SAGE ANNUAL SALARY SURVEY 2004-2005

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SAGE

The People Who Make IT Work

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Introduction

Salary surveys are primary components of the efforts to advance the status of computer system administration as a profession, and establish standards of professional excellence. The salary survey also serves individual sysadmins, managers, and HR departments in comparing their practices with those of other companies.

This survey was sponsored by SAGE, a Special Technical Group of the USENIX Association, whose goal is to advance the state of system administration.

The salary survey for the year 2004-2005 was administered during July and August 2005 and garnered 3,223 valid responses: 2,976 individuals employed more than half the year and 247 employed less than that. This first part of this document analyzes those employed for more than half the year; the unemployment survey follows on the final pages.

This report includes a large section on demographics, the qualities of the respondents. That is followed by extensive statistical analyses of salaries, distribution, salary increases. Breakdowns include by geography, gender, and experience. The final part of the employment survey includes several pages of respondents' comments on the state of the profession, the future of system administration, and advice to newcomers.

A Note on Nomenclature

This year's survey generated some contention as respondents wrestled with the term 'system administrator.' In some circles, this is a generic term that covers all those people who care for a computer (security folks, database people, networkers, etc.). In others, it is a carefully delineated area from which many wish to distinguish themselves. This was clear when people began asking if the survey was 'going to be applicable to them.'

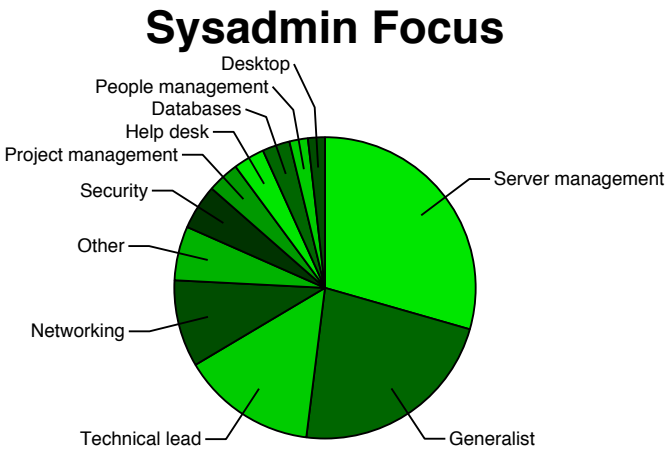
The survey was intended to include all those people who might be lumped into the general field of 'computer support' or 'user support.' Next year we'll try to do a better job of being inclusive while enabling people to distinguish their particular career path (for salary comparison purposes).

Summary

Of the 2,976 valid respondents, 96.2% were males; 3.2% (95 individuals) were females. Previous surveys saw 95.4% (2003), 93.0% (2002), and 88.4% (2001) males.

92.3% of the individuals worked 35 or more hours weekly. 7.7% worked less than 35 hours/week. These are the same numbers as respondents reported for 'fulltime' vs. 'part-time'.

The set of respondents broke out into several different types of jobs: Databases, Desktop, Generalist, Help desk, Networking, People mgmt, Project mgmt, Security, Server mgmt, Technical lead, and 'Other.' The chart on the right shows the breakdown of the responses.



Statistical Exclusions

The few respondents who cited salaries greater than US$200,000 are excluded from most of the analyses throughout this document. These salaries significantly impact the calculation of statistical means (averaging in a salary like one million dollars has a big impact on statistics unless you divide it by another huge number) and thus have generally been omitted from reporting. Likewise, the few with annual salaries less than US$10,000 are generally omitted, as they must reflect some compensation scheme outside the mainstream.

After analyzing the data extensively, it became clear that the statistics of interest pertained to the salaries companies were paying, a number that is often more than the amount of money people received (since many people were unemployed for weeks or even months). Accordingly, all reported salaries have been annualized (e.g., a reported US$25,000 for 26 weeks annualizes to US$50,000/year) and, except where mentioned, all salaries have been converted to US dollars when statistical aggregates are used. Salaries are reported in native currencies when appropriate.

Despite economic doldrums, the average of all the salary changes (including the negative ones) for 2004-2005 across full-time workers world-wide was plus 6.12% (2003: 10.68%, 2002: 8.15%) when calculated for annualized salaries. 507 (24.1%) respondents (2003: 23.2%; 2002: 24.0%) saw no salary change or reduced their salary. Of the 75.9% (up from 2003: 68.8% and 2002: 54.5%) who increased their salaries 0-30%, the mean increase was 9.15% (down from 2003-2004: 10.95% but up from 2002: 8.88%).

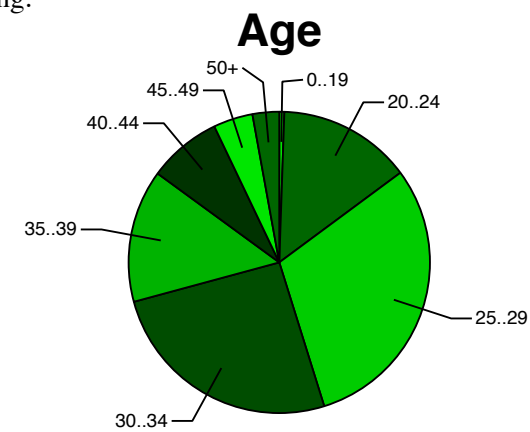
The average reported salary for the 2,113 respondents who reported using US dollars as their currency was $68,045 (up from lasty year's $66,557; 2003-2004: $67,675): $68,195 for males (up from 2003-2004's $66,612; 2002: $67,920) and $64,016 (down from 2003-2004: $65,432; 2002: $64,946) for females. The overall median was $64,000 (up from 2003-2004's $62,500; 2002: $65,000) and was just $257 less than the median for all males. The female median was lower at $60,500, a big drop from 2003-2004's $65,000 (and 2002's $63,000). Please note, these numbers **do not factor in experience** and therefore should not be used as a general comparison of anything. However, because this report endeavors to enable you to find how your salary compares to people who have both similar and different backgrounds, we have included analysis which will enable you to make more accurate comparisons based on experience, education, job title, and SAGE Sysadmin Classification.

We hope you find the following information useful, and we encourage you to participate in the 2006 salary survey.

Demographics

2,976 individuals completed valid employment surveys this year (plus 247 more who completed the 'unemployment' survey; see the final pages of this document). They completed a comprehensive questionnaire on the World Wide Web with over 80 questions, including:

- Age
- Benefits
- Certifications
- Commute time
- Corporate policies
- Education
- Employers
- Experience
- Focus
- Gender
- General comments
- Home Internet
- Hours worked
- Hours training
- Industry
- Job properties
- Job type
- Length of employment
- Location
- Longevity projections
- Pager/cell phone requirements
- Prognostications
- Professional organizations
- Purchasing responsibilities
- Recent pay increases
- SAGE admin level
- Salary & bonuses
- Supervisory duties
- Technical associations
- Telecommuting
- Time off
- Title
- Training methodologies
- Travel



Age and Experience

It has been said that system administration is a young person's game. The pie chart above shows the concentration of admins in various age groups. 45.2% of the respondents were under 30 years of age; only 15.0% were 40 years old or older. It's easy to observe the concentration in the 20-34 age group. The slightly smaller number of those under 25 suggests that respondents 'found their calling' potentially slightly later than their very first job.

Age vs. Years Experience

Age	0..3	4..5	6..9	10..15	16..20	21+	Total
0..24	47.4%	25.4%	3.9%	0.0%	0.0%	0.0%	14.9%
25..29	36.0%	45.8%	41.6%	8.6%	0.0%	0.0%	30.3%
30..34	10.1%	16.7%	35.4%	40.1%	3.7%	0.0%	25.6%
35..39	3.3%	7.4%	11.9%	30.6%	26.4%	1.2%	14.3%
40..44	1.4%	2.7%	4.6%	11.4%	36.8%	37.5%	7.9%
45..49	0.9%	1.5%	1.4%	5.1%	19.0%	42.5%	4.2%
50+	0.9%	0.6%	1.2%	4.1%	14.1%	18.8%	2.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

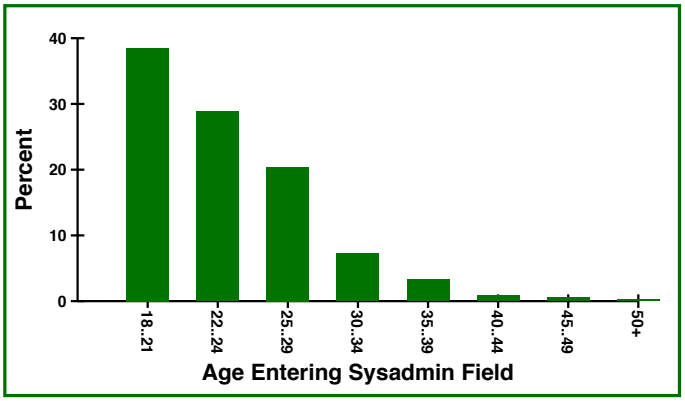
The table on the right compares experience. Several respondents (12.2%) entered the field at age 30 or later. This chart has its columns normalized to 100% for easy comparison. Percentages are of 2,340 valid geographies.

Some larger cities had good representation in this survey.

Sysadmins in Large Metro Areas

Metro Area	# Resp	% Resp.	Metro Area	# Resp	% Resp.
N/A	1013	43.3%	Atlanta, GA	56	2.4%
San Francisco/San Jose/Silicon Valley, CA	207	8.8%	Austin, TX	39	1.7%
Los Angeles/Orange Co., CA	121	5.2%	Philadelphia, PA	38	1.6%
Washington, DC	119	5.1%	San Diego, CA	36	1.5%
New York	118	5.0%	Vancouver, BC	33	1.4%
Seattle/Redmond, WA	93	4.0%	Research Triangle, NC	31	1.3%
Chicago, IL	83	3.5%	Houston, TX	21	0.9%
Boston, MA	82	3.5%	Montreal, QC	18	0.8%
Denver, CO	64	2.7%	Sydney, Australia	17	0.7%
Dallas, TX	62	2.6%	London, England	15	0.6%
Toronto, ON	61	2.6%	Ottawa, ON	13	0.6%

Subtracting years of experience in the field of system administration from the respondent's age can lead to a rough approximation of the age they entered the field (though obviously some respondents might have been sysadmins for a while then changed careers and later changed back). The chart on the right shows the results of such an estimation.



Geographies Represented

Respondents were located throughout the world, though only the USA and a small number of other locations had enough data for true statistical validity of any results. The large chart on the next page shows the origins of all respondents to the 'employed' part of the salary survey. See this page's chart for represented USA metro areas.

Sysadmins Around the World

Country	% Resp.	Country	% Resp.	Country	% Resp.
United States	76.0%	Denmark	[4]	Bangladesh	[1]
Canada	7.1%	France, Metro	[4]	Cape Verde	[1]
Australia	3.3%	Israel	[4]	Cayman Islands	[1]
United Kingdom	2.6%	Lithuania	[4]	China	[1]
Ireland	1.6%	Malaysia	[4]	Costa Rica	[1]
Norway	1.0%	Portugal	[4]	Croatia	[1]
Germany	[26]	Switzerland	[4]	Egypt	[1]
New Zealand	[24]	Bulgaria	[3]	Estonia	[1]
India	[15]	Greece	[3]	Guatemala	[1]
Netherlands	[13]	Singapore	[3]	Iran	[1]
Belgium	[8]	Albania	[2]	Iraq	[1]
Russia	[8]	Algeria	[2]	Jamaica	[1]
France	[7]	Hungary	[2]	Korea (South)	[1]
Japan	[7]	Kuwait	[2]	Luxembourg	[1]
Sweden	[7]	Latvia	[2]	Malta	[1]
Finland	[6]	Mexico	[2]	Namibia	[1]
Romania	[6]	Pakistan	[2]	Nepal	[1]
Spain	[6]	Poland	[2]	Philippines	[1]
Afghanistan	[5]	Puerto Rico	[2]	Rwanda	[1]
Brazil	[5]	Saudi Arabia	[2]	Ukraine	[1]
Italy	[5]	Thailand	[2]	Uruguay	[1]
South Africa	[5]	Angola	[1]	Vietnam	[1]
Andorra	[4]	Armenia	[1]		
Argentina	[4]	Austria	[1]		

A number in square brackets (e.g., [3]) denotes an absolute number of respondents that is less than one percent of the total of 2,976 who named countries.

Titles

Respondents were asked to share their position's title (i.e., as shown on their business card). 2,149 actual titles contained 400 (vs. 2003: 437 and 2002: 688) distinct words. The average actual title was 21.8 characters (vs. 21.6 in 2003) long with 2.62 words (vs. 2.74 words in 2003 and 3.72 in 2002). 3.3% (vs. 4.7% in 2003) of the titles had multiple functions separated by a slash; only two had more than one slash.

This year's most popular word was 'system' (in incarnations that included 'systems' and 'sys'), appearing in 41.7% (vs. 40.1% in 2003) of the titles. This year's runner-up was ''administrator'' with 35.6% of the titles (vs. 34.5%, the runner-up in 2003) was 'administrator' (including 'administrative,' 'administration,' 'admin,' and 'sysadmin'). Only a handful of titles included brand names (most notably UNIX) unlike several years ago.

A few years ago, the word 'administrator' carried the connotation of secretary. It appears that infrastructure support employees are now using the word with high frequency.

The table on the right shows all the words that appeared in 25 or more titles.

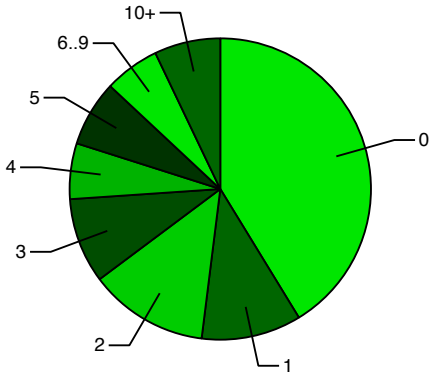
Title Words

Freq.	Word	Freq.	Word	Freq.	Word
41.7%	Systems (etc.)	6.1%	Specialist	2.8%	Consultant (etc.)
35.6%	Administrator	4.5%	Support	2.7%	Architect
17.4%	Engineer	3.8%	Sr.	2.1%	Lead
14.3%	Network	3.7%	Director	2.0%	Operations
11.9%	Senior	3.6%	Information	1.8%	II
10.5%	Technical (etc.)	3.4%	Security	1.4%	Service
8.8%	Manager	3.2%	Software	1.4%	III
7.6%	Analyst	3.1%	Developer (etc.)	1.2%	Assistant
7.4%	I.T.	3.0%	Computer (etc.)		
7.2%	Unix	2.8%	Programmer		

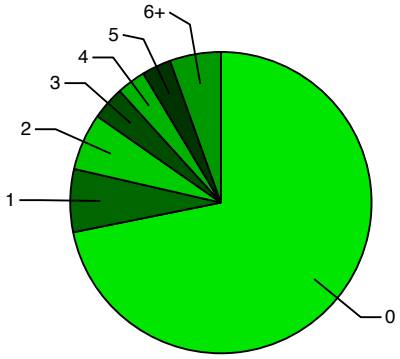
Supervisory Capacity

Almost two-thirds of the respondents reported informal supervisory capacity at some level; over a quarter had formal supervisory capacity. These charts hint at the level of mentoring in the profession.

Informal Subordinates



Formal Subordinates



Purchasing Responsibility

Half of the respondents at least contribute to the budget; over a quarter can purchase less expensive items. The charts on the next pages show purchasing responsibilities for all the sub-disciplines. Not surprisingly, a different focus brings different responsibilities.

	Generalist				Help desk			
Purch. Resp.	None	Contrib	Specify	Final	None	Contrib	Specify	Final
Less than US$500	10.6%	8.6%	41.7%	39.0%	39.0%	15.0%	34.0%	12.0%
US$500-US$5000	10.6%	16.2%	56.8%	16.4%	40.0%	29.0%	26.0%	5.0%
More than US$5000	15.9%	28.5%	48.1%	7.5%	54.0%	28.0%	16.0%	2.0%
Group Budget	35.9%	35.8%	19.2%	9.1%	71.0%	21.0%	5.0%	3.0%
Dept. Budget	41.7%	33.2%	18.2%	6.9%	72.0%	23.0%	4.0%	1.0%

	Security				Networking			
Purch. Resp.	None	Contrib	Specify	Final	None	Contrib	Specify	Final
Less than US$500	18.8%	11.1%	43.8%	26.4%	14.0%	8.3%	42.4%	35.3%
US$500-US$5000	18.8%	15.3%	49.3%	16.7%	16.9%	14.4%	54.3%	14.4%
More than US$5000	21.5%	25.0%	43.1%	10.4%	20.5%	24.8%	48.9%	5.8%
Group Budget	36.1%	36.1%	21.5%	6.2%	35.6%	34.5%	21.6%	8.3%
Dept. Budget	45.1%	36.8%	15.3%	2.8%	43.2%	32.7%	18.0%	6.1%

	Server mgmt				Databases			
Purch. Resp.	None	Contrib	Specify	Final	None	Contrib	Specify	Final
Less than US$500	21.3%	13.7%	42.1%	22.8%	27.3%	17.0%	40.9%	14.8%
US$500-US$5000	22.4%	19.2%	48.6%	9.8%	30.7%	34.1%	29.5%	5.7%
More than US$5000	26.5%	29.3%	39.5%	4.7%	38.6%	35.2%	23.9%	2.3%
Group Budget	45.5%	34.7%	17.4%	2.4%	64.8%	23.9%	6.8%	4.5%
Dept. Budget	51.1%	34.2%	12.4%	2.2%	72.7%	20.5%	3.4%	3.4%

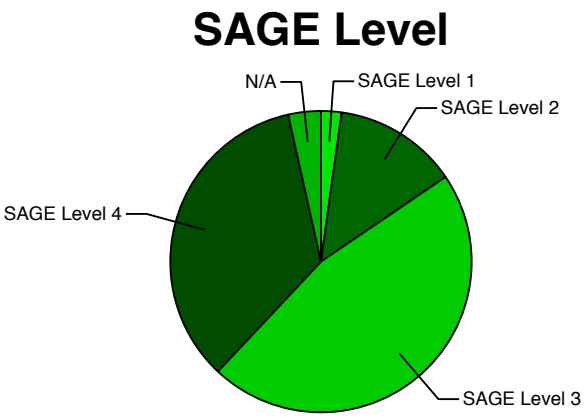
	People mgmt				Technical lead			
Purch. Resp.	None	Contrib	Specify	Final	None	Contrib	Specify	Final
Less than US$500	11.9%	0.0%	15.3%	72.9%	16.9%	9.0%	39.9%	34.1%
US$500-US$5000	10.2%	3.4%	28.8%	57.6%	17.4%	13.5%	51.7%	17.4%
More than US$5000	10.2%	5.1%	49.2%	35.6%	19.5%	22.5%	49.4%	8.6%
Group Budget	11.9%	11.9%	44.1%	32.2%	28.3%	39.0%	23.9%	8.8%
Dept. Budget	10.2%	30.5%	35.6%	23.7%	38.3%	34.8%	20.0%	7.0%

	Project mgmt				Desktop			
Purch. Resp.	None	Contrib	Specify	Final	None	Contrib	Specify	Final
Less than US$500	11.8%	13.7%	30.4%	44.1%	24.1%	14.8%	42.6%	18.5%
US$500-US$5000	14.7%	18.6%	37.3%	29.4%	31.5%	25.9%	38.9%	3.7%
More than US$5000	16.7%	25.5%	41.2%	16.7%	40.7%	29.6%	27.8%	1.9%
Group Budget	27.5%	30.4%	19.6%	22.5%	51.9%	37.0%	9.3%	1.9%
Dept. Budget	32.4%	30.4%	21.6%	15.7%	57.4%	35.2%	7.4%	0.0%

	Other			
Purch. Resp.	None	Contrib	Specify	Final
Less than US$500	27.7%	17.3%	33.5%	21.4%
US$500-US$5000	30.1%	23.1%	34.1%	12.7%
More than US$5000	37.0%	26.0%	28.9%	8.1%
Group Budget	51.4%	26.6%	15.0%	6.9%
Dept. Budget	59.5%	23.7%	12.1%	4.6%

SAGE Sysadmin Classifications

Respondents were asked to self-assess the responsibilities of their primary job in order to show the mappings with the SAGE job levels. Only 3.5% of them felt their job did not fit within the proper parameters. The remainder classified themselves according to these definitions. The number of SAGE Level 1 respondents was very low.



SAGE Level 1: Assist on consulting or engineering projects or the administration of a systems facility. Perform routine tasks under the direct supervision of a more experienced system administrator or consultant. May act as a front-line interface to users and senior system administrators.

SAGE Level 2: Assist on consulting or engineering projects or the administration of a systems facility. Work under general supervision of a computer system manager or senior consultant. Carry out more complex tasks with some independence and discretion regarding how to carry out the tasks.

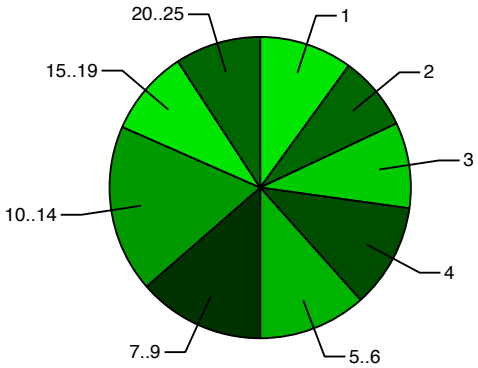
SAGE Level 3: Receive general instructions for assignments from manager and work with independence and discretion regarding how to carry out tasks. Initiate some new responsibilities and help to plan for the future of a facility. Manage the work of junior system administrators, operators, engineers, or consultants. Evaluate and/or recommend purchases and have a strong influence on the purchasing process.

SAGE Level 4: Design and manage the computing infrastructure or manage the larger, more complex consulting or engineering projects. Work under general direction from senior management. Establish or recommend policies on system use and services. Provide technical lead and/or supervise system administrators, system programmers, engineers, consultants, or others of equivalent seniority. Have purchasing authority and responsibility for purchase decisions and budget.

Unemployment

11.2% (vs. 2003: 10.9%) of the respondents who were generally employed during the last year were unemployed for at least one week during the survey period. Of all respondents, 4.5% (vs. 2003: 3.3%) were unemployed for four weeks or less; 72% (vs. 2003: 6.1%) were unemployed for as much as eight weeks. This chart shows how many weeks those 11.6% were out of work.

Unemployment Distribution



Certifications

Respondents named the certifications most important to them; see the table for the results.

Certifications Held

Certification	% Resp.	Certification	% Resp.	Certification	% Resp.
Bachelor's Degree (any relevant)	16.4	IBM (any)	2.5	Cisco CCDP	[25]
Cisco CCNA	10.7	HP (any)	2.5	Compaq	[25]
Microsoft MCP/MCP+i	10.3	AIX (any)	2.2	Checkpoint CCSA	[25]
Microsoft MCS*	9.5	Apple (any)	2.0	SAIR certified Linux administrator	[24]
COMPTIA A+	7.8	COMPTIA Security+	1.7	SANS/GIAC GSEC	[24]
Red Hat (any)	7.2	Novell CNE	1.7	Checkpoint CCSE	[23]
Sun/Solaris SCSA	6.5	COMPTIA Linux+	1.6	Learning Tree (any)	[20]
Brainbench (any)	4.1	LPI (any)	1.6	Lotus (any)	[17]
Sun/Solaris Other	3.8	Oracle/OCP (any)	1.5	SANS/GIAC GCIA	[16]
Microsoft Other	3.7	COMPTIA I-Net+	1.4	COMPTIA Other	[15]
COMPTIA N+	3.2	Cisco CCIE	1.4	Cisco Other	[11]
Sun/Solaris SCN*	3.1	Citrix Other	1.2	SANS/GIAC GCUX	[11]
(ICS)2 CISSP	2.9	Citrix CCA	1.2	SANS/GIAC GIAC	[10]
Novell CNA	2.9	EMC (any)	1.1		
Cisco CCNP	2.8	Cisco CCDA	1.0		

A number in square brackets (e.g., [3]) denotes an absolute number of respondents that is less than one percent of the total.

Certifications often generate a lot of discussion when syadmins gather. This year's survey asked respondents their general opinion about the value of certifications. The results are illuminating, given that the most vocal opinion is "they are worthless."

Value of Certs

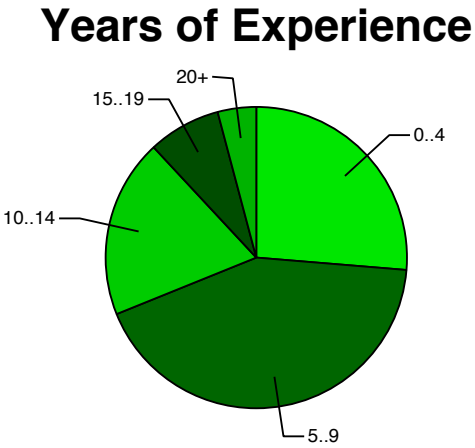
Perceived value	% Resp.
Sometimes, it depends	47.4%
Rarely, a few are good	19.5%
Generally good	11.1%
No, generally worthless	10.5%
Pretty good	9.2%
No opinion	2.3%

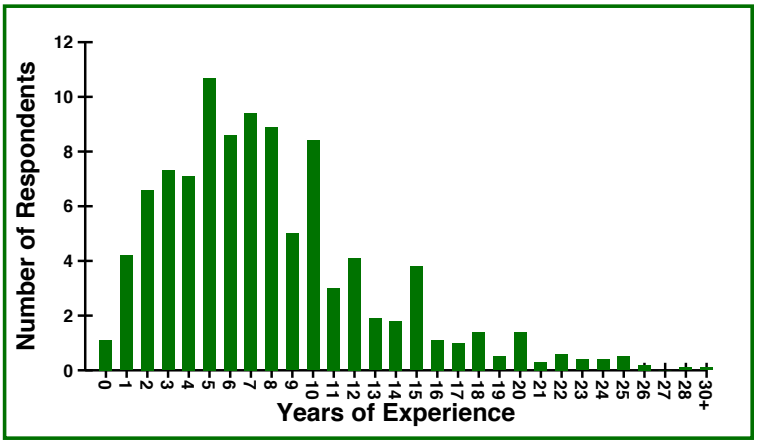
Experience

Respondents had a mean of 7.91 (2003: 8.01; 2002: 7.83) years of experience, with a standard deviation of 5.11 years (almost the same as the two previous years). The median was 7, just as in 2002 and 2003. About 31% had ten years or more of experience; 11.8% had 15 or more years of experience (2003: 11.8%; 11.7% in 2002). Two charts summarize the experience levels of the respondents. The pie chart show a huge (51%) hump in the distribution for those with 5..10 years experience (with 26.3% having less than that).

The detail graph shows an almost bell curve-like distribution with a peak at five years. Curiously, the last two years' charts also had a peak at five years. Since this survey postdates those, one would have expected the peak to move! The detailed graph implies that a number of people entered the field 5-10 years ago, and that the number entering or staying in the field is now declining.

The gender chart implies that females stay in the field longer than males. If one believes that system administration is a waystation on the way to 'better' career steps, then this would be evidence of a sort of 'pink ceiling.' The data here, though, probably need deeper analysis to draw such a conclusion.





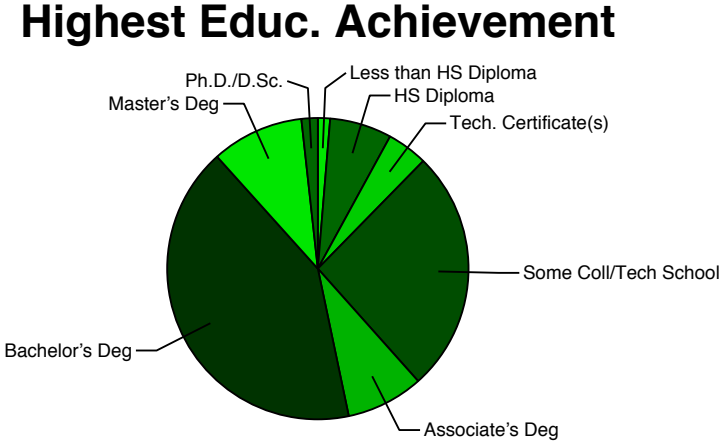
Exp. vs. Gender

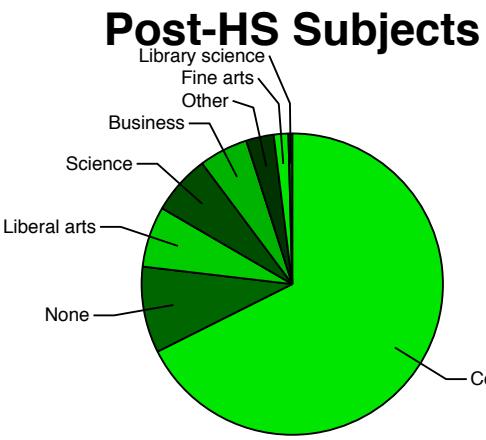
Exp.	Female	Male	Total
0	0.0%	1.2%	1.1%
1..4	32.3%	24.9%	25.2%
5..9	33.3%	42.9%	42.6%
10..14	16.7%	19.3%	19.2%
15..19	13.5%	7.6%	7.8%
20..24	2.1%	3.2%	3.2%
25..29	2.1%	0.8%	0.9%
30+	0.0%	0.1%	0.1%
Total	100.0%	100.0%	100.0%

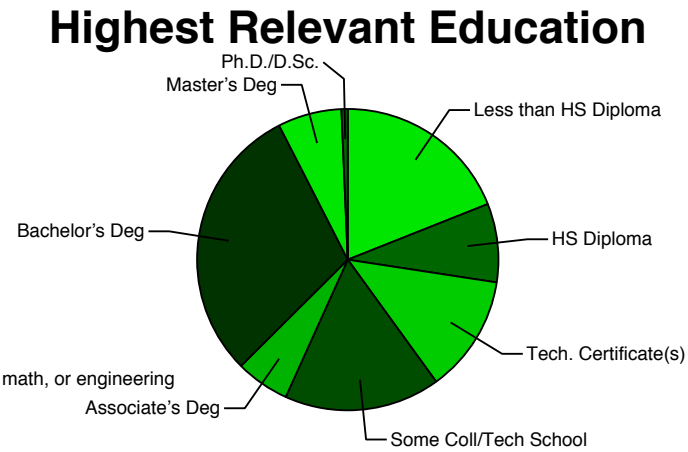
Education

Experience is often backed by education. About 53.3% (vs. 2003: 57.6%) of those responding have a college degree (at least a Bachelor's) in any field. Informal discussions at conferences yield the unsurprising results that those admins with degrees think college education is a real boon while the others argue, "I get along just fine without one."

The chart below shows the breakdown of subjects for post-secondary education. The 'Other' listings included philosophy, psychology, electronics, economics, physics, mathematics, law, English, communications, and 65 other items that were mentioned three or fewer times.







Some college degrees are arguably more relevant (in the technical sense) to computer administration. The second chart above on the right takes this into account and shows the highest 'relevant' degree (according to the respondent's definition of 'relevant'). Fully 37.5% of those surveyed have earned at least a Bachelor's degree in a relevant field.

Most universities don't really teach system administration. How do people *really* learn system administration? Over 80% of them were able to attribute much of their knowledge to on-the-job training or self-instruction: The 'Other' entries included chat rooms, trial-by-fire, hobby computing, Google, user groups, and mailing lists.

Learning Styles

	Not at all	A bit	Somewhat	A lot
Taught myself (textbooks, web, practice, etc.)	1.4%	1.6%	8.7%	88.3%
On the job	1.7%	2.0%	14.1%	82.3%
University/college education (CS/IS/IT degree program)	35.4%	25.4%	24.1%	15.1%
Mentor of any kind	31.1%	26.8%	27.2%	14.9%
Certification program courses	51.3%	26.6%	17.0%	5.1%
Vendor-specific training courses	44.6%	31.7%	18.8%	4.9%
Non-degree tech school, college, or university courses	74.8%	14.3%	7.9%	2.9%
Conferences/commercial training	48.4%	32.9%	16.1%	2.6%
Military	94.2%	2.6%	1.6%	1.7%
Other	98.8%	0.1%	0.2%	0.8%

Relevant Education vs. Age

The Relevant Education chart is the rare chart that is probably better read starting at the bottom and moving up. The bottom three rows (finished college degrees in a relevant field) show that the younger members of the profession are indeed getting relevant education. Of course, this surely correlates with the availability of such education – the first Bachelor's degree in computer science was given around 1974, so some of the 50+ group never had a chance.

Relevant Education vs. Age

Education	1..24	25..29	30..39	40..49	50+	Total
Less than HS Diploma	21.9%	19.1%	19.2%	15.0%	16.5%	19.0%
HS Diploma	3.8%	6.8%	9.9%	13.1%	10.6%	8.4%
Tech. Certificate(s)	12.2%	13.2%	13.7%	8.9%	9.4%	12.6%
Some Coll/Tech School	16.9%	16.4%	17.5%	14.4%	18.8%	16.7%
Associate's Deg	7.4%	6.0%	4.9%	6.7%	3.5%	5.8%
Bachelor's Deg	34.5%	31.4%	27.5%	28.9%	29.4%	29.9%
Master's Deg	2.5%	6.5%	7.0%	11.4%	11.8%	6.9%
Ph.D./D.Sc.	0.7%	0.7%	0.4%	1.7%	0.0%	0.7%

This trend is echoed by the Associate's degree number, which is also increasing for younger respondents.

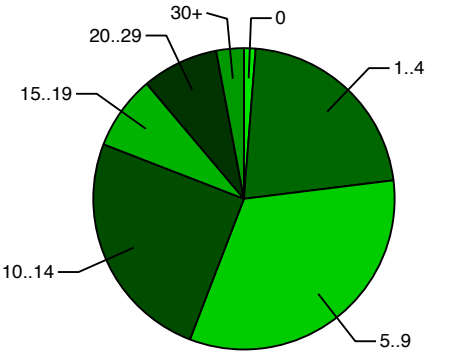
The no-high-school diploma number is probably noisy, as it suggests an unintended interpretation of the question, since so many respondents already reported earning at least a high school diploma (see the pie charts on the previous page).

Continuing Education

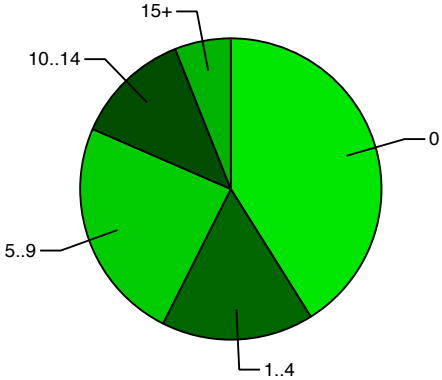
In the world of computer administration, learning and growing are absolute requirements. Admins must keep up to date on a host of new technical and legal developments in their focus area and in 'soft' areas, as well. The weekly time expenditure of time for keeping up is quite dramatic (see the first chart on the right). The average is 9.2 hours/week (vs. 8.9 and 9.0 for the previous two surveys) and the standard deviation is 8.3 hours/week (a bit higher than previously). This works out almost to a quarter-time job for '40 hour' workers. Only 23% report four hours or less per week; more than 44% report a staggering 10 hours or more per week. Just 1.1% reported 0 hours/week. It is clear that continued learning is de rigueur for this profession.

Organizations sometimes pay for employee continuing education. Of 2,976 respondents, 41.1% (vs. 2003's 39.7%) were not afforded this option. Even with that many zeroes averaged in, the mean number of training days annually was 4.8 (up from 2003's 4.4) and the median was 3 (same as 2003). See the chart on the right for the breakdown.

Hrs/wk Self-training



Paid Training Days



Industries Represented

Roughly 83.2% (vs. 2003: 82.7%) of the respondents work at a single job; 16.8% have multiple employers. Respondents were asked to cite their primary area of employment. Education led the way again; for some reason they come out in force for this survey every year. Almost 87% were able to categorize their employment into a set of canonic industries.

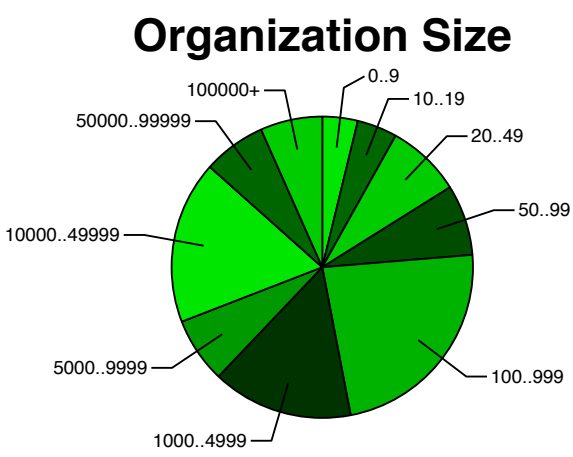
Employment Categories

Industry	%	Industry	%	Industry	%	Industry	%
Educ. - Post-Sec	12.5%	IT Company: Consulting	3.5%	Educ. - Prim/Sec	2.0%	Adv, PR, Mar-Comm	1.5%
IT Co.: SW Dev	6.9%	IT Company: Other	3.0%	IT Co: Web	1.9%	Research	1.4%
Financial svcs	6.5%	Cons.	2.9%	Ins/risk management	1.8%	Not-for-profit	1.3%
Telecommunications	6.4%	Govt - Non-Military	2.9%	Retail	1.8%	Publishing	1.3%
IT Company: ISP/ASP	5.1%	Govt - Contracting	2.8%	Entertainment	1.8%	Defense	1.3%
Health Care, Medicine	4.1%	Comp HW	2.8%	Engineering	1.7%	Aeronautical/aerospace	1.0%
Manufacturing	3.7%	Other	2.4%	Government - Military	1.6%	Transportation	1.0%

Other industries represented by fewer than 1% included: Automotive (28 respondents), IT Co./Security (27), Legal (24), Educ. – Commer. (24), Services (other) (22), State/Local Govt (22), Dist/Warehousing (21), Travel/Recreation (18), Biotechnology (16), Energy (15), Real Estate (15), Broadcasting/Cable/Video (14), Food (14), Utility (13), Pharmaceuticals (13), Accounting (12), Library (11), Gambling/gaming (11), Agriculture (10), Construction (10), Architecture (buildings) (9), Wholesale (7), VAR (6), HR/Recruiter (6), Environmental Services (6), Chemical (3), Political (3), Religion (3), Hospitality (2), Intellectual property (2), and GIS (2).

Organization Size

53.0% of respondents work in organizations with at least 1,000 people. One might expect this percentage to be even higher, since such organizations employ the vast majority of admins. 23.7% work in organizations with fewer than 100 employees (down quite a bit from previous surveys).



Travel

Generally, sysadmins don't seem to travel very much (this sort of travel is for support of the business, not for conferences/training); 53.3% (vs. 2003's 55.4% and 2002's 53.7%) of respondents don't travel at all. About 18.0% are out of town more than two weeks annually. The pie chart on the right is a graphical representation of this data.

Work Week Characterization

Sysadmins have long complained about long work weeks. The survey asked how many hours per week each respondent worked. The graph below tells the tale (for those who worked 30 or more hours per week). About half (48.5%) reported 44 or fewer hours per week; half reported 45 or more. Those reporting 60 hours or more numbered 10.1% (vs. 2003's 9.3%). For full-timers, the average work week was 45.6 hours (down from 45.7 in 2003, 46.7 hours in 2002, and 47.7 hours in 2001). This is still more like nine hours per day instead of the the mythical "USA average eight hour day." About 32.6% (vs. 27.8% in 2002) of the respondents – almost one in three – worked more than 50 hours/week (10 hours/day for a standard work week).

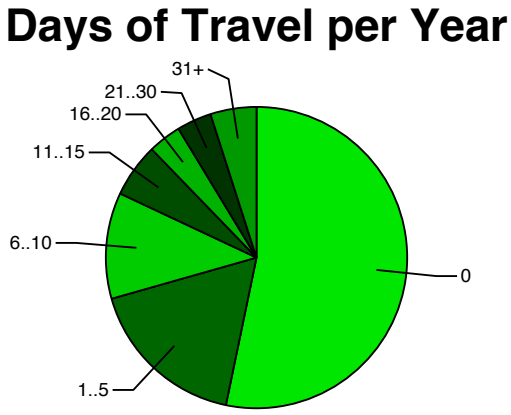
Commute Time

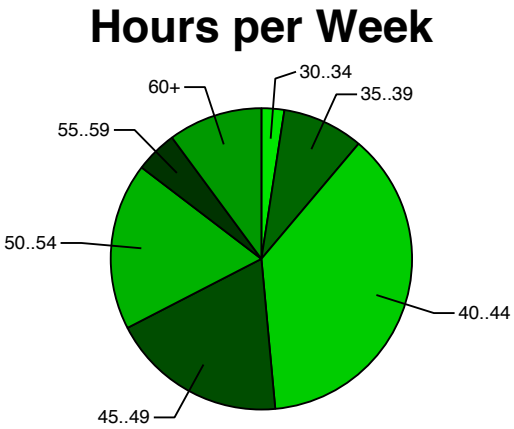
While over 13% of respondents commute (one way) for less than 10 minutes, 22.1% commute more than 45 minutes, including 2.9% at over 90 minutes. See the pie chart below for a summary.

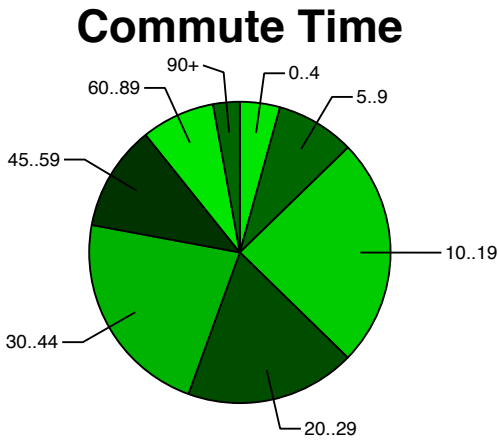
Working from Home

Telecommuting is a big buzzword in the technical community. The chart on the right illuminates interesting facts:

- 97.2% of respondents have Internet at home
- 93.6% (up from 2003's 88.9% and 2002's 75%) of respondents have full-time Internet at home
- Companies do assist in paying for connection costs (26.7% of companies pay something or everything); half (presumably those whose employers are not paying) are dissatisfied with this
- Over a third – 39.8% (vs. 2003's 38.5%) – telecommute for more than 8 hours/week
- Over 7% telecommute more than 30 hours/week
- 95.5% (up from 2003's 89.7%) connect to the Internet at speeds much greater than 1 megabit per second







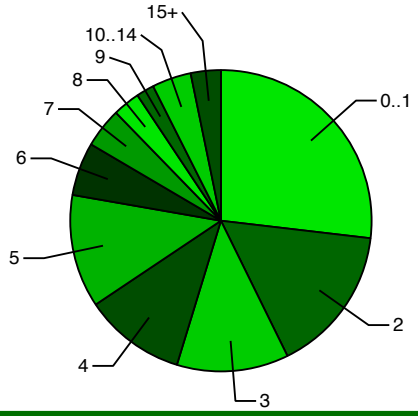
Internet at Home		
Query	No	Yes
Connection at home?	2.8%	97.2%
Full-time?	6.4%	93.6%
Company pays ANY costs?	73.3%	26.7%
Company pays ALL costs?	81.2%	18.8%
Satisfied employer's financial support?	49.5%	50.5%
More than 8 hours/week for primary employer?	60.2%	39.8%
More than 30 hours/week for primary employer?	92.8%	7.2%

Longevity and Loyalty

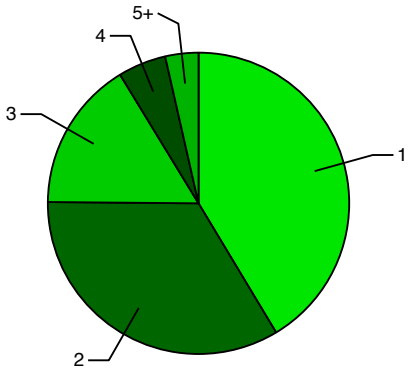
Recent economic conditions have dramatically changed notions of employer (and employee) loyalty and position longevity in many cultures. The mean job stay of those at their job at least a few months is 4.14 years (vs. 2003's 4.22 and 2002's 4.32 years); the median is right at three years. 53.1% (vs. 2003's 54%) have been at their job for less than four years. Only 13.7% (vs. 2003's 15.7%, 2002's 15.1%, and 2001's 18.4%) of those who responded say they have been with their current employer for seven years or more. Only 0.6% of respondents (vs. 2003's 2.8%) reported being in their job less than one year.

Looked at another way, it's clear that these days admins continue to move around to different jobs (for a number of reasons). Below is a chart that reveals the number of primary employers respondents report having had over the previous five years. Note that 41.4% (vs. 2003's 38.6%) have stayed with the same employer for the full half-decade.

Years on This Job



Empl's Last Five Yrs



As far as loyalty goes, the survey asked what would make people wish to change jobs. Intriguingly, compensation is #1 on the list. Job satisfaction has a huge number of components that include (from former computer company executive Bill Wallace):

- A sense of personal power; mastery over others
- Ego-gratification – a feeling of price or importance
- Financial success
- Recognition of success; reassurance of worth
- Social or group approval; acceptance of peers
- The desire to win; need to be first
- A sense of roots
- Opportunity for creative expression
- Accomplishment of something worthwhile
- New experiences
- Liberty, freedom, privacy from intrusion
- A sense of self-esteem, dignity, and self-respect
- Love in all forms
- Emotional security

Ten years ago, compensation did not so frequently come out #1 on the list.

Reasons to change jobs

Why	% Resp.	Why	% Resp.
Pay/compensation	66.9	Respect	13.7
Challenge/interest	39.5	Open source	13.7
Benefits	31.2	Telecommuting	13.0
Job security	30.2	Dress code	12.5
Faster advancement/promotion	29.2	Ethics	11.2
Improved hours/schedules	24.1	Physical environment	11.1
Location/commuting issues	23.1	Workload	10.9
People	22.4	Company size	8.9
Culture	19.7	Family-friendly	8.1
New technology	19.4	More or less travel	5.0
Management/vision	17.0	On-call/pager/mobile phone issues	4.9
Training in all forms	16.6	Intellectual property policy	4.0
Reputation, size, potential, stability, or mission	16.4	Conference attendance	3.3
Vacation time	15.7	Child care	2.3
Technology enticements	14.4	Visa/work permit	1.8
Competence	14.1	Other (please specify)	1.2

As to longevity expectations, 79.9% (vs. 80.6% for 2003, 79.4% for 2002, and 75.8% for 2001) of respondents report that they expect to be in system administration in five years. The other 20.1% answered 'No.' Both genders responded at approximately the same level. The table below shows the differences in expectations for members of various sized organizations: Only those in companies with 10-49 employees tend to be less confident of their future in computer administration than those in large companies. It is interesting that many respondents, though, still seem to think they'll be changing careers in the next half decade.

Future Prospects vs. Company Size

Stay?	0..9	10..49	50..99	100..499	500..999	1000..4999	5000+	Total
No	18.6%	27.0%	19.0%	17.0%	17.0%	20.0%	20.2%	20.1%
Yes	81.4%	73.0%	81.0%	83.0%	83.0%	80.0%	79.8%	79.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

For those who would change away from the profession, what future career areas are they considering? 566 respondents answered the question, "What else would you do?" with some answer that wasn't "Stay in the field." Management was the big winner, with about 20% (down from 2003's 25%) of the responses. See the table on the right for details. Many wanted to move into even higher tech (development, consulting, security, architect, network engineering, technical leadership). Only 5.2% responded "Anything else" or "Don't know."

Future Prospects

% Resp.	Field	% Resp.	Field
19.8	Management	1.7	Architect
17.8	Development/Engr/R&D	1.4	Sales/pre-sales/Mktg
4.8	Entrepreneurship	1.2	Retired
3.9	Continue education	[7]	Real estate
3.3	Consulting	[6]	Research
3.2	Anything else	[5]	Legal
3.0	Don't know	[4]	Technical leadership
2.5	Security	[4]	Network Engr/Security
2.2	Education	[4]	Author

Organization Membership

Professionally, 22.4% of respondents belong to some local user group; 12.2% belong to SAGE (this survey's sponsor); 10.6% belong to USENIX (SAGE's parent). The table on the right below shows not only membership but opinions on 'helpfulness' for the total set of respondents. Respondents could check one box for each organization so 'Belong & Helpful' means not only do they belong but also they think the organization is helpful. Local groups came out on top this time.

A few other organizations garnered mention for this query. Ignoring the 184 associations that did not garner at least four mentions, here is the list of those with four or more citations: ISC2 (17), ISSA (16), SAGE-AU (9), BCS (6), InfraGard (5), BayLISA (4). ISACA (4), MCP (4), PMI (4), and SAGE-IE (4),

Technical Assns. and Rated Utility

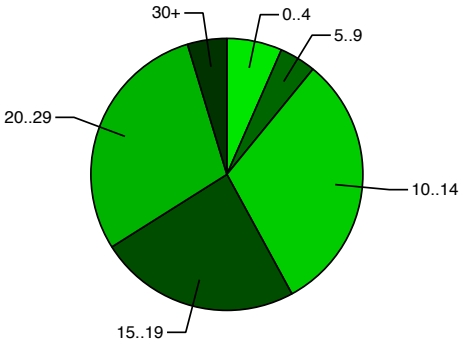
Organization	Do not belong	Belong	Belong & helpful	Belong & very helpful
Local affinity group	77.6%	8.1%	8.9%	5.4%
SAGE	87.8%	3.1%	6.2%	3.0%
USENIX	89.4%	3.7%	4.7%	2.2%
SANS	92.9%	2.4%	2.9%	1.8%
IEEE	94.2%	2.9%	1.8%	1.1%
ACM	94.0%	3.2%	1.8%	1.0%

Traditional Time Off

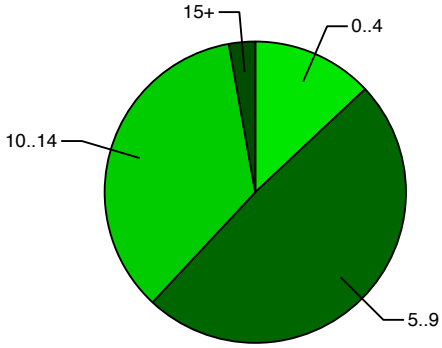
Like most professionals, system administrators usually get some paid vacation (in addition to paid holidays). While 5.4% of those reporting say they get no paid vacation, the mean of those who do is about 15.2 days (not counting those who report more than 30 annual days off); this is the same vacation level as 2003. The median is 15 days. While experience in the field can yield increased vacation days, staying with a single employer longer can yield even greater vacation (see the charts below).

Note that some cultures have much longer vacation than those in the USA; this accounts for some of the higher numbers on the right.

Annual Days Paid Vacation



Paid Holidays



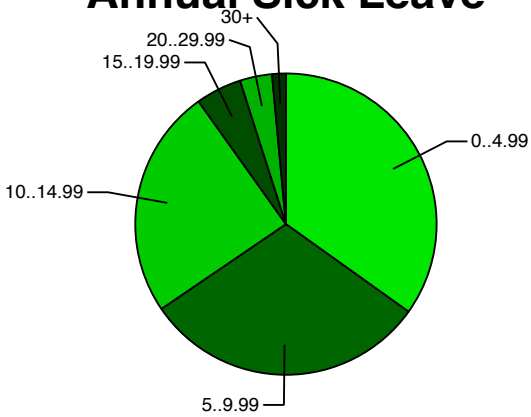
Exper. vs. Days Off

Years Experience	Days Vac.	Years Experience	Days Vac.
0	10.4	6	16.4
1	12.4	7..9	16.7
2	13.2	10..14	16.3
3	14.0	15..19	16.7
4	15.0	20+	17.1
5	16.3		

Longevity and Vacation

Years at Employer	Days Vacation	Years at Employer	Days Vacation
0	13.7	6	18.1
1	13.1	7..9	18.9
2	14.3	10..14	19.4
3	15.6	15..19	19.7
4	16.7	20+	21.4
5	16.9		

Annual Sick Leave



Sick days are another kind of time off work. Of those responding, 16.4% (up from 2003's 12.7% and 2002's 12.07%) receive no sick days. The mean was 6.9 (compared to 2003's 7.4 days and 2002's 7.1 days); the median was 5 days (vs. 2003's 6 days and 2002's 5 days). Above on the right is a chart of sick day allocation (for those who have limits).

Benefits

The chart on the right describes insurance coverage for the survey's respondents. The survey still has a bit of a problem in integrating Euro-style and other non-USA insurance programs.

Insurance Coverage

Coverage	Not offered or not used	Unpaid	Partly paid	Fully paid
Life insurance	25.2%	9.5%	37.7%	27.7%
Health insurance	13.1%	4.0%	55.8%	27.0%
Disability insurance	29.1%	9.4%	36.9%	24.7%
Dental insurance	19.5%	8.0%	51.6%	20.9%
Vision care insurance	27.2%	10.4%	45.2%	17.2%

73.1% (vs. 2003's 75.2%) of respondents report that their employer contributes to a retirement fund on their behalf. Respondents also reported on receiving other extra benefits.

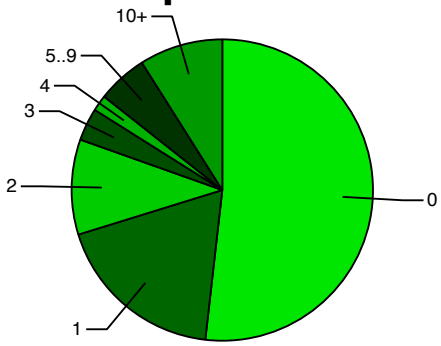
Benefits Reported

Benefit	% Resp.	Benefit	% Resp.
401(k) matching	41.5	Flexible/cafeteria plan for benefits	15.0
401(k), etc.	38.9	Domestic partnership benefits	14.3
Education support	37.9	Performance or signing bonus	14.1
Family medical insurance	37.7	Hardware/telecomm assis	13.4
Cell phone (paid)	35.8	Donation matching	13.0
Food/drink at work	31.3	Profit sharing	10.5
Flextime/flexible hours	26.9	Commuting assistance	9.2
Parking	23.8	403(b)	7.6
Discounts of various kinds	23.1	Child care/childcare assistance	6.2
Telecommuting	21.4	Association memberships	6.2
Conference/tutorials	21.1	Company car (or lease)	3.3
Retirement plan/fund/program	20.7	Special pensions	3.1
Gym, health club membership	19.8	Housing/home loan	2.6
Stock	18.5	RRSP	2.4
Credit union	16.6	IRA	2.2
Employee stock ownership plan	16.5	Other	1.7

Hiring Outlook

Respondents were asked to estimate the number of sysadmins to be hired in the upcoming year. The chart on the right summarizes this optimistic outlook. Almost half (49.2%) anticipate hiring at least one person. Almost 9.0% anticipate hiring ten or more.

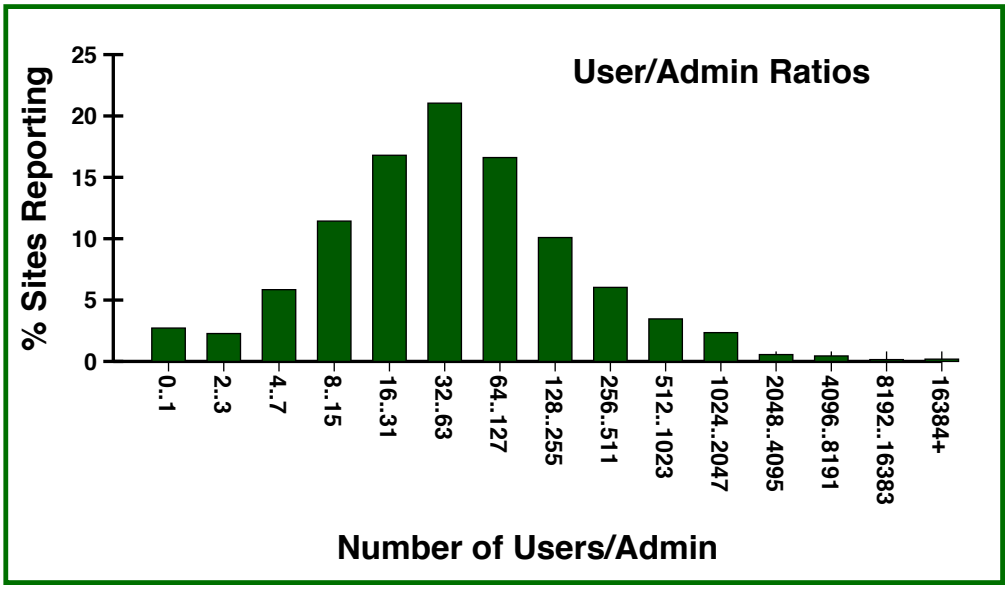
Anticipated Hires



Users per Admin

Managers often look to SAGE for a ''universal constant'' that is the number of full-time-equivalent users that a single administrator can mange. This year's survey again collected data from which to estimate this elusive value. The answer is, ''it depends.'' A site with resource-intensive users might require far more admins than, for example, eBay, which has a huge number of users but a smaller admin ratio, since the users are generally exploiting a single application.

As reported in previous surveys, the breakdown shows a bell-shaped distribution when plotted against a logarithmic scale for the number of users; see the chart below.



Some notes on this chart:

- A small number of respondents appears to have responded with unusual and probably erroneous numbers (e.g., 40,000 admins for 40,000 users). They did not materially affect the presentation above.
- Multiple respondents from the same company will skew that company's ratio a bit higher on the ''Sites Reporting'' scale.

This same bell curve (on a logarithmic scale!) has appeared now for the better part of a decade.

Salary Information

Demographics are interesting, but salaries form the heart of a salary survey. Here's a quick rundown of how some people work and get paid:

- 63.8% (vs. 2003's 65.1%) of employees are "generally satisfied with their compensation package" (36.2% aren't)
- 48.5% of respondents are not specially compensated for overtime
  - 10.9% receive both cash and/or time off as compensation for overtime work
  - 11.6% receive cash compensation for overtime work
  - 29.0% receive time off as compensation for overtime work
- 70.4% of respondents are not specially compensated for 'night' (shift) work
  - 19.7% receive comp time or other compensation for special hours
  - 9.8% receive more money for special hours
- 71.6% (2003: 73.5%; 2002: 69.9%) of respondents are at least occasionally required to be on call, wear a pager, or carry a cell phone
- Of those required to be on call, 15.6% receive compensation (4.1% comp time, 9.1 money, 2.4% either).
- 28.4% (vs. 2003's 25.5% and 2002's 44.2%) of respondents never carry a pager/cell phone; 42.2% (vs. 2003's 44.2%) wear a pager/cellphone all the time. The rest are on call at various frequencies: 5.5% are on call one week out of two or more; 3.9% are on call one week out of three or so; 4.5% are on call one week out of four or so; 4.4% are on call one week out of five or so; 7.1% are on call one week out of six or so; 4.0% are on call sometimes, but less than one week out of six.
- 26.7% (vs. 2003's 27.5% and 2002's 30.3%) of respondents receive some sort of stock bonus
- 90.8% of respondents work for a single employer
- 84.4% of respondents are salaried; 15.6% (up from 2003's 13.7%) are paid hourly

This statistical summary attempts to describe the state of salaries and salary changes over the last year by examining salary with respect to gender, age, experience, geography, industry, and other factors.

The number of respondents in certain sub-categories is occasionally too low to draw valid statistical inferences (e.g., just one person in Anchorage, Alaska). Generally, statistics that are nonreliable by virtue of their small sample size are either not reported or reported with a '#' that marks them as unreliable.

Salary Change Summary

The average salary change for those 2,103 full-time respondents with incomes of US$10K-US$200K with salary changes from -30% to 30% (from all nations and currencies) was 6.12%.

8.0% earned less this year; 24.1% had no change in salary. Of those 75.9% who increased their salaries no more than 30%, the average increase increase was 9.2% (vs. 2003's 8.2%). In a surprising development, raises were spread fairly evenly throughout the salary range, with higher earners being dramatically less penalized than in the past.

Unlike past results, where it appeared that managers were allotting a pot of raise-dollars to a number of variously paid staff, this year's dollar-value of raises was *much* higher for the $100K+ brackets.

To the right is an overall chart of last year's salary changes, calculated against last year's salary – and shown by gender. It does not show experience or job categories and thus should be viewed only as an overall picture. Little gender difference appears except in the highest range, where the small number of females gives statistics from which it is difficult to draw a general conclusion.

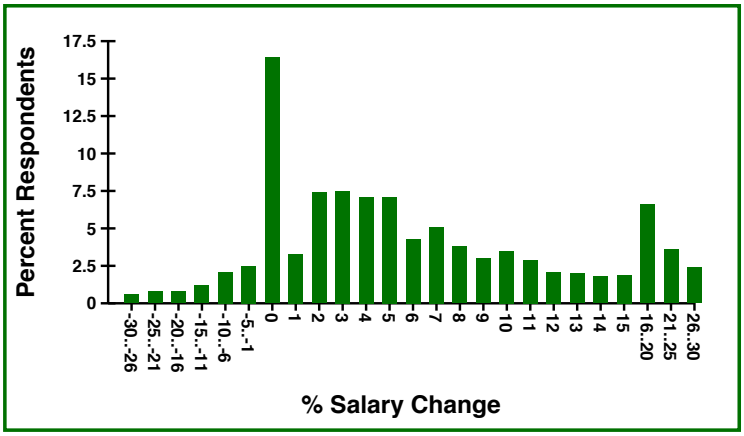
The page's final chart shows the various salary changes. It's easy to see that the 2-5% range was very popular in addition to the "no raise" and the 16..20% options.

Increases by Salary Range

Range	% in Range	% Incr	Incr (US$)
< 20,000	1.5	4.7	781
20,000-29,999	4.3	5.2	1,343
30,000-39,999	10.1	6.6	2,258
40,000-49,999	13.9	7.6	3,389
50,000-59,999	15.3	6.6	3,554
60,000-69,999	13.6	5.6	3,576
70,000-79,999	12.3	6.1	4,444
80,000-89,999	9.5	5.2	4,331
90,000-99,999	7.6	4.9	4,565
100,000-124,999	8.1	5.9	6,437
125,000-149,999	2.8	6.3	8,500
150,000-174,999	0.8	12.5	19,279
175,000-199,999	0.3	8.9	16,489

Salary Raises from Year to Year

% Inc.	All	Male	Fem.	% Incr.	All	Male	Fem.
-30..-10	3.4	3.5	0.0	10..11.99	6.4	6.6	2.8
-9.99..-5	2.0	2.0	1.4	12..13.99	4.1	4.1	4.2
-4.99..0	2.5	2.5	1.4	14..15.99	3.6	3.6	2.8
0..1.99	19.6	19.6	19.7	16..17.99	2.7	2.6	4.2
2..3.99	15.1	15.0	19.7	18..19.99	1.8	1.8	1.4
4..5.99	14.5	14.7	8.5	20..29.99	7.8	7.5	15.5
6..7.99	9.4	9.4	9.9	30+	0.2	0.3	0.0
8..9.99	6.9	6.9	8.5				



Bonuses

Some companies give one-time rewards to people in lieu of changing their salary. The respondents were asked whether they received such a bonus/incentive and why:

Reasons for Bonus/Incentive

Reason	% Resp.	Reason	% Resp.
Did not receive at least 4% raise	40.7	Collective bargaining/union	2.2
Annual raise	25.0	Achieved goals	2.2
Changed (reclassified) position	19.4	Client/customer satisfaction	1.9
Corporate success/profit sharing	13.7	Earned a certification	1.4
Became involved in a high-profile project	11.8	Corporate buyout/takeover	1.2
Contractual	11.4	Improved speaking, writing, and/or presentation skills	1.0
Changed employers/job	6.0	Departure of others	[27]
Cost of living adjustment/COLA	4.6	Changed to management	[19]
More active planning/mgmt role	3.7	Earned a college/advanced degree	[11]

Other reasons mentioned: Adjusted toward norm (5), Union (3), Fear of losing employee (3), Company grew (3), Good job (2), Worked more (1), Salary banding (1), Hour -> Salary (1), Grew family (1), Finished probation (1), and Boss likes me (1).

Working More

Does working more imply getting a bigger salary change? The table at the right suggests that this is true at the highest end of work hours, where 5.7% of respondents toil.

Hrs vs. Incr.

Hours	% Incr.	% Resp.
30-39	6.2	11.3
40-44	5.7	42.0
45-49	5.9	20.2
50-54	6.5	17.3
55-59	6.2	3.6
60-64	9.2	4.3
65+	9.0	1.3

Salaries vs. Experience

Experience counts. Those with less than three years of experience report incomes that average $40,000 less than those with more than ten years experience – but the next ten years brings only a $3,000 average gain (thus demonstrating salary compression). The charts on the next page show *total* compensation (after last year's salary change) vs. experience.

This table summarizes the experience vs. salary numbers for those reporting in US currency. The graphs below, however, are also illuminating, since they enable you to pinpoint just where you stand in the (almost) bell curve of salaries for those with similar experience.

The table includes three sets of statistics, all of which are narrowed by requiring last year's increase to be in the range -30..30, income to be in the range US$10,000..US$200,000, experience to be at least one year, weekly work at least 30 hours/week, and salary to be reported in US dollars (thus restricting the numbers mostly to the USA – no other countries had enough respondents to create valid general statistics). Statistical groups include:

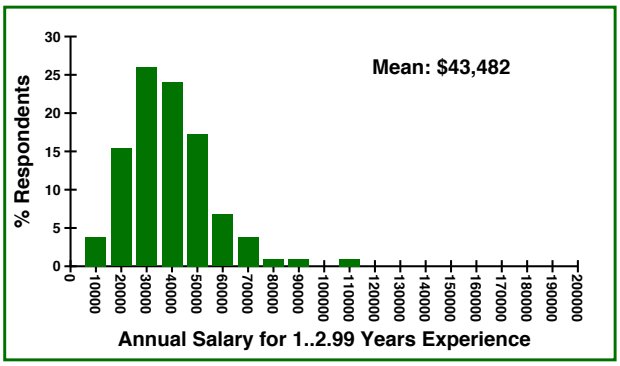
- Summary of all respondents who meet the conditions above.
- Only those who actually increased their salary in 2003.
- Only those who have worked for the same organization for at least two years (i.e., this column arguably shows the raises people get at an organization instead of by changing to a new job).

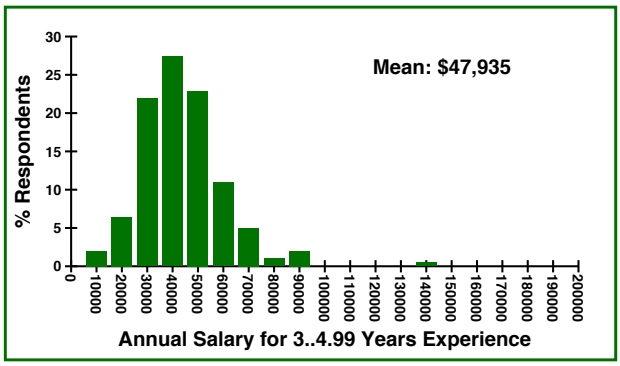
Note in all statistics that even though the percentage of increase ranges widely, the dollar increase holds much closer to constant across experience levels.

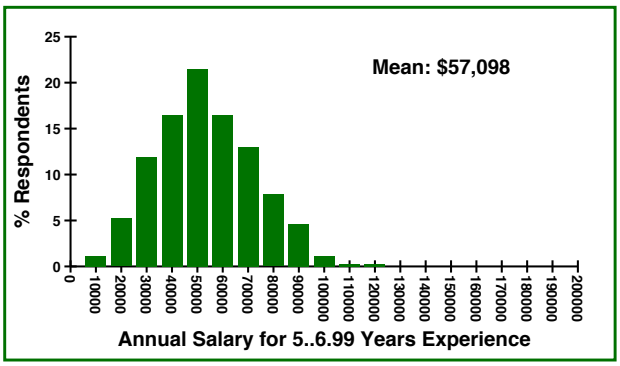
Adm. Experience vs. Salary and Increase

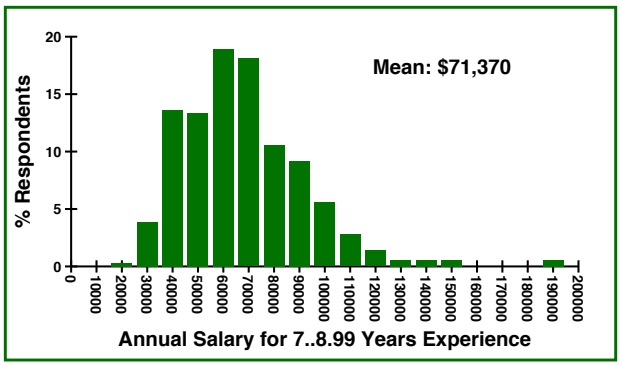
Exp Range	% Resp.	All Responses Sal.	All Responses --Incr--		Raise > 0 Sal.	Raise > 0 --Incr--		Same Co. >2 Yr Sal.	Same Co. >2 Yr --Incr--	
0..0	0.5%	48,280	13.0%	$6,254	52,075	16.7%	$8,674	32,218	12.7%	$4,106
1..2	5.9%	43,482	7.6%	$3,324	43,752	12.8%	$5,582	43,698	8.4%	$3,677
3..4	11.3%	47,935	6.8%	$3,239	50,006	11.0%	$5,516	47,740	7.6%	$3,640
5..6	19.4%	57,098	7.0%	$3,994	57,425	10.2%	$5,878	56,660	6.9%	$3,908
7..8	20.2%	71,370	6.8%	$4,875	72,762	9.0%	$6,521	71,729	6.6%	$4,705
9..10	15.7%	76,900	5.1%	$3,887	78,327	7.3%	$5,723	77,598	4.8%	$3,744
11..15	17.5%	86,302	4.5%	$3,921	86,685	7.6%	$6,620	86,959	4.6%	$4,025
16..19	4.9%	89,701	4.8%	$4,299	90,235	7.4%	$6,639	93,419	4.3%	$3,974
20+	4.6%	92,430	3.5%	$3,272	95,598	7.5%	$7,130	93,327	4.4%	$4,124

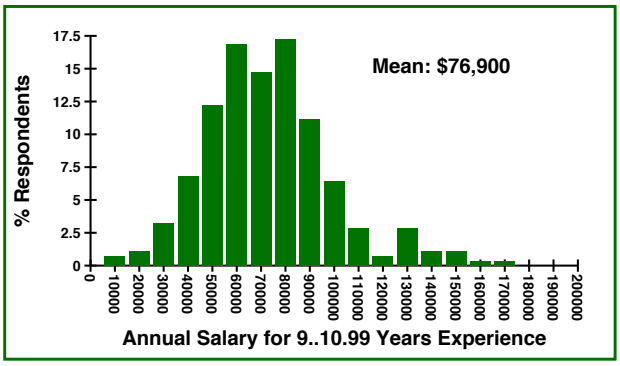
Below are the overall distributions for salary vs. experience, though they include all countries with no special processing for geography.

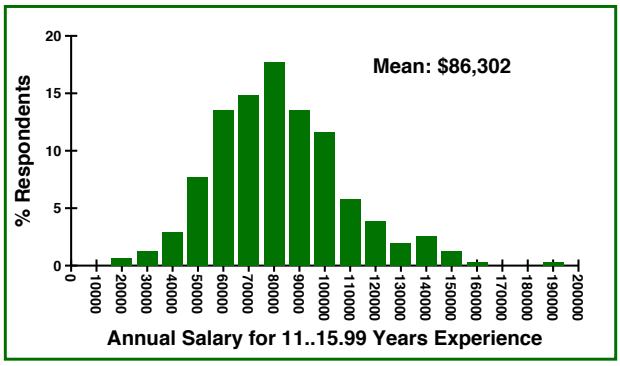


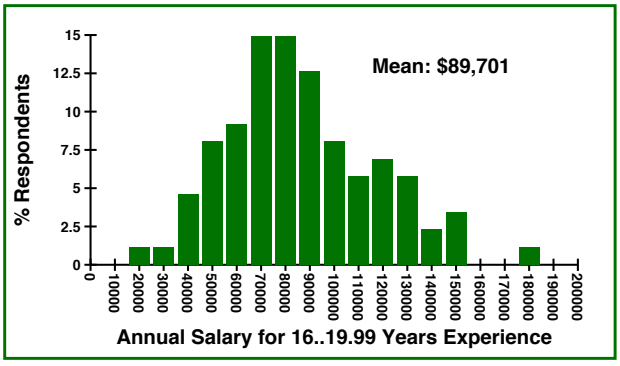


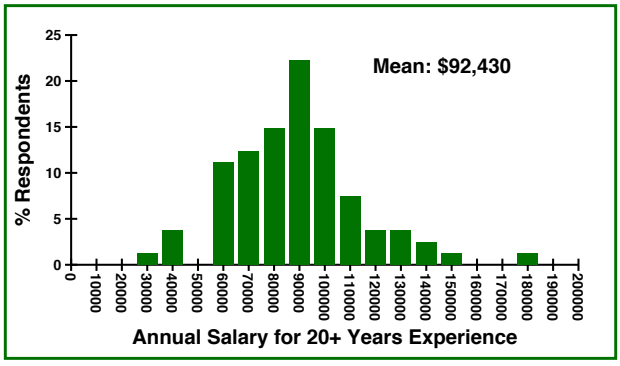












The charts show pleasing bell-curve distributions that connote the validity of the statistics. A small number of dramatically higher-paid respondents ups the average a slight bit in just about every chart. Checking the records uncovers that some of these were due to one-time bonuses for various reasons.

Gender Studies

As time goes on, women are, in general, catching up to men in experience (years ago, computer professions were truly male-dominated). The charts on the right show the distribution and average salary increase for the entire group and for males/females broken out. The top chart includes the very high and very low salaries in addition to very positive and very negative salary swings.

Females seem to be overrepresented in the $30K-59K range (again, potentially due to experience). They appear strongly in the $150K+ range, but not many people overall fit into the ranges (and thus this data is not a strong case for argument).

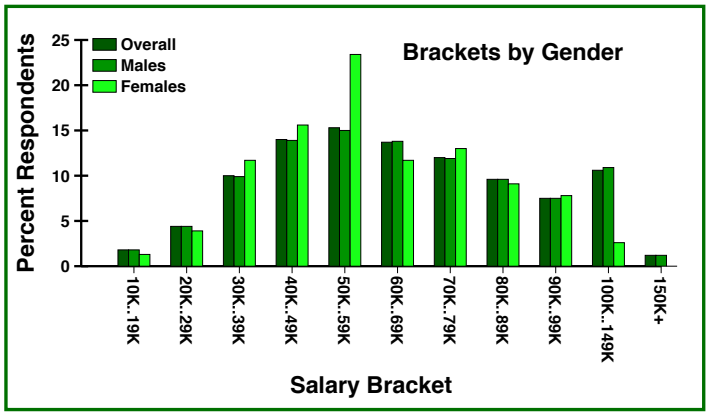
On the right below is a graphical representation of the same salary brackets by gender. Generally, salaries for women keep pace with men throughout. This is good news for former victims of the "pink ceiling."

Salary vs. Years of Experience

	Overall		Male		Female	
Years	AvgSal	% Resp.	AvgSal	% Resp.	AvgSal	% Resp.
0..2	43,133	10.9	43,372	10.9	36,283	11.1
3..4	47,216	14.2	46,877	13.9	53,772	21.1
5..6	57,638	19.2	57,740	19.3	54,187	16.7
7..8	69,497	18.7	69,585	18.8	66,386	15.6
9..10	74,425	13.9	74,451	14.1	73,048#	7.8
11..15	85,025	15.2	84,861	15.1	89,378	16.7
16..19	89,767	4.0	91,028	3.9	71,215#	7.8
20+	88,357	4.0	88,678	4.0	77,003#	3.3

Increases by Gender & Sal. Range

	Overall		Male		Female	
Salary	N	Incr.	N	Incr.	N	Incr.
10,000..19,999	1.8%	0.6%	1.8%	0.6%	1.3%	0.0%
20,000..29,999	4.4%	1.4%	4.4%	1.5%	3.9%	-1.4%
30,000..39,999	10.0%	4.6%	9.9%	4.6%	11.7%	4.1%
40,000..49,999	14.0%	7.7%	13.9%	7.5%	15.6%	13.1%
50,000..59,999	15.3%	7.4%	15.0%	7.1%	23.4%	17.8%
60,000..69,999	13.7%	5.4%	13.8%	5.5%	11.7%	3.2%
70,000..79,999	12.0%	5.3%	11.9%	5.2%	13.0%	9.7%
80,000..89,999	9.6%	3.7%	9.6%	3.5%	9.1%	10.4%
90,000..99,999	7.5%	2.7%	7.5%	2.6%	7.8%	6.4%
100,000..149,999	10.6%	4.7%	10.9%	4.8%	2.6%	1.2%
150,000+	1.2%	0.9%	1.2%	1.0%	0.0%	0.0%



Salary and Education

Education is often said to enhance salaries. The chart on the right (which is for general education, not technical education), while not accounting for experience, shows that this adage seems to hold true except for the 23 strange cases of those reporting "no high school diploma." Note that certificates and Associate's Degrees do not contribute nearly as strongly as some technical school advertisements might suggest.

The second chart on the right shows average salaries compared against 'relevant' education. This chart reflects a very traditional sort of observation: more, better education yields higher salaries.

The next chart breaks down salary by experience and gender. The # means that the sample is probably too small to believe the numbers.

Generally, it appears that both education and longevity pay off though women seem a bit short-changed after 15 years of experience.

Salary vs. Education

EducLevel	AvgSal	AvgInc	% Resp.
Ph.D./D.Sc.	77,790	5.0%	1.9%
Master's Degree	72,245	4.9%	10.3%
Less than High School Diploma	68,514	3.9%	[25]
Bachelor's Degree	66,356	6.5%	42.1%
Some College or Technical School	63,030	6.0%	26.7%
High School Diploma	60,230	5.9%	4.3%
Associate's Degree	56,507	6.6%	8.3%
Technical Certificate(s)	55,165	6.9%	5.5%

Salary vs. Relevant Education

EducLevel	AvgSal	AvgInc	% Resp.
Ph.D./D.Sc.	74,079	6.9%	[15]
Master's Degree	73,286	5.0%	6.9%
High School Diploma	69,565	6.3%	8.4%
Bachelor's Degree	66,423	6.2%	30.5%
Less than High School Diploma	64,554	5.9%	18.4%
Some College or Technical School	62,368	6.2%	16.8%
Technical Certificate(s)	58,931	6.7%	12.6%
Associate's Degree	55,893	6.6%	5.9%

Salary and Incr. by Education/Exp.

Education level	0..1	2	3..4	5..9	10..14	15..19	20+
Ph.D./D.Sc.	30,000 20.0#	50,705 -1.0#	63,497 25.0#	63,555 3.9	130,000 5.7#	94,456 7.4#	117,000 6.4#
Master's Degree	65,291 5.0	48,715 4.6	57,028 10.6	74,813 4.8	81,904 4.5	85,274 2.4	85,316 5.5
Bachelor's Degree	46,645 4.3	44,726 7.9	50,645 7.1	63,013 7.4	83,785 4.7	89,659 4.5	100,324 2.2
Assoc. Degree	34,115 2.0	45,000 22.7#	41,728 8.5	53,816 7.9	75,519 2.1	72,441 3.2	87,212 3.6
Some Coll/Tech Sch	38,642 18.8	37,438 6.5	41,713 6.1	61,949 6.3	80,182 6.2	77,202 3.3	72,082 6.1
Technical Cert(s)	31,704 16.0#	35,139 8.8	38,582 8.0	60,687 6.8	74,462 6.3	65,022 4.7	81,518 -7.1
High School Diploma	47,405 7.7	35,500 14.9#	53,560 8.6	66,280 6.1	79,569 5.4	86,269 4.9	99,696 7.5
Less than HS Diploma	33,331 1.8	41,516 8.4	45,119 6.5	62,291 6.6	79,413 3.6	96,656 5.8	92,657 6.7

Salary in USA Metro Areas

The cost of living varies in different cities (e.g., New York City is very expensive; Kansas City is less so). The chart on the next page shows how compensation varies in some of the larger tech cities. All salary reports are converted dollars using 13 July 2004 exchange rates.

Average Salary by Metro Area

Metro area	Salary	% Incr	% Resp.	Metro area	Salary	% Incr	% Resp.
Washington, DC	91,098	6.4	5.0	Atlanta, GA	70,787	4.2	2.3
San Francisco/San Jose/Silicon Valley, CA	90,513	5.8	9.0	London, England	68,756	10.7	0.5
San Diego, CA	87,524	6.9	1.7	Philadelphia, PA	64,180	6.1	1.8
New York	82,974	7.0	5.0	Research Triangle, NC	62,976	6.2	1.5
Chicago, IL	77,295	6.2	3.8	Sydney, Australia	61,474	3.8	0.8
Denver, CO	77,067	5.9	3.1	Ottawa, ON	59,221	2.0	0.6
Austin, TX	76,025	6.9	1.6	Houston, TX	58,968	4.8	1.1
Dallas, TX	75,655	4.2	2.6	N/A	58,307	5.8	42.5
Seattle/Redmond, WA	74,925	5.4	3.9	Toronto, ON	57,454	7.1	2.5
Boston, MA	74,069	7.5	3.4	Vancouver, BC	45,246	7.8	1.4
Los Angeles/Orange Co., CA	73,884	6.8	5.4	Montreal, QC	39,688	0.8	0.6

The chart on the next page factors in both self-reported (vs. derived) geography and experience; all salaries are converted to US$.

The # symbol means the sample size is small and not trustworthy; boxes with '----' had few or no samples.

Avg Salary/Raise by Area/Experience

Area	0..1	2..4	5..9	10..14	15..19	20+
Washington, DC	87,162 9.0#	61,680 5.5	82,463 8.4	106,230 4.7	115,357 7.1	91,250 -0.9
San Francisco/San Jose/Silicon Valley, CA	45,600 5.3	62,312 8.8	82,990 6.7	103,313 4.7	108,723 4.8	116,750 2.0
San Diego, CA	---- ----	75,000 7.1#	70,888 10.3	96,600 11.3	99,000 0.6	89,250 4.2
New York	55,000 5.8#	49,850 4.8	82,172 6.6	120,276 8.5	95,831 10.9	101,361 9.3#
Chicago, IL	67,560 12.5#	48,614 11.7	72,004 6.2	93,636 -1.0	93,405 2.2	133,730 9.5
Denver, CO	61,000 10.8#	62,000 6.9#	65,784 8.9	80,741 2.2	85,995 4.6	106,200 2.5
Austin, TX	---- ----	43,000 12.1#	71,340 4.9	73,800 6.7	91,285 9.7	85,750 2.1#
Dallas, TX	---- ----	36,500 10.2#	64,596 3.9	89,208 3.2	91,133 4.2	94,000 7.1#
Seattle/Redmond, WA	---- ----	48,900 4.5	70,398 7.3	88,072 3.8	89,139 1.4	---- ----
Boston, MA	62,000 3.1#	53,838 8.5	74,340 9.7	81,525 4.3	102,016 2.9	91,666 4.9#
Los Angeles/Orange Co., CA	29,000 -11.2#	53,134 11.0	70,323 8.6	87,396 3.6	106,333 7.3#	82,850 1.7
Atlanta, GA	39,875 1.9#	60,500 -4.8	61,812 6.7	84,019 6.0	93,000 0.3#	89,000 3.5#
London, England	---- ----	52,765 12.8	78,421 9.9	---- ----	---- ----	94,061 6.0#
Philadelphia, PA	27,500 5.8#	49,828 7.4	65,346 6.9	84,000 3.7	92,766 1.6#	---- ----
Research Triangle, NC	---- ----	55,625 3.7	56,390 7.0	66,500 4.9#	99,591 4.1#	65,330 10.3#
Sydney, Australia	---- ----	43,380 0.8	50,073 4.7	72,638 2.3#	115,001 8.9#	---- ----
Ottawa, ON	---- ----	49,104 3.6#	47,622 6.7	60,110 0.0#	76,408 -5.2#	79,583 0.0#
Houston, TX	15,000 0.0#	37,333 -3.7#	50,412 4.3	91,020 12.5	63,000 1.6#	72,000 2.9#
N/A	33,755 9.0	43,192 6.6	56,453 6.2	70,650 4.7	69,541 3.4	80,793 8.1
Toronto, ON	38,310 18.0#	43,508 11.6	54,515 7.2	60,957 4.6#	71,540 1.5	103,006 -1.1#
Vancouver, BC	31,325 5.7#	41,908 9.8	46,267 5.4	51,329 10.1	---- ----	---- ----
Montreal, QC	42,331 11.1#	32,305 1.9	47,411 -7.1#	50,798 9.1#	---- ----	---- ----

SAGE Job Classifications vs. Salary

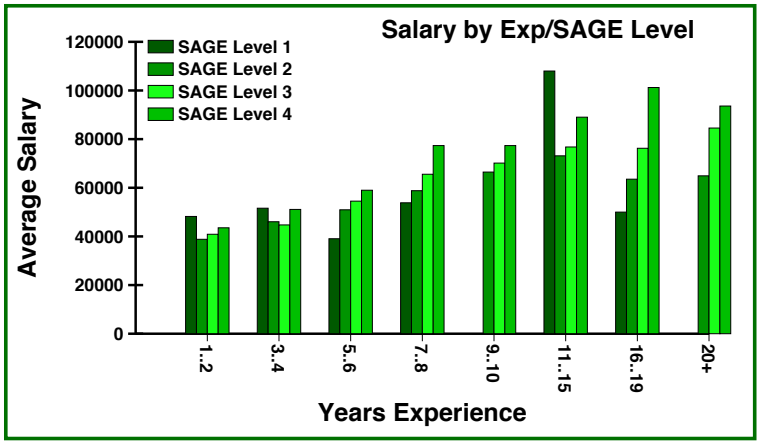
The SAGE job classifications were detailed previously. This table shows how classification and experience affect salary. Generally, higher numbers seem to appear exactly where one would expect.

Increase/Salary for SAGE Classif. and Experience

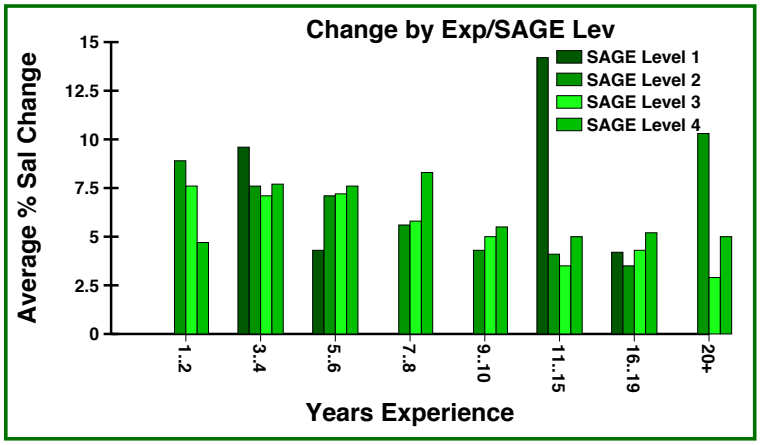
	Level 1		Level 2		Level 3		Level 4		N/A	
Exp Yrs	Sal	%Incr	Sal	%Incr	Sal	%Incr	Sal	%Incr	Sal	%Incr
1..2	48,214	-0.3	38,818	8.9	40,889	7.6	43,545	4.7	54,697	12.1
3..4	51,602	9.6	46,035	7.6	44,726	7.1	51,100	7.7	49,583	12.4
5..6	39,049	4.3	50,947	7.1	54,508	7.2	58,993	7.6	56,446	7.5
7..8	53,824	-2.2	58,799	5.6	65,562	5.8	77,350	8.3	58,365	5.8
9..10	----	----	66,461	4.3	70,149	5.0	77,348	5.5	70,325	5.7
11..15	108,000#	14.2#	73,135	4.1	76,772	3.5	89,028	5.0	88,074	8.4
16..19	50,000#	4.2#	63,535	3.5	76,243	4.3	101,226	5.2	----	----
20+	----	----	64,910#	10.3#	84,559	2.9	93,610	5.0	110,080#	-11.1#

The '#' symbol means the number of respondents is small and not to be trusted too much. In fact, each of the observations that appears anomalous is indeed marked that it is not to be trusted.

On the right is a graphical chart of the salaries. It is extremely intuitive, with higher salaries for more experience and apparently higher skill levels. The spike in 11..15 Level 1 group is due to one person in a group of two having a high salary. Email confirmed that he is an experienced engineer in another area.



On the right is a graphical chart of the salary increases for the various SAGE levels. The effects of salary compression are exposed here as the presumably younger admins catch up to the older respondents. The huge peak at 11..15 experience for SAGE Level 1 is due to one of the two respondents in that category getting a large raise; the same situation happened for the 20+ Level 2 category.



Salary by Focus, Experience, and Region

Sometimes it is easier to compare salaries and increases by focus. The charts to the right and on the next pages explore that possibility. Foci are sorted roughly in descending order of apparent earning power. It is interesting that some concentrations are not long-term careers (e.g., networking, help desk, desktop). The database folks didn't seem to fare too well after 10 years; perhaps the sample size is truly too small.

The # symbol means the sample size is small and not to be trusted too much.

Refining data to ever smaller subsets sometimes yields sample sizes that are too small. However, it is very useful to explore the salary and salary changes for regions, specialties, and experience. It is the tables below and on the next pages that can make it easy to compare salaries. These regions were derived from reported zip codes.

Salary and Raise by Title and Years of Experience

Title	2..4	5..9	10..14	15..19	20+
People management	52,000 2.9#	86,961 9.3	96,584 5.5	105,884 7.1	97,463 4.5
Security	41,293 5.7	70,096 6.2	85,263 5.4	78,560 2.5	91,763 4.0
Technical lead	51,626 6.7	67,773 7.1	84,515 4.7	92,762 4.4	96,859 7.2
Databases	40,914 7.4	65,363 6.5	82,920 7.2	58,000 -6.6#	59,479 0.7#
Generalist	43,164 7.6	61,545 6.9	81,714 4.6	90,364 3.8	86,015 5.3
Project management	46,966 6.2	72,311 6.0	81,990 7.5	89,238 6.5	---
Other	52,509 4.3	65,778 6.6	79,523 4.5	74,081 3.5	81,402 -6.2
Server management	44,964 7.9	60,790 6.3	77,228 4.9	79,399 5.1	91,942 1.5
Networking	50,023 10.4	61,930 7.8	71,711 4.8	73,428 2.6	74,960 6.2#
Help desk	36,302 8.8	44,083 5.0	45,750 3.9#	55,333 3.4#	---
Desktop	41,062 10.9	54,607 4.8	43,429 3.6#	---	---

Salaries (K$)/Raises by Region/Exp.

Region	1..2	3..4	5..6	7..8	9..10	11..15	16..19	20+
Akron	--- ---	51.0 8.6	51.2 9.5	--- ---	--- ---	--- ---	--- ---	--- ---
Arlington	--- ---	--- ---	51.7 3.0	68.3 3.0	80.6 4.6	90.7 3.0	--- ---	--- ---
Atlanta	63.7 1.5	--- ---	62.5 4.8	74.2 8.4	91.0 6.5	88.8 2.8	--- ---	--- ---
Austin	--- ---	--- ---	--- ---	81.2 10.6	81.2 4.7	91.9 6.8	--- ---	--- ---
Balt/Wash., DC+	--- ---	70.3 4.5	73.4 2.7	84.0 10.8	99.9 6.8	113.3 6.2	127.1 8.4	96.9 0.4
Boston+Area	--- ---	58.4 8.8	69.2 9.5	73.4 6.9	81.6 5.7	90.0 3.7	95.7 5.4	--- ---
Chapel Hill	--- ---	--- ---	54.8 9.5	61.3 4.0	--- ---	--- ---	--- ---	--- ---
Chicago	45.4 10.7	58.9 15.0	79.1 6.7	75.2 5.3	100.7 7.8	94.0 0.8	--- ---	138.7 9.5

Salaries (K$)/Raises by Region/Exp.

Region	1..2	3..4	5..6	7..8	9..10	11..15	16..19	20+
Cincinnati	--- ---	--- ---	48.6 3.9	63.9 7.4	--- ---	--- ---	--- ---	--- ---
Columbus	--- ---	--- ---	--- ---	72.7 9.5	--- ---	89.4 9.8	--- ---	--- ---
Denver/Front Range	--- ---	--- ---	68.0 8.1	73.7 11.3	76.6 4.4	85.7 0.9	93.8 6.4	111.2 2.5
Detroit	--- ---	--- ---	50.0 3.1	71.2 7.1	72.2 2.6	82.9 6.0	--- ---	--- ---
Fort Wayne	--- ---	--- ---	64.7 7.7	88.6 10.0	--- ---	--- ---	--- ---	--- ---
Houston	--- ---	--- ---	--- ---	--- ---	79.5 5.7	--- ---	--- ---	--- ---
Indianapolis	--- ---	--- ---	44.2 9.2	--- ---	--- ---	--- ---	--- ---	--- ---
Kansas City	--- ---	--- ---	65.0 -0.2	--- ---	--- ---	--- ---	--- ---	--- ---
Los Angeles	57.6 11.4	56.4 9.0	66.9 8.1	81.6 6.2	93.9 5.9	87.4 4.2	--- ---	92.7 2.4
Miami/Ft. Laud.	--- ---	--- ---	--- ---	--- ---	73.8 3.1	94.1 8.7	--- ---	--- ---
Milwaukee	44.5 15.2	--- ---	--- ---	--- ---	77.9 2.5	--- ---	--- ---	--- ---
Mpls/St. Paul	--- ---	--- ---	73.7 5.0	80.3 4.9	82.0 2.4	89.3 -2.2	--- ---	--- ---
New York	54.3 5.8	53.8 4.7	69.6 10.4	93.9 7.0	94.6 4.5	111.9 9.9	--- ---	98.5 8.9
Orlando/Tampa	--- ---	--- ---	53.1 10.6	57.5 5.1	--- ---	67.0 7.6	--- ---	--- ---
Philadelphia	--- ---	54.8 7.8	69.0 6.7	63.7 6.1	94.4 5.8	--- ---	--- ---	--- ---
Phoenix	--- ---	--- ---	55.3 6.7	67.6 5.3	83.2 1.6	104.8 0.0	--- ---	--- ---
Portland	--- ---	43.9 10.9	55.6 6.8	90.0 11.4	70.5 3.6	84.0 7.3	--- ---	--- ---
Richmond/Norfolk	--- ---	--- ---	49.0 5.9	--- ---	--- ---	--- ---	--- ---	--- ---
Sacramento	--- ---	--- ---	68.0 11.9	--- ---	72.7 4.4	--- ---	--- ---	--- ---
Salt Lake/Ogden	--- ---	59.0 6.5	55.0 6.6	--- ---	--- ---	--- ---	--- ---	--- ---
San Diego	--- ---	--- ---	--- ---	76.8 8.7	--- ---	111.9 5.3	--- ---	94.2 4.2
San Jose	51.4 8.4	67.8 8.6	77.7 7.3	92.8 3.8	101.0 7.4	111.2 4.0	124.6 6.5	114.0 4.5

Salaries (K$)/Raises by Region/Exp.

Region	1..2	3..4	5..6	7..8	9..10	11..15	16..19	20+
Seattle	--- ---	48.3 6.4	59.5 9.2	88.2 7.9	78.8 5.8	93.8 3.5	--- ---	--- ---
St. Louis	--- ---	--- ---	--- ---	64.9 3.9	68.0 4.8	87.2 3.4	--- ---	--- ---

And on the right is the same data derived from country codes.

Salaries (K$)/Raises by Region/Exp.

Region	1..2	3..4	5..6	7..8	9..10	11..15	16..19	20+
Australia	41.6 4.5	45.5 4.6	54.4 8.6	60.6 2.8	56.1 7.6	72.3 2.2	107.7 7.1	--- ---
Canada	39.1 5.9	45.8 9.4	51.9 6.1	60.5 5.3	54.4 6.8	72.8 3.8	60.0 -2.3	88.1 1.4
Germany	--- ---	--- ---	72.5 5.5	81.4 6.5	--- ---	--- ---	--- ---	--- ---
Ireland	--- ---	43.0 14.7	52.1 17.4	74.4 8.6	--- ---	66.3 11.2	--- ---	--- ---
New Zealand	36.0 13.0	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---	--- ---
Norway	--- ---	66.3 5.7	65.2 7.2	73.1 2.1	89.7 8.4	94.6 4.7	--- ---	--- ---
Spain	--- ---	--- ---	29.2 5.3	--- ---	--- ---	--- ---	--- ---	--- ---
United Kingdom	44.5 10.9	55.8 11.9	63.7 10.4	76.7 7.3	98.3 5.8	78.2 3.5	--- ---	--- ---

Only a few cities had enough data to derive per-focus comparisons. These tables are derived from self-described geographies.

Los Angeles/Orange Co., CA, Metro Area

YrExp	Generalist	Project management	Server management	Technical lead
3..4	--- / ---	--- / ---	52.0 / 4.2	--- / ---
5..6	--- / ---	--- / ---	56.2 / 7.9	82.9 / 9.4
7..8	87.0 / 8.6	--- / ---	86.3 / 6.4	--- / ---
9..10	--- / ---	93.5 / 7.0	86.8 / 3.1	--- / ---
11..15	95.8 / 0.2	--- / ---	100.4 / 7.7	--- / ---

New York Metro Area

YrExp	Generalist	Other	Server management	Technical lead
3..4	--- / ---	--- / ---	60.1 / 11.6	--- / ---
5..6	74.0 / 5.3	--- / ---	68.4 / 18.6	--- / ---
7..8	109.0 / 10.4	--- / ---	109.7 / 5.9	81.4 / 4.6
9..10	108.3 / 1.2	--- / ---	95.5 / 3.1	--- / ---
11..15	--- / ---	108.7 / 12.3	--- / ---	--- / ---

San Francisco/San Jose/Silicon Valley, CA, Area

YrExp	Generalist	Networking	People management	Server management	Technical lead
5..6	86.2 / 10.5	--- / ---	--- / ---	85.3 / 10.4	--- / ---
7..8	97.3 / 4.4	--- / ---	--- / ---	86.6 / 3.6	96.0 / 5.8
9..10	104.0 / 6.4	--- / ---	--- / ---	94.4 / 4.3	99.5 / 7.2
11..15	96.6 / 6.2	124.9 / 3.9	124.0 / 3.7	108.0 / 0.7	109.5 / 2.6

These tables are derived from zipcodes.

Balt/Wash., DC+

YrExp	Generalist	Server management	Technical lead
5..6	--- / ---	63.5 / 4.3	--- / ---
7..8	--- / ---	67.4 / 9.5	--- / ---
9..10	--- / ---	--- / ---	106.0 / 5.2
11..15	123.6 / 6.9	111.3 / 5.2	105.6 / 7.3
20+	--- / ---	--- / ---	104.2 / 6.0

Los Angeles

YrExp	Generalist	Project management	Server management
3..4	--- / ---	--- / ---	52.0 / 4.2
5..6	63.1 / 3.5	--- / ---	55.8 / 9.6
7..8	87.4 / 5.3	--- / ---	86.3 / 6.4
9..10	--- / ---	93.5 / 7.0	86.8 / 3.1
11..15	95.8 / 0.2	--- / ---	79.7 / 2.4

New York

YrExp	Generalist	Other	Server management	Technical lead
1..2	--- / ---	--- / ---	53.6 / 9.2	--- / ---
5..6	67.6 / 7.1	--- / ---	67.5 / 16.1	--- / ---
7..8	93.1 / 11.8	--- / ---	105.6 / 6.2	79.7 / 5.7
9..10	108.3 / 1.2	--- / ---	91.1 / 4.4	--- / ---
11..15	--- / ---	108.7 / 12.3	--- / ---	--- / ---

San Jose

YrExp	Generalist	Networking	People management	Server management	Technical lead
5..6	84.7 / 11.2	--- / ---	--- / ---	--- / ---	--- / ---
7..8	97.5 / 3.2	--- / ---	--- / ---	84.1 / 2.7	100.0 / 5.7
9..10	101.4 / 7.4	--- / ---	--- / ---	--- / ---	99.5 / 7.2
11..15	96.1 / 6.4	133.0 / 4.2	124.0 / 3.7	113.6 / 0.8	110.4 / 2.5
20+	113.5 / 7.4	--- / ---	--- / ---	--- / ---	--- / ---

Seattle

YrExp	Generalist	Networking	Server management	Technical lead
5..6	58.4 / 2.1	--- / ---	61.9 / 15.1	--- / ---
7..8	93.4 / 15.7	--- / ---	64.3 / -3.9	119.3 / 15.3
9..10	--- / ---	--- / ---	--- / ---	80.5 / 7.2
11..15	87.4 / 3.5	78.4 / 1.2	--- / ---	--- / ---

The chart to the right and the first chart on the next page show results for Australia and Canada. All numbers are converted to USA dollars.

Australia

YrExp	Generalist	Server management	Technical lead
1..2	--- / ---	49.9 / 6.0	--- / ---
3..4	--- / ---	43.3 / 1.2	--- / ---
5..6	42.0 / 6.4	--- / ---	--- / ---
9..10	--- / ---	55.2 / 4.5	--- / ---
11..15	--- / ---	--- / ---	77.1 / -3.2

Canada				
YrExp	Generalist	Networking	Server management	Technical lead
1..2	35.4 / 1.8	--- / ---	39.5 / 5.1	--- / ---
3..4	42.2 / 9.1	--- / ---	43.8 / 12.0	52.6 / 6.0
5..6	48.8 / 7.9	43.9 / 2.9	51.5 / 6.9	66.2 / 8.3
7..8	50.5 / 5.1	--- / ---	63.5 / 4.5	--- / ---
9..10	60.8 / 5.0	--- / ---	54.7 / 11.8	--- / ---
11..15	--- / ---	--- / ---	--- / ---	77.5 / 1.6

Do Large Companies Pay More?

The chart below shows how salaries are distributed at companies of various sizes. It appears that larger companies not only have more admins (something you can't tell from the chart) but also have more admins in the higher pay brackets (something the chart shows very clearly).

Salary vs. Company Size								
Salary	0..9	10..49	50..99	100..499	500..999	1000..4999	5000+	Total
0..29,999	24.3	11.9	7.8	11.8	10.6	7.5	5.6	8.9
30,000..39,999	29.9	17.6	19.4	14.6	7.5	8.4	7.0	11.5
40,000..49,999	18.7	18.2	18.9	17.1	12.6	13.1	12.6	14.8
50,000..59,999	7.5	14.5	13.4	13.7	13.1	18.6	15.0	14.7
60,000..69,999	9.3	11.6	13.8	9.3	18.6	11.1	14.0	12.6
70,000..79,999	0.0	7.4	6.5	11.6	10.1	12.4	13.8	11.1
80,000..89,999	2.8	4.8	9.2	8.2	7.5	10.2	10.2	8.7
90,000..9,9999	0.9	6.0	3.7	4.2	8.0	6.6	8.8	6.6
100,000..149,999	6.5	6.2	6.0	8.6	10.6	10.6	11.7	9.7
150,000+	0.0	1.7	1.4	0.8	1.5	1.6	1.4	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Salaries by Industry Size

Charts on the next pages show salaries and increases on an industry-by-industry basis with columns representing different sizes of a given organization. **Entries marked with '#' have almost no chance of being statistically valid.** Statistics were limited to salaries in the range of US$10,000..$200,000 and raises in the range -30%..30%. No other restrictions were applied (i.e., these charts include a global geography).

Trends in these data were very hard to discern.

Salary/Raise by Industry & Size

	0..99		100..499		500..999		1000+	
Accounting	15,626	10.0#	29,000	0.0#	----	----	56,898	7.8
Adv, PR, MarComm	49,120	4.3	48,887	1.7	73,500	3.4#	55,885	2.5
Aeronautical/Aerospace	----	----	59,838	0.4#	----	----	69,193	6.2
Agriculture	61,500	6.0#	64,591	-0.1#	----	----	80,751	4.0
Architecture (buildings)	61,500	9.5	69,200	0.0#	----	----	----	----
Automotive	27,092	6.7#	65,666	-0.2#	75,666	8.1#	60,018	9.4
Biotechnology	42,000	20.0#	83,333	1.7#	82,479	4.4#	99,000	7.3
Broadcasting/Cable/Video	----	----	110,500	14.5#	60,957	2.9#	88,567	8.4
Chemical	45,000	7.1#	----	----	61,000	3.4#	----	----
Comp HW	64,375	6.0	78,359	5.5	76,612	6.0	89,450	4.3
Cons.	74,395	6.8	57,188	7.9	80,000	15.9#	77,690	4.3
Construction	44,395	0.3#	61,166	-4.0#	----	----	55,186	3.0#
Defense	55,000	0.0#	----	----	66,072	12.5#	75,640	5.5
Dist/Warehousing	34,318	4.5	38,662	2.3	82,000	2.5#	68,700	6.4
Educ. - Commer.	57,465	8.1	62,139	3.5	----	----	63,625	6.0
Educ. - Post-Sec	46,950	1.3	53,538	6.2	56,483	7.0	55,973	5.3
Educ. - Prim/Sec	58,363	6.8	42,895	4.7	65,021	4.9	50,406	9.6
Energy	28,785	0.0#	30,910	25.0#	----	----	71,037	5.9
Engineering	69,412	6.2	40,401	10.3	83,833	12.8#	83,701	7.0
Entertainment	63,236	10.4	67,733	4.8	43,000	19.4#	83,702	4.5
Environmental Services	62,145	2.2#	73,500	4.2#	----	----	53,337	20.0#
Financial Svcs	64,200	7.5	78,223	9.3	106,127	9.7	82,407	6.9
Food	60,000	-23.1#	----	----	68,000	19.3#	69,049	10.3
GIS	----	----	55,060	20.0#	----	----	44,000	4.8#
Gambling/Gaming	----	----	53,138	4.2#	----	----	48,875	11.0
Government - Military	82,000	-0.2	78,800	10.5	70,599	8.8	73,869	5.3
Govt - Contracting	64,858	7.1#	88,428	6.5	64,333	5.8#	76,248	6.3
Govt - Non-Military	50,333	6.5#	42,676	7.8	61,218	5.4	70,485	4.0
HR/Recruiter	38,945	4.5#	54,632	3.2#	----	----	46,000	0.0#
Health Care, Medicine	53,087	4.7	52,973	7.3	68,750	10.2	70,666	4.8
Hospitality	----	----	25,000	8.7#	----	----	95,000	11.8#
IT Co.: SW Dev	63,474	7.8	74,239	7.6	83,981	10.1	76,703	5.3
IT Co.: Security	60,656	9.6	60,451	-1.5	----	----	99,723	12.9
IT Co: Web	46,219	5.4	84,874	-0.7	53,000	1.9#	73,741	3.2

Salary/Raise by Industry & Size

	0..99		100..499		500..999		1000+	
IT Company: Consulting	60,223	6.5	60,253	8.2	62,643	2.1	71,744	4.2
IT Company: ISP/ASP	52,133	7.1	63,948	8.5	60,878	5.0	86,099	5.3
IT Company: Other	52,551	9.5	68,817	8.9	58,007	16.9	74,151	6.0
Ins/Risk Management	48,532	2.8	53,809	6.9	107,825	7.7#	68,239	6.2
Intellectual Property	50,000	4.2#	----	----	----	----	80,000	0.0#
Legal	53,033	18.3#	61,145	7.7	96,769	5.9	77,250	6.1
Library	43,911	2.8	60,000	3.5#	55,000	4.8#	75,000	7.1#
Manufacturing	55,788	6.7	58,088	5.2	58,142	4.0	69,959	4.1
Not-for-Profit	50,099	4.7	57,397	1.8	41,163	4.3	74,350	5.3
Other	63,045	7.1	51,987	11.9	52,259	0.1	71,101	8.0
Pharmaceuticals	----	----	----	----	----	----	93,217	7.5
Political	26,864	-0.2#	----	----	----	----	----	----
Publishing	83,773	12.7	53,278	8.8	----	----	71,976	5.3
Real Estate	31,500	5.0#	----	----	66,705	15.9#	74,800	7.3
Religion	24,720	3.0#	----	----	----	----	30,000	0.0#
Research	61,092	6.0	76,966	6.6	83,172	2.0#	73,327	2.3
Retail	46,806	8.2	43,888	3.5	56,000	7.2#	60,071	7.0
Services (other)	24,854	-5.1#	80,000	23.1#	24,798	2.6#	55,500	7.0
State/Local Govt	47,500	9.2#	53,400	1.5	43,914	-5.9#	70,029	2.9
Telecommunications	60,628	6.9	73,485	4.8	77,900	6.0	72,621	6.0
Transportation	78,212	-6.8#	66,125	2.5#	45,039	3.1#	70,856	4.9
Travel/Recreation	30,455	16.4#	71,200	9.5#	57,530	3.1#	59,765	7.1
Utility	----	----	50,802	6.1#	70,000	5.8#	85,010	0.3
VAR	51,500	4.7#	86,000	14.7#	----	----	65,217	5.6#
Wholesale	38,000	26.7#	44,733	3.7#	47,411	16.7#	68,650	19.9#

Salaries by Industry and Experience

Charts on the next pages show salaries and increases on an industry-by-industry basis with columns representing different levels of experience. **Entries marked with '#' have almost no chance of being statistically valid.** Statistics were limited to salaries in the range of US$10,000..$200,000 and raises in the range -30%..30%. No other restrictions were applied (i.e., these charts include a global geography). Trends in these data were easier to discern: more experience generally gets a higher remuneration.

Salary/Raise by Industry & Experience

	1..3		4..6		7..9		10..14		15+	
Accounting	22,313	5.0#	41,061	1.8#	----	----	47,000	14.4#	108,368	6.7#
Adv, PR, MarComm	49,219	5.4	42,446	2.0	55,344	-0.9	76,000	8.2#	79,000	9.4#
Aeronautical/Aerospace	60,666	5.0#	52,260	7.2	64,085	2.1	64,969	10.0	92,366	3.4
Agriculture	----	----	44,000	8.4#	56,720	3.8#	89,875	0.7	95,000	4.4#
Architecture (buildings)	----	----	71,500	13.8#	63,800	3.5#	50,000	0.0#	----	----
Automotive	35,394	6.9	54,374	4.9	73,063	6.8#	90,671	7.2	77,468	14.7
Biotechnology	66,000	10.0#	84,000	4.1#	67,218	4.3#	104,333	7.5#	95,666	5.2#
Broadcasting/Cable/Video	----	----	65,282	4.7#	60,957	2.9#	93,352	11.5	112,333	10.9#
Chemical	----	----	45,000	7.1#	61,000	3.4#	----	----	----	----
Comp HW	----	----	75,296	4.0	82,273	8.7	87,010	5.6	97,652	-0.0
Cons.	47,237	7.1	57,992	5.7	73,964	7.7	81,735	4.7	104,354	7.5
Construction	35,558	0.0#	48,000	-8.0#	49,597	0.2#	78,750	6.5#	----	----
Defense	59,480	5.2	60,675	7.1	73,778	7.6	101,078	10.1#	89,739	2.4
Dist/Warehousing	33,138	4.0	47,481	9.4	75,400	3.4	73,000	-1.5#	----	----
Educ. - Commer.	35,669	1.3	48,605	2.1	62,500	9.2	96,015	1.1#	98,294	9.4#
Educ. - Post-Sec	38,531	6.4	49,198	6.1	54,781	5.0	62,848	5.0	73,178	3.8
Educ. - Prim/Sec	39,065	14.3	45,443	9.1	57,578	4.9	69,141	7.1	62,049	2.8#
Energy	32,120	7.4#	50,455	18.1#	70,670	3.2	74,747	5.6#	98,000	3.2#
Engineering	49,841	8.5	61,488	10.4	74,110	10.2	83,277	8.2	82,474	4.0
Entertainment	52,250	18.1	52,112	9.8	79,548	0.6	95,060	6.8	----	----
Environmental Services	----	----	50,668	13.7#	39,791	0.0#	99,000	1.0#	84,500	4.3#
Financial Svcs	41,798	3.7	54,214	10.2	82,599	8.7	95,317	5.1	108,349	6.8
Food	28,000	16.7#	50,500	-10.3#	73,348	10.6	86,000	13.3#	----	----
GIS	----	----	49,530	12.4#	----	----	----	----	----	----
Gambling/Gaming	49,554	12.5#	54,834	9.3#	30,910	14.3#	52,547	4.6#	----	----
Government - Military	69,333	2.9#	66,358	9.6	75,036	9.4	72,750	-0.4	84,562	3.4
Govt - Contracting	48,500	10.7	66,243	2.5	71,272	8.8	96,068	3.8	85,849	5.9
Govt - Non-Military	43,249	9.2	52,570	4.3	62,434	5.4	79,321	2.2	76,325	3.5
HR/Recruiter	----	----	50,000	6.4#	----	----	49,104	2.3#	46,000	0.0#
Health Care, Medicine	40,758	9.7	53,468	7.7	69,473	3.6	76,828	4.3	84,999	1.4
Hospitality	----	----	95,000	11.8#	----	----	25,000	8.7#	----	----
IT Co.: SW Dev	43,097	10.4	60,976	6.5	71,298	6.7	87,744	6.8	102,158	6.6
IT Co.: Security	17,902	0.0#	61,232	10.8	82,943	7.8#	99,799	9.6	86,857	6.7#
IT Co: Web	34,250	9.9	45,581	7.1	64,384	2.4	69,832	-7.9#	90,020	2.0#

Salary/Raise by Industry & Experience

	1..3		4..6		7..9		10..14		15+	
IT Company: Consulting	32,790	8.5	51,315	6.5	75,692	7.8	76,385	1.0	72,817	2.3
IT Company: ISP/ASP	36,755	11.4	46,451	7.4	65,525	6.1	86,616	4.4	105,690	4.0
IT Company: Other	44,930	12.8	48,668	10.2	80,162	11.1	61,866	3.9	80,858	3.5
Ins/Risk Management	38,091	6.5	48,178	8.4	69,866	5.3	89,662	4.5	107,050	-3.3
Intellectual Property	----	----	80,000	0.0#	50,000	4.2#	----	----	----	----
Legal	57,500	0.0#	53,350	15.5	67,019	4.4	93,600	5.0	76,886	9.9#
Library	----	----	33,000	4.7#	58,000	0.0#	60,328	4.1	----	----
Manufacturing	42,677	7.4	49,017	6.6	63,990	3.8	83,734	2.9	88,673	2.2
Not-for-Profit	35,816	5.4	47,046	5.9	56,341	3.6	86,763	5.7	50,333	-7.7#
Other	48,211	13.6	54,422	5.3	62,456	6.0	91,120	7.1	84,701	9.1
Pharmaceuticals	35,000	16.7#	70,000	7.1#	156,994	16.8#	100,000	4.8#	88,800	0.6#
Political	26,864	-0.2#	----	----	----	----	----	----	----	----
Publishing	47,120	10.2#	48,580	3.6	76,918	8.1	74,435	4.6#	80,010	8.1
Real Estate	----	----	52,833	9.4#	64,500	9.4#	79,705	8.3#	92,000	9.5#
Religion	24,720	3.0#	----	----	30,000	0.0#	----	----	----	----
Research	49,720	5.6	68,462	0.8	66,685	4.5	76,889	3.0	92,850	4.5
Retail	42,363	4.1	34,610	7.3	68,739	10.4	66,390	7.4	53,530	-0.1#
Services (other)	34,927	0.1	69,500	12.3	24,798	2.6#	----	----	----	----
State/Local Govt	49,250	5.6#	39,441	3.4	66,133	-2.3#	65,666	2.5#	81,781	-3.3#
Telecommunications	45,199	6.9	61,573	8.6	70,009	5.3	77,114	5.0	86,194	4.3
Transportation	50,750	4.6#	44,700	3.4	64,252	3.1	92,751	2.1	69,666	4.4#
Travel/Recreation	42,000	10.5#	44,341	7.2	71,233	2.7#	59,924	10.2	25,293	27.5#
Utility	42,500	0.0#	68,000	-1.7#	81,135	6.5#	88,000	-3.3#	88,358	4.4#
VAR	----	----	36,000	20.0#	86,000	14.7#	77,551	-5.3#	----	----
Wholesale	31,000	13.3#	55,100	5.6#	68,650	19.9#	47,411	16.7#	----	----

Opinions and Comments

The survey affords a rare opportunity to query professionals about ideas and on a variety of subjects. This section describes the results.

Why Did Salary Change?

Respondents were asked why their salary changed. They could each choose several items from a list and also enter extra information. Almost two-thirds believe that hard work and/or good work ethic was the cause of their salary change. Just over a third believed tangible results (stable environment, achieving goals) was responsible. Here's the whole chart:

Why Salary Changed

Percent	Reason	Percent	Reason
33.8	Did not receive at least 4% raise	1.4	Changed to management
19.6	Performance	1.3	Longevity
14.4	Achieved goals	1.3	Earned a certification (i.e., SANS/GIAC, MCSE, CCNA, CISSP, etc.)
11.3	Annual raise	1.3	Departure of others
11.2	Increased responsibilities	1.2	Corporate success/profit sharing
10.2	Worked hard with a positive attitude and ethic	1.1	Raise to combat other job offer(s)
6.7	Maintained a stable network or system environment	1.1	Upgraded skills via education
5.4	Became involved in a high-profile project	1.1	Publicized achievements
4.9	Changed (reclassified) position	1.0	Other
4.6	Changed employers/job	[24]	Earned a college/advanced degree
3.9	Grew into a more active planning/management role	[23]	Used a salary survey to educate your management/HR
3.8	Client/customer satisfaction	[23]	Improved speaking, writing, and/or presentation skills
3.6	Promotion	[22]	Collective bargaining/union
3.1	Long time without raise	[22]	Salary freeze lifted
3.1	Cost of living adjustment/COLA	[20]	Probation ended
2.7	Requested/negotiated salary increase	[18]	Contractual
2.0	Standard/across-the-board raise	[17]	Went into consulting
1.6	Increased hours/overtime	[14]	Relocation within same company
1.6	Stayed in position (vs. 'quitting')	[11]	Corporate buyout/takeover
1.5	Threatened to leave/quit		

What Do Admins Like About Their Jobs?

What do admins like about their jobs? It turns out that the #1 property cited by respondents was a casual work environment, cited by just under one-third of those who answered this question. Second place was 'challenge,' with quality of co-workers, environment flexibility, and job stability rounding out those marked by more than 20% of the survey participants. The table below shows the entire set of standard responses.

Favorite Job Properties

Percent	Property	Percent	Property
34.7	Casual dress, atmosphere, environment	6.8	Standard work week
30.6	Challenge	6.6	Telecommuting
24.0	Co-workers	6.6	Dynamic environment
23.0	Learning on the job	5.1	Walled offices
20.3	Flexible working environment, freedom	4.0	Family friendly
19.5	Stability, job security	3.8	Comp time
17.9	Flexible hours	3.7	Free or cheap food, drink at work
17.4	Salary/compensation	3.6	Vacation/sabbatical policy
15.7	Job satisfaction	3.5	No on-call/pager/overnight/weekend
14.8	Technology, advanced equipment, fast internet	3.4	Subsidy for cell, home telecomm, hardware
14.4	Fun	3.3	Pension/retirement program
14.0	Small company environment	2.7	Enlightened policies
13.4	Responsibility	2.6	Stock purchase, grant plans
13.3	Respect, trust	2.5	Social activities
13.2	Location/commute time	2.4	No overtime
12.3	Management/boss	2.4	Gym/pool/health club membership (or on-site)
12.2	Benefits	2.1	Discounts, free merchandise
12.2	Future potential	1.8	Facilities, phys. environment
11.7	Academic environment	1.4	Short work week
11.3	Projects	1.3	Transportation (company car, free parking, bus subsidy, carpooling, etc.)
10.9	Employment in current economic climate	1.2	Smoking policy
10.6	Specific technology that you use (e.g., MS, Open Source)	[25]	Travel, cruises
10.3	Self-determination (of all kinds)	[20]	Green card assistance
10.2	Sense of achievement	[19]	Movies, entertainment
9.6	Culture	[18]	Dogs allowed at company
9.0	Special hardware (e.g., laptop, supercomputer)	[14]	Special rewards (e.g., cruises)
8.6	Variety of tasks	[9]	Child care
7.3	Education, tuition, training, incl. conferences	[8]	Sabbaticals

The ‘Other’ category did not yield any replies that appeared more than once other than ‘‘It’s nice having a job.’’

What Do Admins Dislike About Their Jobs?

What about the other side of the coin? What are the most disliked features of sysadmin jobs? Corporate management issues! Look at the breakdown (bearing in mind respondents could cite more than one dislike): bureaucracy/paperwork at 24.1%, management [in]competence at 22.8%, leadership issues/poor vision at 18.8%, not enough staff at 17.8%, politics at 17.0%, and budgets at 14.8%.

Worst Job Properties

Percent	Property	Percent	Property
24.4	Bureaucracy, paperwork,	6.6	Lack of peers
22.6	Bad compensation	6.3	Project management
19.8	Management competence	6.2	Corporate stability, layoffs
19.1	Not enough staff	6.2	Co-workers
16.1	Politics	6.1	Coping with growth or force reduction
14.8	Leadership issues, poor or poorly communicated vision	6.0	Unrealistic job performance expectations
14.1	Infrequent salary increases	5.8	Working outside general job description
13.3	Ceiling on advancement or low advancement speed	5.7	On-call or pager/mobile phone issues
12.7	Budgets, funding	5.6	Work hours
12.7	Salary, benefit issues	5.5	Lack of trust
12.3	Boredom	5.5	Lack of accountability
12.0	Conflicting demands	5.0	Management stability
10.6	Poor respect or low value placed on my job; poor visibility in org.	4.6	Customers/clients
10.1	Bad infrastructure	4.4	Computer security issues overwhelming
10.0	Excessive on-call time	4.3	No conference attendance
9.9	Cubicles/offices/noise	4.1	Bad retirement plan
9.9	Morale	3.7	Culture
9.9	Poorly communicated or differentiated priorities	3.5	Keeping up with advances
9.8	Interruptions	2.9	Inflexibility
9.1	Lack of training/cont. ed.	2.8	Location
8.7	Cost of living	2.5	Ethical issues
8.6	Lack of opportunity	1.4	Discrimination, tolerance issues (age, race, creed, orientation, etc.)
8.5	Vision, future planning (lack thereof)	1.3	Specific vendors (or lack of specific vendors)
8.2	Commute	1.1	Travel
8.0	Inability to see reality	[20]	Safety
7.7	Infrequent salary reviews	[17]	Smoking policy
7.7	Hardware isn't up to snuff		

Next up were compensation issues: 21.8% respondents felt they were poorly compensated; 17% didn't feel salary increases came often enough; 12.5% had problems with salary and benefit issues. Morale, boredom, respect, interruptions, and conflicting demands rounded out the top 15. See the chart.

Just under 2% of the respondents wrote an extra comment for the 'other' category. These included leadership issues, dress codes, human resources, 'executive greed,' lack of time off, lack of benefits, 'Microsoft culture,' outsourcing, Sarbanes-Oxley, slow reimbursement, union problems, training issues, policies on pets at work, 'everything,' interaction with human resources, nepotism, overtime/on-call compensation, outdated equipment, parking, and stress.

Survey Comments

Hundreds of people entered comments in reply to a question about the state and future of the system administration profession. They have been partitioned into sections with related topics:

- Frustration
- The Profession
- Advice
- The Future
- Optimism

The 'Optimism' category has returned! The incredible frustration of last year's survey has been dramatically reduced.

Generally, duplicated comments are not shown. Those comments displayed are intended to represent the ensemble of all respondents without displaying the same thought over and over again.

Frustration

This category is broken into several subcategories.

Outsourcing

It's all going to India

My company outsourcing to India, laying off Americans, importing foreign workers. [The company doesn't] value education, instead want[s] to go cheap. Management knows it is hard to find a job and that you will stay even if they make you work pager duty all hours of the night so they take advantage of that even though they are making millions in profits.

Generalist Sys Admin has an uncertain future in the United States as more and more IT departments are outsourced, domestically and internationally. It seems as if the general practice is facing or soon will face a critical time. IT Specialists in the future will be as rare as steam engine engineers are today.

[Facts] lead me to believe that there is no longer money to be made in IT (or a future). The money will all be leeched by the outsource-management layer.

My current corporate has entered into an agreement with IBM out outsource their IT staff to IBM India. I will be starting my new position on Monday in direct response to this dis-respect to the company's IT employees.

Not sure which will be outsourced more in the future: sysadmin or development jobs.

This is not much of a future in system administration with the advent of outsourcing, downward spiral of billing rates, and an oversupply of technical staff in all markets.

I'm very worried about the future of our jobs. With the explosion in tools to perform telecommuting, I fear it will only be a matter of a couple of years before SAGE level 1 & 2 jobs are outsourced to large firms. Possibly even moved overseas. Currently I'm responsible for servers in CA, MO, & TX, however I live in WI. What's to stop my company from moving my job to Bombay other than the skill levels of the workers there?

I figure most of the system administration will be outsourced in the future, so you may not need this survey anymore.

Compensation

While system administration salaries are relatively high, on an absolute basis, relative to the amount of hours and the ambiguity of the time required, I don't think system administration is a fairly-compensated field.

The entire IT staff feels underpaid. I quit my job to finish school and returned this summer. Big mistake.

Although, the University is limited by current politics and the economic conditions of our state, receiving pay increases of 1.25% is basically a slap in the face. Our jobs have been "remapped" so we are "theoretically eligible" for overtime. However, we will never get paid overtime since no one has budgeted.

More and more companies in my area of residence seem to think that system administrators are worth $30-$35,000 per year and no more. I feel System Administrators are not recognized for what they do for the company, nor appreciated. "Any kid off the street can do what you do" is basically how I feel... and how I feel I get paid.

Undervalued when you are there. Highly valued when you are not.

Lower your expectation for what a "good raise" is. IT at my University gave an average 2% raise in FY '04 across the campus, many organizations deciding to give a flat 2% to everyone rather than give some people less. In FY'05 the average did go up to 3%, but "great performance" was still only 3.9%.

Appreciation/Understanding

Unless managers start learning something about the technology they manage, I foresee continuous turmoil in this industry.

A lot of people in organizations don't understand what and when we do thing.

System Administration will always be a dynamic field, but unfortunately, upper management and "users" do not understand the changes and will take a long time before allowing a change to actually be acceptable.

I feel that system administration is seen as a singular field where everyone is equal and does the same job. There is very little recognition of different skill levels or duties. People bolting servers into racks are generally seen in the same light as people designing overall infrastructure involving 100's or 1000's of components. That causes salary and expectation compression which makes it nearly impossible to pay the necessary money to hire really good people at the top. It also makes management look at the entire administration group as a bunch of hot swappable components that can be exchanged at will. The end result is a lot of wasted effort and very low efficiency.

Administration (of the bureaucratic sort) thinks that sysadmins are fungible like desktop PCs. This buys them lowest-common-denominator technology and support, and drives competent folks into other fields.

[My biggest problem:] being asked to support insecure or unfeasible projects − usually those that have been decided upon by higher management with limited input by techie staff. That coupled with the pressure of "Why couldn't you make this work (faster/cheaper/at all)?" or in general being asked to support technology that you do not personally or professionally agree with.

There are not enough competent UNIX admins out there. There are tons of characters with certs. but they actually know nothing. It is frustrating. My consulting work is primarily geared to helping other find competent staff and it is VERY difficult.

The field still suffers an identity crisis and as such is often not recognized as a profession.

Always under appreciated.

Too Demanding

They expect more and pay less... like the commercials say.

Unions

Unionization, or Sysadmin Sweatshops. One or the other.

System administrators and IT staff should have a union, we should form an international body which can support minimum wage and enforce on-call hours, we lack an organization to lobby standard on-call time to enable this practice and this allows employers to exploit IT services by making employees slaves to the system they breed.

Morale

I am the senior network administrator, but due to layoffs I also have to answer the help desk phone now. We are so under-staffed that all of our projects suffer and often turn into crises.

Honestly, networking and system administration has become boring to me. I'd much rather spend my time nurturing people's spiritual lives.

The golden days are over.

I hope we survive.

Automation Threats

SysAdmin is a field doomed to becoming nothing but digital janitors. As HW and SW become more commoditized, most sysadmin positions will be filled by trained monkeys.

Seems to be becoming more of a commodity.

SA's a to a certain extent almost a dying breed, as they are replaced more and more with automation.

The Profession

Scarcity

Still hard to find good admins. Too many people focus on how to complete a task and don't understand how the systems work.

Insight

It's not clear to me that giving "regular" people a computer actually increases their productivity when you take into account viruses, printing problems, inability to remember where a file is saved, OS/application bugs or awkward UI's, etc... It may be more productive to go back to the model where you submit a request to the computer operators, and then you get the results back later.

*Have noticed an increase in restrictive contract clauses (some not even legal), e.g., at termination of job, employee is not to seek employment in an industry or field that the current employer operates in. Employee has to seek permission from employer to perform *any* work not appointed by employer.*

This occupation becomes a little more demanding every year: more systems or services to support, new technology, more productivity, etc. But the pay does not increase because of these things. It is also getting much more difficult to find another job, as most of what I see advertised is contract/part-time, which I won't do.

After working for years in the field, I have come to realize how enormous the stress is on a sysadmin. Sysadmins hold the main key to a company's success and continuance. Sysadmins should receive more attention and respect from the management, they hold the company's balls.. one mistake and the whole business could go down.

People need to adapt to a changing world. Stay on top of your field, make your presence know, keep your group focused on staying on top of the latest technology, let your manager(s) know how good of a job you do (but don't always toot-your-own-horn).

Compensation

People who are expecting salaries and benefits to be commensurate with the dot-com times are the ones constantly complaining about the IT industry. I essentially created this job for myself here, and hard work is rewarded with more money... just like for everyone else. Sadly, we're not super-special anymore. We're not the new thing. People are getting used to us, and we're joining the ranks. But in my experience, respect and appreciation and the ability to drive the company is still there.

Stress

When looking at job postings, they are also requiring a lot more specialization than ever before. Most of these jobs could be done by most any system administrator, but most of them don't qualify because the laundry list of the specialized applications or hardware they want someone to support the first day on the job with no training.

Advice

The only thing that is going to save us jobs in sys admin, is people with security clearances. i feel these jobs going to be outsourced, with the exception of touch labor to rebuild machines, or to work in environments that no foreign nationals can work in

All admins must be able to work across brands and products. As automation and large enterprise management software becomes more sophisticated the opportunity to specialize will dwindle. Companies will be incented to have fewer people handling fewer tasks but on a wider range of products by reducing labor costs in favor of investment in smart IT infrastructures. It's obvious that the current shift on offshore labor in the IT industry shows a desire to reduce labor costs across the board.

We all need a way of demonstrating/communicating the value of our work. So often we're not noticed unless things BREAK at which time we're under a microscope/spotlight; but if things always run smoothly (which is our goal) then we're "invisible".

Still a craft − part science and part art. Some management views this as entirely an expense − to be minimized. Some management views this as an opportunity − to run projects as vehicles of visibility. Occasionally one finds enlightened management which views this as an enabling investment − enabling one to do business.

I feel that there is a strong need to fold into SA training/education some business process training, such that an SA will know what management is looking for when it comes to a critical process that keeps going down. This will better enable the SA to communicate with management when it comes to justifying purchases or explaining problems in their terms.

The Future

*I think the future of UNIX system administration seems assured, and a good (read: crusty old long-haired guru) sysadmin can write their own ticket. Windows system administration seems saturated. I already notice that tolerance of prima donnas has decreased dramatically, *except* for the uber-geeky UNIX guys. We can still get away with a lot, because there aren't that many of us it seems.*

Part of feeling of change in the IT industry Open Source is delivering the promise of the IT industry. But to maintain perspective and provide simple solutions to everyday problems and requirements.

At this moment I am the Sole Net admin for the organization. I have seen exceptional growth in the IT infrastructure for the organization and my position/Responsibilities in the last year and foresee it in the future along with growth in my position. However I do not foresee the pay scale growing sufficiently with it.

I have noticed over the many years that this job has gotten harder. Sys admin in the '90's is harder than in the 80's and still harder in the 21st century. The complexity of the environment, software and hardware is staggering! I would be interested to see how "newbies" are entering this field, and how they rise to the challenge. What can we old hands do to help promote this career? My small answer is that every time I use a new tool or develop an interesting method, I write a paper for my company that is used as a resource. I also let my older children become sys admins in the home network. They are solving problems and learning the ropes that may help pay for their college education.

System admin, network, and security are being rolled into a single problem.

Sysadmin is getting easier and more automated so that newbies without much skills can manage servers. This makes old timers much more valuable when there is a need to troubleshoot as the newcomers can't learn about all the nitty-gritty details that the oldtimers are familiar with. Unfortunately, the experienced people demand higher salary and are often laid off and they have to find work in new fields or are paid a lot less than what they are worth

The future of system administration as we know it continues to change, and training to keep up is critical.

I see the trends of Windows administration declining in value and UNIX administration increasing continuing for the foreseeable future.

I belive that new technology will increase the ratio for admins to computers. I believe will reduce by 30 the amount of admin staff in the next 5 years.

Ultimately, over the long run true systems administration will be commoditized just like the systems we manage. This is not immediate (2-6 years), but is inevitable (5-15 years)

I'm sure that much of this could be more from my own advancement in the field, but there seems to be a move towards more and more of doing more things with more systems for more users with less staff. Minimizing the amount of human time required to perform tasks, especially routine tasks such as testing, monitoring, deployment of new systems and patching of current systems is a priority.

I think System Administration will be around for awhile... After 19 years, It is simply time to do something else − however, secure systems engineering will have a SysAdmin component so I won't really be hanging up the hat entirely.

I've been living in/observing sys-admin land for over a decade. What I see is that Systems Administrators are more involved in all aspects of technology (incl. phones and physical security tech), but given less resources to accomplish these goals. Due to our recent economic downturn a large emphasis has been placed on getting more out of less technical staff and the industry has (or should have) placed more emphasis on making the sys admins life easier on the job.

It seems as if the systems administration market is booming at the moment. Rampant offshoring, however, threatens to send the sysadmin jobs offshore with the programming gigs.

The recent emphasis of regulatory legislation such as Sarbanes-Oxley has and will continue, for better or worse, raising the prominence of system administrators in organizations.

I think specific training and certification in different aspects of systems administration are going to make a difference in the job field in the next five years. Finding large Unix/linux shops also.

In doing much research for my company, it's becoming evident that many companies are moving away from traditional "on-call" and to a model where system administrators are physically on-site around the clock. By this, I'm not referring to level I or level II individuals, but level III and level IV individuals as well. I see a trend in companies paying less and demanding more, as has been happening over the last 4 years. As such, there is increased competition in the workplace and political works.

Two paths: 1) Systems will become easier to manage thereby reducing the need for administrators or dropping the role of administrator to that of a regular lackey. 2) System complexity will outgrow the rate of users willingness to learn resulting in far more work/complaints. Management will continue to ignore the people factor of the Administrator's job.

In the future, wars will be fought by robot armies with laser guns. Our mission is clear; we are to build and maintain those robots.

I see that the professional members will need to nurture skills outside of traditional science: Management, communication, presentation, and continued education. It also helps to be able to write documents to different levels of competency.

An increasing ease of the ability to learn and practice administration at home (thanks to market shifts towards cheaper and more standardized systems, as well as Ebay) is going to be balance itself against the collapse of the primary and secondary US education system.

I believe that managing SAN's & Backup/Recovery of data and Disaster Recovery planning will take up more and more of a SA's time then the actual administration of the servers, if it does not already.

System administration will have increasing requirements for automation in the future. Programming skills and organizational skills are becoming more important for the average system administrator.

Optimism

It's better this year than last. I feel the economic situation has improved.

My employer is a great place to work. Compensation is more than fair, bonus amount is a MAJOR plus (> 20% of my salary) and I really enjoy my co-workers. Teamwork is stressed very heavily. The only downside is the corporate politics, but they are no

worse than anywhere else.

The future of system administration is bright indeed :-)

The most intellectually rewarding job I've ever had.

System Administration, I believe, is alive and well. It is just going through another of its innumerable transformations. It has been proven that any task that can be boiled down to a checklist is doomed to be replaced either by outsourcing or offshoring. So far, I have yet to discover anything that can replace a competent, imaginative and responsive administrator.

Wherever there are computers there will be a need for system administration... SAGE brings administrators together...

I believe the days of the re-ascension of Sys Admins, in both respect and salary, are beginning, and will continue to accelerate because of the rise of security concerns in the IT world. Unfortunately, it seems at this stage it will still only be accomplished by changing employers. But I see it happening with greater and greater frequency at the university I work at and the people who leave are generally getting vastly improved compensation. At some point current employers will have to step up to quell the exodus.

Good System Admin jobs continue to be difficult to find but more and more I'm finding that employers are looking for skills over education or certifications, and this is helping to weed out many of the .com IT professionals that read books and took tests but have no true understanding of the technology in general.

Summary

A technically challenging profession that pays its entry people as much as US$50,000/year is an interesting one. System administration appears to be a fine way to make a living. Experience, education, and enhanced skillsets seem to be the growth path of choice (at least as far as increasing the midpoint of the salary bell curves goes).

About SAGE: The People Who Make IT Work

SAGE is organized to advance the status of computer system administration as a profession, establish standards of professional excellence and recognize those who attain them, develop guidelines for improving the technical and managerial capabilities of members of the profession, and promote activities that advance the state of the art or the community. Members enjoy a variety of benefits including: the SAGE Short Topics in System Administration booklet series; the option to join the highly responsive sage-members list, an electronic mailing list for peer discussions and advice; access to the SAGE jobs board, and more. For a full list of SAGE benefits, check out http://www.sage.org

Unemployment Survey

Introduction

Those respondents who were employed for less than 26 weeks were asked to answer a different set of questions that comprise the first ''SAGE Unemployment Survey''.

A total of 247 respondents submitted valid sets of responses. This is but 7.7% of total respondents. One might conclude that only 8% of admins are having serious unemployment problems, but odds seem more likely that other unemployed admins simply did not participate in the survey.

Did They Regain Employment?

As of the time they completed the survey, 72.3% of the group had regained full-time employment while an additional 19.8% had found part-time employment; only 17.8% remained unemployed (vs. 45.4% in 2003).

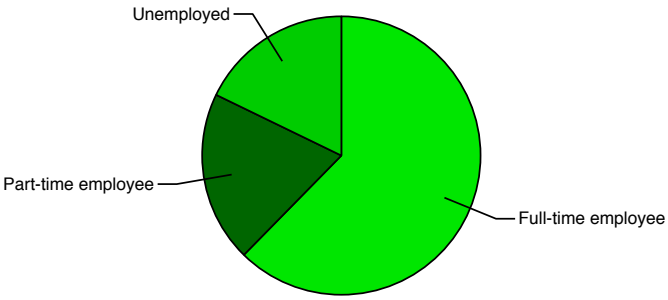
Focus

Respondents were asked about their primary admin focus. Slightly more generalists and server managers seem to be unemployed than the employed population as a whole.

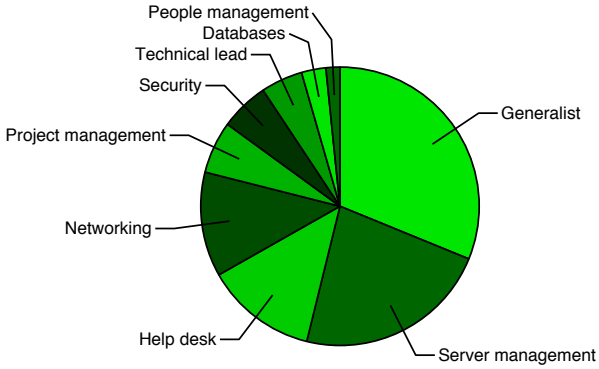
Geography

As with the rest of the survey, over 70% of respondents are in the USA.

Current Status



FOCUS



Unemployed Sysadmin Geography

Country	% Resp.	Country	% Resp.	Country	% Resp.
United States	71.7%	Germany	[2]	Italy	[1]
Canada	7.7%	Portugal	[2]	Japan	[1]
Australia	2.8%	Spain	[2]	Netherlands	[1]
United Kingdom	2.0%	Afghanistan	[1]	Philippines	[1]
Ireland	1.6%	Austria	[1]	Russia	[1]
India	1.2%	Belgium	[1]	Slovakia	[1]
Poland	1.2%	Finland	[1]	Slovenia	[1]
Singapore	1.2%	France	[1]	South Africa	[1]
Argentina	[2]	Iceland	[1]	Taiwan	[1]
Bulgaria	[2]	Israel	[1]		

The traditional concentration of technical jobs in a given area seems to map well onto the locations of those unemployed.

Metropolitan Locations

Where	% Resp.	Where	% Resp.
N/A	45.9%	Seattle/Redmond, WA Metro Areas	2.4%
San Francisco/San Jose/Silicon Valley, CA Area	7.7%	Montreal, QC Metro Area	2.4%
Chicago, IL Metro Area	6.8%	San Diego, CA Metro Area	1.9%
New York Metro Area	5.3%	Toronto, ON Metro Area	1.4%
Los Angeles/Orange Co., CA Metro Area	4.8%	Denver, CO Metro Area	1.0%
Boston, MA Metro Area	3.4%	Houston, TX Metro Area	1.0%
Washington, DC Metro Area	3.4%	London, England Metro Area	[1]
Austin, TX Metro Area	2.9%	Ottawa, ON Metro Area	[1]
Philadelphia, PA Metro Area	2.9%	Sydney, Australia Metro Area	[1]
Atlanta, GA Metro Area	2.4%	Vancouver, BC Metro Area	[1]
Dallas, TX Metro Area	2.4%		

Education

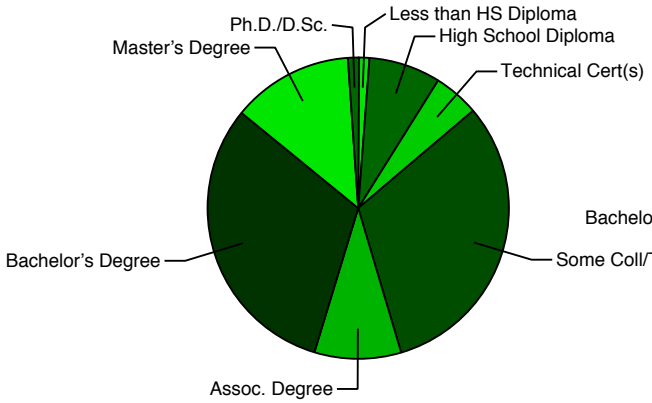
These respondents' learning techniques are almost indistinguishable from the employed group. The main difference is that they have had less training at conferences. Of course, this might also mean that they have less "peer networking" and contacts to find a new job.

How Admins Learn

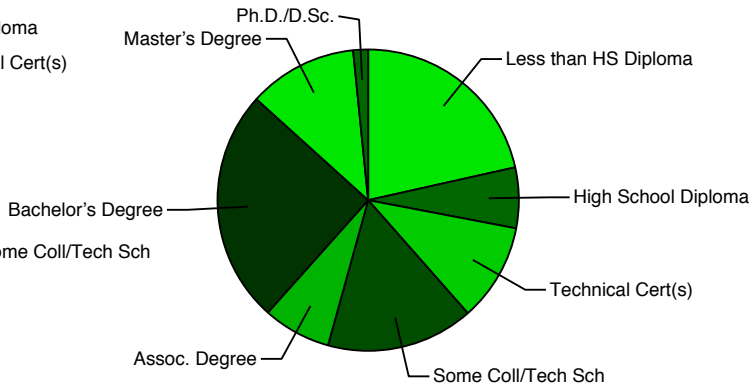
Learning Methods	Not at all	A bit	Somewhat	A lot
Taught myself	5.3%	1.2%	9.3%	84.2%
On the job	8.9%	4.9%	21.5%	64.8%
University/college education	32.8%	23.1%	22.3%	21.9%
Mentor of any kind	43.3%	23.1%	19.0%	14.6%
Certification program courses	60.3%	19.4%	10.9%	9.3%
Non-degree tech sch, coll/univ. courses	79.8%	8.5%	7.3%	4.5%
Vendor-specific training courses	66.0%	21.1%	9.3%	3.6%
Other	96.8%	1.6%	0.8%	0.8%
Conferences/commercial training	70.0%	21.9%	7.7%	0.4%
Military	98.8%	0.4%	0.4%	0.4%

The unemployed respondents have almost identical educational backgrounds to those who are employed.

Highest Education

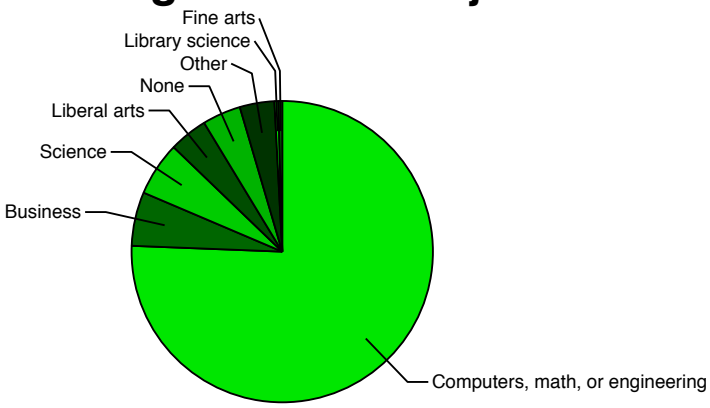


Highest Relevant Education



Unemployed respondents had strong relevant post-high-school training with almost three-quarters citing computers and related subjects.

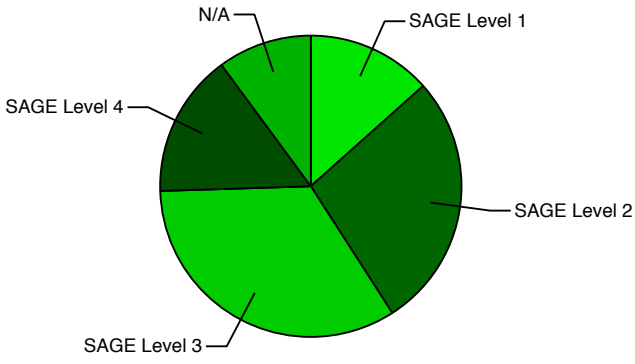
Post-High-School Subjects



SAGE Level

Those unemployed were spread out among all the SAGE Levels this year.

SAGE Level



Industries

Respondents' industries diverged widely from those of the 'employed' part of the survey. Almost one-third of them checked 'IT' categories vs. 10% of the other group.

Industries of the Unemployed

Type	% Resp.	Type	% Resp.
IT Company: Software Development	7.3%	Accounting	1.2%
IT Company: Consulting	6.1%	Government - Non-Military	1.2%
IT Company: ISP/ASP	6.1%	Travel/Recreation	1.2%
IT Company: Web Development/Webmaster	6.1%	Insurance/Risk Management	1.2%
Education - College or University	6.1%	Legal	1.2%
IT Company: Other	5.7%	Government - Military	[2]
Consulting and Business Services	4.9%	Aeronautical/Aerospace	[2]
Financial Services (all kinds)	4.5%	Automotive	[2]
Manufacturing	4.0%	Intellectual Property	[2]
Other	3.6%	IT Company: Security	[2]
Telecommunications	3.2%	Defense	[2]
Health Care, Medicine	3.2%	Pharmaceuticals	[2]
Engineering	2.8%	Real Estate	[2]
Retail	2.8%	Transportation	[1]
Publishing	2.4%	Education - Commercial, Training, etc.	[1]
Advertising, Public Relations, Communication, or Marketing	2.0%	Political	[1]
Computer Hardware/Semiconductor	2.0%	Religion	[1]
Not-for-profit	2.0%	Research	[1]
Entertainment	2.0%	Food	[1]
Government - Contracting	2.0%	Gambling/Gaming/Lottery	[1]
Biotechnology	1.6%	Services (other)	[1]
Distribution/Warehousing	1.6%	State or Local Government	[1]
Education - Elementary or Secondary	1.6%		

Technical Associations

Unemployed respondents joined technical associations at a slightly lower rate than their counterparts and generally felt they were less helpful (same as in 2003).

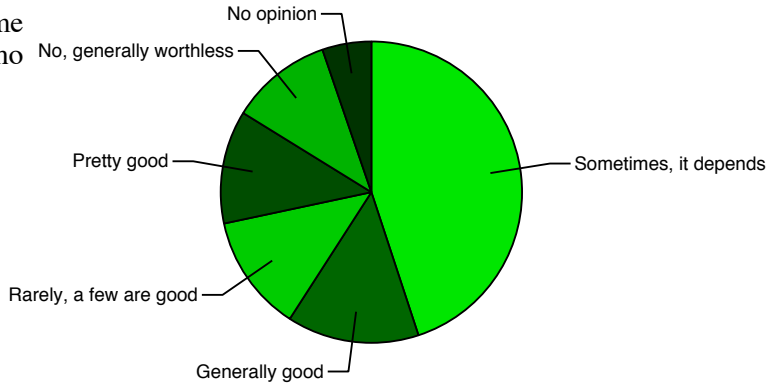
Technical Assns/Rated Utility

Organization	Do not belong	Belong	Belong & helpful	Belong & very helpful
Local user/affinity group	79.4%	8.9%	9.3%	2.4%
IEEE	93.1%	3.2%	2.0%	1.6%
USENIX	95.1%	1.6%	2.0%	1.2%
SAGE	92.7%	2.8%	3.2%	1.2%
ACM	91.9%	5.7%	2.0%	0.4%
SANS	97.6%	1.2%	1.2%	0.0%

Certifications

These respondents generally held the same opinions about certifications as those who filled in the other half part the survey.

Value of Certifications



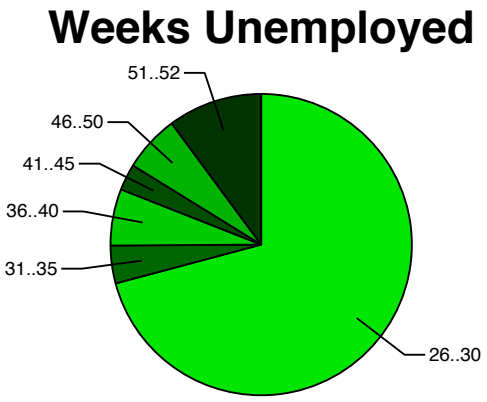
Generally, certification levels were similar, though COMPTIA showed up much higher in this list of certifications of the unemployed (only certificates held by 1% or more are shown).

Certifications Held

Certification	% Resp.	Certification	% Resp.	Certification	% Resp.
COMPTIA A+	17.4	Novell CNA	3.6	COMPTIA I-Net+	1.6
Bachelor's Degree (any relevant)	14.6	Sun/Solaris SCSA	2.8	Checkpoint CCSE	1.6
Cisco CCNA	13.4	IBM (any)	2.4	Oracle/OCP (any)	1.6
Microsoft MCS*	8.1	Novell CNE	2.0	LPI (any)	1.6
Microsoft MCP/MCP+i	8.1	Cisco CCNP	2.0	Checkpoint CCSA	1.6
COMPTIA N+	7.7	Apple (any)	2.0	AIX (any)	1.2
Red Hat (any)	4.9	(ICS)2 CISSP	2.0	Lotus (any)	1.2
Brainbench (any)	4.9	COMPTIA Linux+	1.6		
COMPTIA Security+	4.9	Sun/Solaris SCN*	1.6		

Unemployment Duration

The median unemployment period was 26 weeks – six months. The mean was 31.9 weeks, with a standard deviation of 9.3 weeks. Only a few respondents were out for an entire year.



Unemployment Hardships

Respondents were asked what hardships they might endure in order to get a job. Most, of course, are now employed. 'On call' work was onerous only to 30%; likewise the commute. 42.5% would not relocate; almost half would not take a part-time job. A 10% paycut was acceptable only to half; 25% pay cut only to a quarter. Only 6.1% could stand a 50% pay cut. Of course, most already know what they achieved, so these numbers might indicate a bit more intolerance than reality.

What Admins Will Do to Gain Employment

Actions	No	Yes
Employed now?	19.0%	81.0%
Willing to do on-call outside work hours?	30.8%	69.2%
Willing to extend commute?	31.6%	68.4%
Willing to relocate?	42.5%	57.5%
Willing to take part-time job?	47.8%	52.2%
Willing to take 10% pay cut?	49.8%	50.2%
Willing to take 25% pay cut?	74.5%	25.5%
More of a people manager?	87.0%	13.0%
Willing to take more than a 50% pay cut?	93.9%	6.1%
Willing to take 50% pay cut?	94.7%	5.3%

Job Requirements

Respondents chose properties that were essential in their new job. Salary was #1, followed by a good working environment and good benefits. Technology, projects, and challenge all beat out good management.

Job Requirements

Count	Requirement	Count	Requirement	Count	Requirement
36	Salary	5	Location	1	Sufficient resources
18	Good environment	5	Advancement potential	1	Standard hours
17	Benefits	4	Flexibility	1	Responsibility
15	Good co-workers	4	Independence/trust	1	Purchasing authority
13	Good technology	3	Training	1	Internet access
13	Enjoyable projects	3	Telecommute	1	High morale
11	Challenge	2	Nice office	1	Handicap friendly
10	Good management	2	Work with people	1	Good company
8	Stability	2	Vacation	1	Established processes
8	Freedom/trust	2	Small company	1	Diversity
9	Flex time	2	Management pos.	1	Clear communication
7	Education	2	Dress code	1	Appreciation
6	Commute	1	Vendor independence		

Job Anti-Requirements

Respondents were asked what properties had to be avoided in their new job.

Job Anti-Requirements

Count	Requirement	Count	Requirement	Count	Requirement
15	Bad management	4	Travel	2	Dress code
14	Bad technology	4	Bad corporate mission	2	Bad salary
9	Unethical/illegal activity	3	Sales	2	Bad hours
9	Bad commute	3	Bad schedule	2	Bad environment
7	Lack of challenge	3	Bad responsibilities	2	Bad community
6	Excess work hours	3	Bad co-workers	2	Bad benefits
5	High stress	2	Small company		

Garnering one vote each were: Work with people, Unsafe work, Unpaid overtime, Uncompensated on-call req's, Too much challenge, Relocation, No benefits, Night work, Military, Long probation, Lack of trust, Lack of responsibility/trust, Lack of impact, Lack of control, Intolerance, Drug test/background check, Drinking on the job, Computer games, Bad practices, Bad pay, Bad on-call policy, Bad customers, Bad co-workers, and Bad 'customers'.

Job Hunting Techniques

How did respondents go about finding a new job? The chart on the right shows some of the schemes. Other methods used include: Checking the ads on my university campus, Cold calling, Craigslist, Direct solicitations to interesting employers, Email, Friends & family, Giving talks at conferences, Internet, Job fairs, Job placement through college, Personal marketing, Phone book, School career center, Social networks, State job pool, Temp agencies, and University.

Job Finding Methodology

Means	% Resp.
Web	80.6
Personal networking	66.4
Newspaper	40.1
Recruiters	32.8
Radio	2.4
TV	2.0

Respondents spend a mean of 9.9 (vs. 2003: 19.2) hours/week job-hunting, with a median of 5 hours/week. It is almost as if it wasn't so hard this year to find a position.

Weekly Hours Job-Hunting