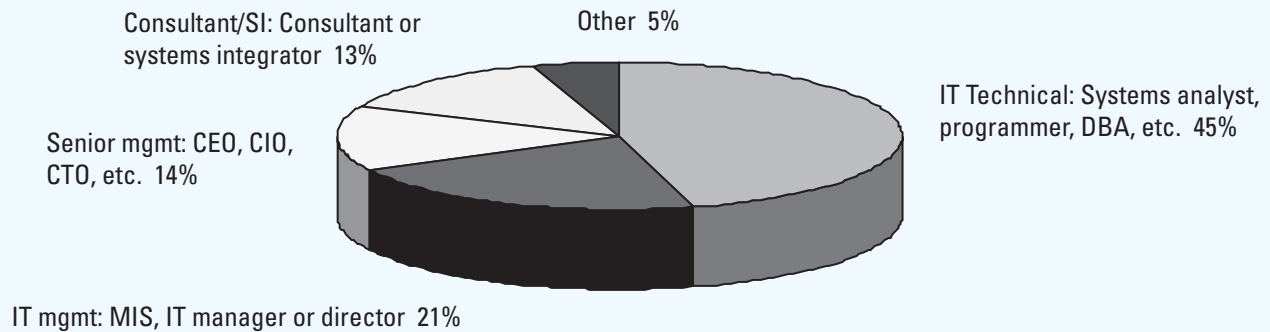


In September 2006, IBM sponsored a survey of readers of its Open Source & LinuxLine newsletter to gauge the levels of adoption, planning, and platforms for Linux and other open-source software. The survey was conducted by Unisphere Research via e-mail notification, which directed participants to a Web-based survey instrument. A total of 434 anonymous responses were collected by the survey deadline.

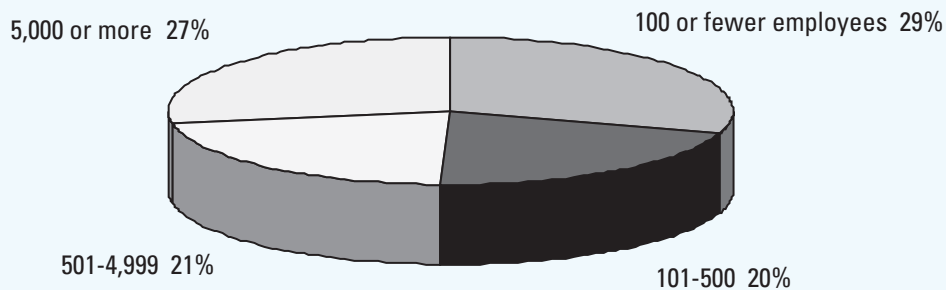
As the table below shows, respondents represented a wide range of job titles, and came from a wide cross section of organizations.

Respondents, by job title



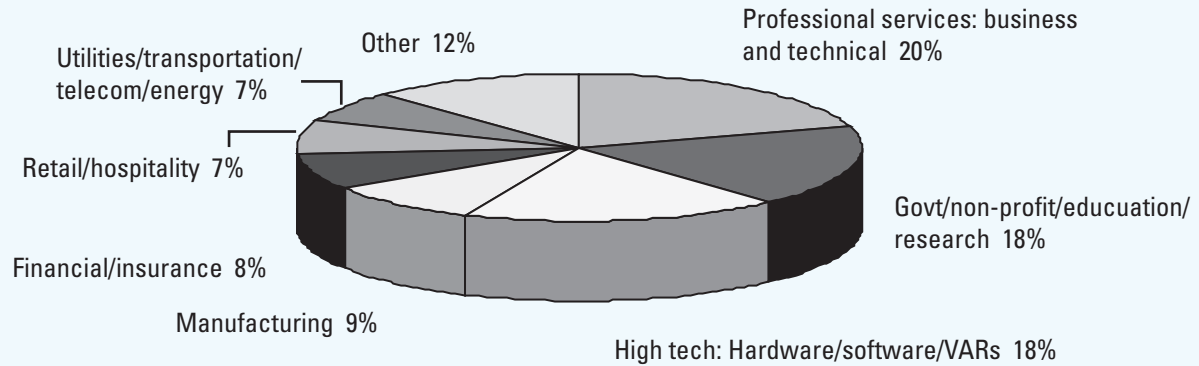
(Totals may not equal 100% due to non-responses)

Respondents, by company employee size



(Totals may not equal 100% due to non-responses)

Respondents, by industry group:



(Totals may not equal 100% due to non-responses)

ADOPTION TRENDS

For purposes of this survey, we address “open source” software and Linux as separate categories. Linux is a subset of open source that addresses all operating system implementations, while open source software covers all other layers of the software stack, including middleware, databases, applications, and development tools.

Since the survey covered readers of Open Source & LinuxLine, it is no surprise that the survey reflected aggressive uptake of Linux and open source solutions. However, the survey uncovered divisions along the lines of company size groups, and within industries in terms of the depth of Linux and open-source deployments. While plans for Linux continue to grow within enterprises, the survey also found that enterprises of all sizes are planning to expand their use of other open source middleware and applications as well.

The survey shows Linux has clearly become an enterprise-class operating system for supporting mission-critical applications, such as ERP. Other open source solutions are popular within the surveyed enterprises as well – however, a majority of companies are not yet quite ready to deploy either open-source mission-critical enterprise systems (such as ERP). It’s important to note, however, that in its earlier days of adoption, Linux also had its start in non mission-critical, if not informal, implementations on the edges of the enterprise.

Adoption of Linux is almost ubiquitous within the enterprises covered in this survey. Eighty-five percent, in fact, report they are using Linux on their servers. In terms of vendor or distribution, Red Hat and SUSE Enterprise are dominating enterprise usage. Close to half of the respondents in the survey, 46%, have already implemented Red Hat or SUSE Enterprise Linux solutions at their site. Another 19% report having a “mix” of Red Hat, SUSE and other Linux distributions such as Debian, Fedora, OpenSUSE or Ubuntu in place. About 20% do not run Red Hat or SUSE at all, and only have at least one of the other distributions at their sites. Adoption of Linux on enterprise servers cuts across all size categories, though the open source operating system is more prevalent at the largest organizations in the survey (5,000 or more employees) – 92% versus 85% overall.

Does your company use Linux servers?

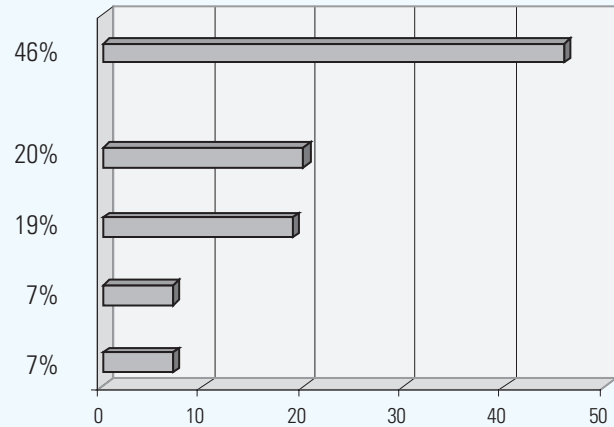
Yes: Red Hat or SUSE Enterprise Linux

Yes: Other Linux Distributions such as Debian, Fedora, OpenSUSE or Ubuntu

Yes: A mixture of Red Hat, SUSE and other Linux distributions

No: And no plans to use

No: But planning to use in the next year



A majority of respondents to the survey, 60%, report that they have at least three years' experience with running the open source operating system on production systems.

Respondents also anticipate growth in their Linux and open-source deployments. More than seven out of ten respondents, 71%, expect their deployments of enterprise applications on Linux to increase. Even more, 77%, expect to be increasing their deployments of other types of open source software. While open source plans are fairly even across company size categories, growth for Linux itself will be more robust at the largest firms in the survey (5,000 or more employees) – 25% expect to “significantly” increase their Linux application deployments, compared to 17% overall.

Adoption plans for Linux and Open Source over the Next Year

Significantly increase

Linux

17%

Other Open Source

15%

Moderately increase

Linux

54%

Other Open Source

62%

Will not change

Linux

18%

Other Open Source

14%

Decrease in any amount

Linux

0.3%

Other Open Source

0%

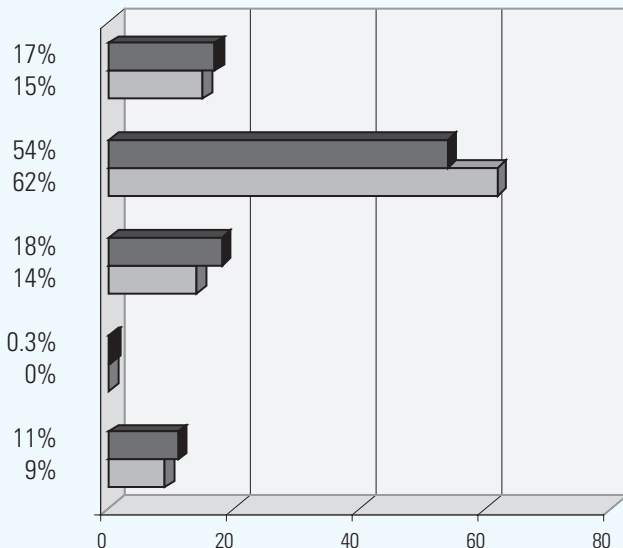
Don't know/unsure

Linux

11%

Other Open Source

9%

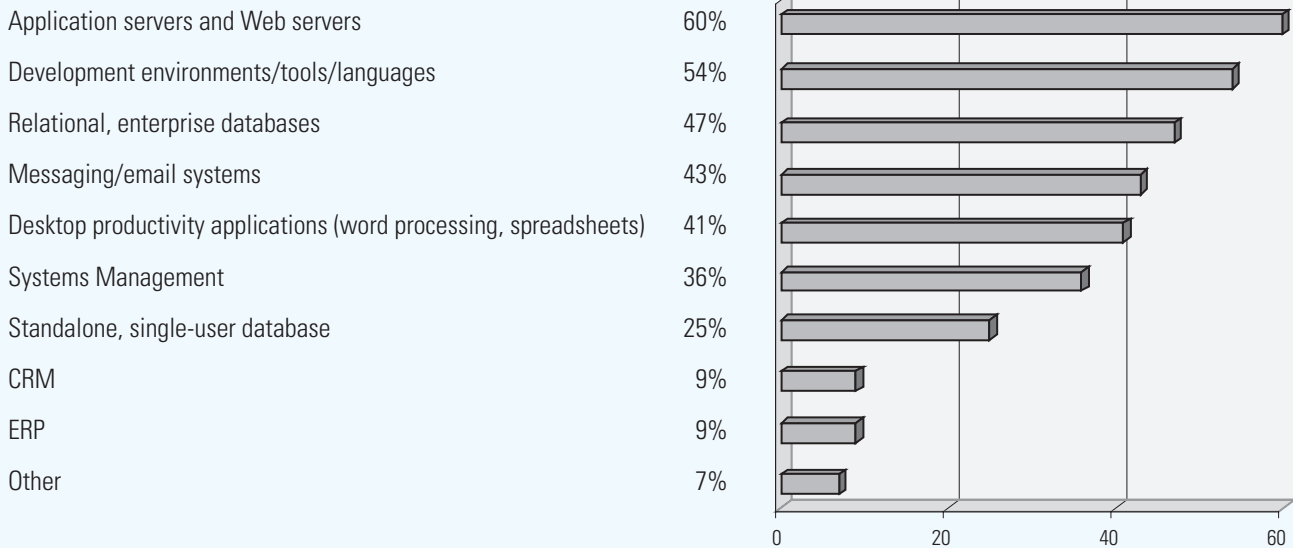


OPEN-SOURCE STACK

Linux adoption also brings along adoption of other types of open source software, especially in the middleware part of the stack. A majority of respondents indicate they currently also run open source middleware and applications within their enterprises. The most common type of open-source software used at respondents' companies include open-source application or Web servers, such as Apache HTTP and Apache Geronimo (60%).

Also popular are development environments, tools, and languages, cited by 54% of respondents. Another 47% say they use open source relational databases, followed by 43% using open source email or messaging systems. Another 41% report that they now use open source desktop productivity applications, such as OpenOffice.

Open Source Applications in Production



Interestingly, while adoption of open source Web and application servers cuts across all company size categories, smaller companies are the most likely to be deploying open source toolsets. For example, more than 60% of the smallest companies (100 employees or fewer) now run open source email and messaging solutions, a number that drops to 33% of the largest enterprises. Smaller companies are more likely to be using open source development tools (64%, versus 51% of the largest companies surveyed). The use of open source desktop productivity tools also is much higher among smaller companies – 55% versus 31% of the largest enterprises.

Among those that do not run open source middleware or other types of open source software, lack of technical resources is the most oft-cited reason (47%), followed by lack of appropriate applications.

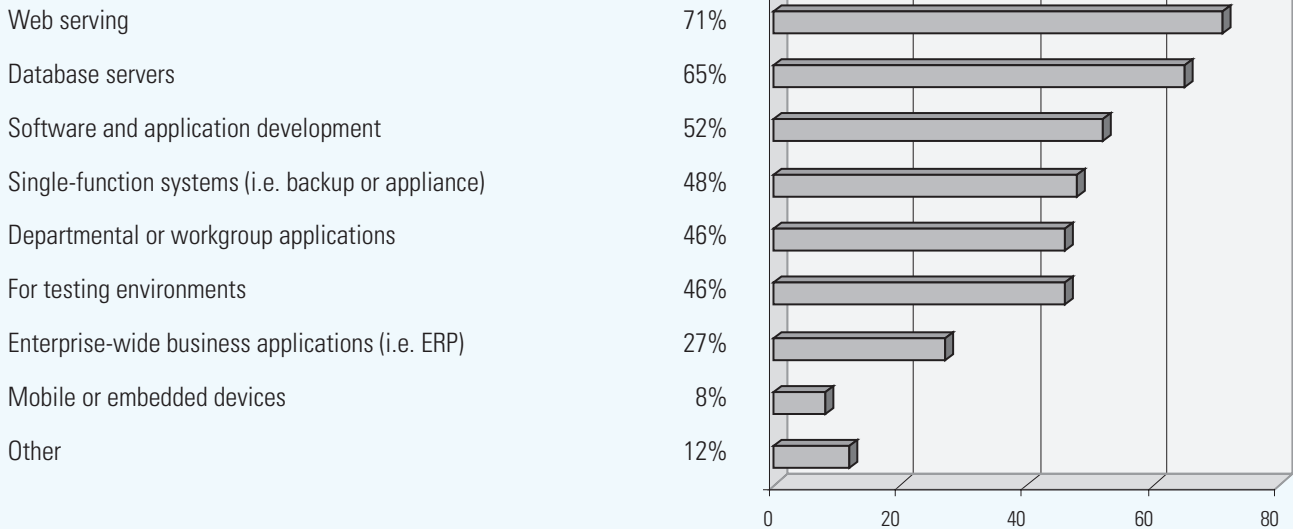
LINUX ROLES

Linux is prevalent across the overwhelming majority of enterprises participating in this survey, and is showing considerable strength in mission-critical enterprise deployments.

The most common use of Linux is for Web serving, as cited by 71% of the survey group, followed by 65% running their database servers on Linux. More than half of the respondents, 52%, report they are using Linux in their development shops. Close to half, 48%, run Linux on single-function systems, such as network appliances.

Linux is also taking hold within large, mission-critical enterprise sites as well. More than one out of four respondents, 27%, report that they are currently running their enterprise resource planning (ERP) systems on Linux. ERP development and deployment is a long-term evolution within most enterprises, and migration to a new operating system requires a considerable investment of resources. In addition, until recently, most ERP systems have been supported by high-end operating system environments such as z/OS or high-end Unix systems.

How Enterprises Use Linux



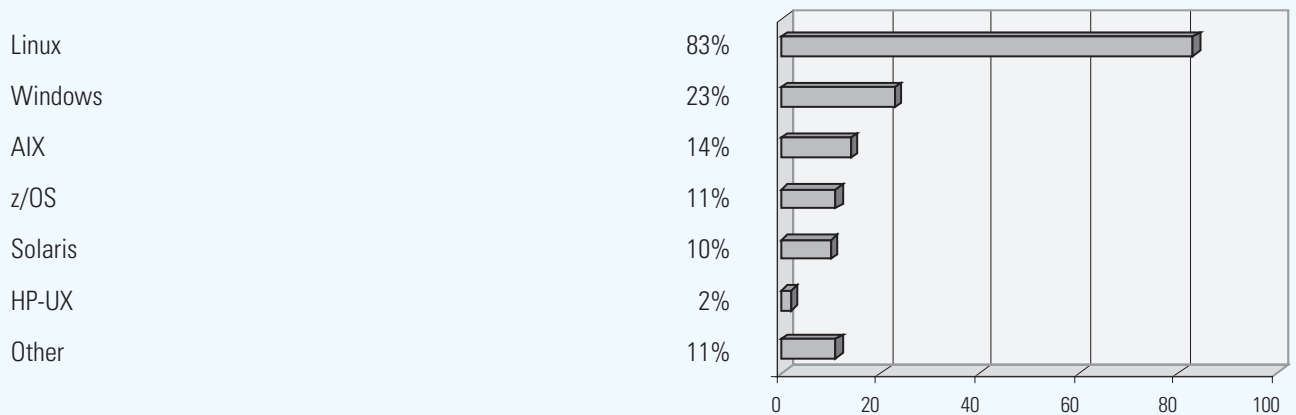
Larger organizations are more inclined to use Linux to support mission-critical deployments, however. About 25% of the smallest organizations run enterprise applications such as ERP on Linux, along with 22% to 23% of medium-size firms. However, this percentage jumps to more than 34% of the largest firms in the survey, with more than 5,000 employees.

Linux adoption for enterprise applications is also most prevalent in the retail and hospitality sector (34%), followed by financial services and insurance companies (33%).

PLATFORMS

As noted earlier, survey respondents expect their adoption of Linux to accelerate over the coming year. The survey finds that 83% plan to implement new workloads on Linux during the next 12 months. By comparison, 23% expect to deploy new applications or functions on Windows, and another 14% anticipate increasing their level of AIX usage. The most pronounced plans are within professional services firms (86%), followed by government or nonprofit organizations (84%).

Operating Systems Anticipated to be Supporting New Workloads Over the Next Year



Smaller companies are the most likely to embracing new workload growth on the Linux platform, the survey also finds. Eighty-seven percent of the smallest firms in the survey (with fewer than 100 employees) planned to add new workloads to Linux, compared to 63% of the largest corporations. By industry, professional services and high-tech firms lead the way with 84% and 71%.

Many industry analysts note that Linux is most likely to usurp applications from Unix, mainly because the two operating systems kernels have a similar heritage and command lines. However, the survey finds that most migrations are likely to come off Windows platforms – 51% of respondents expect to migrate applications from Windows onto Linux. By contrast, 20% expect to move applications from Solaris.

Small and large companies see things a bit differently, however. Smaller organizations are more inclined than their larger counterparts to move away from Windows – 57% versus 44%. However, a greater number of larger organizations will be migrating off of Solaris – 36% to 11% for small firms. This may be a reflection of the greater penetration of Solaris within larger enterprises that can afford the hardware and software stack.