

2002 Trend Report: Technical Skills and Certifications Pay **North America & Europe**

Findings and analysis from the 3Q2000 through 4Q2001 editions of the


Quarterly Hot Technical Skills & Certifications Pay Index[™]

March 10, 2002

This report contains summary data extracted from survey research published in the 2000 and 2001 quarterly editions of our popular **Hot Technical Skills and Certifications Pay Index(HTSCPI™)**.

For more information about the HTSCPI and how to obtain it, please visit the Foote Partners' website at http://www.footepartners.com/htscpi_latest.htm.

Thanks.

A handwritten signature in black ink that reads "David Foote". The signature is stylized with a large, sweeping "D" and a horizontal line extending from the end of the name.

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What is a Hot Technical Skills and Certifications Pay Index?

Skills and certification pay are premium bonuses employers pay to workers who possess high-value technical skills, or who have earned certifications for those skills. It's important to note gaining certification requires passing standardized examinations and other testing procedures, while possessing a skill and being bonused for that skill is highly subjective.

There is usually a finite 'window' for payment of skills and certifications premiums (usually 12-15 months), after which time a new set of in-demand skills and market valuation for those skills is declared and workers are encouraged to become proficient in them. Clearly, the market prices for skills premiums are driven by the economics of supply and demand, internal needs, and many other highly dynamic factors.

Foote Partners' *Hot Technical Skills and Certifications Pay Index (HTSCPI[™])* is compiled every three months from direct interviews and surveying of 29,100 IT workers in over 1,810 private and public sector employers in North America and Europe. Also contributing to the HTSCPI are more than 350 HR departments able to report skills premiums information accurately and regularly according to our exacting specifications.

The 4th Quarter 2001 HTSCPI includes market pay data collected from October 1 to December 30, 2001, targeting 136 skills and certifications. Only full-time IT workers are interviewed and/or surveyed for the HTSCPI.

What's Covered in the HTSCPI?

Skills: market prices for 83 are currently reported in the following categories:

- Networking and Internet working
- Operating systems
- Web/e-Commerce
- Messaging and Groupware
- Database
- Application Development Tools and Languages
- Enterprise Applications

Certifications: market prices for 53 are currently reported in the following categories:

- General Certifications
- Application Development and Programming Languages
- System/Network Operating Systems
- Networking
- Database
- Webmaster, Internetworking
- Security
- Project management

How is the Premium Bonus Pay Data Reported in the HTSCPI?

Skills and certifications pay in the HTSCPI report is displayed as a percent of base pay, by far the most common form in which they are paid. The HTSCPI reports three pay views for each item:

- 10th percentile
- 50th percentile(median)
- 90th percentile

In this summary we have included trend data comparing new median values for 4th Quarter 2001 with those in our previous surveys going back to 3rd Quarter 2000.

For specific market values for each skill and certification among the 136 surveyed, see the *Hot Technical Skills and Certifications Pay Index* report.

Skills & Certifications Surveyed - HTSCPI , 4th Quarter 2001 edition

<p><u>Networking and Internetworking:</u></p> <ul style="list-style-type: none"> • TCP/IP • VoIP • SIP • IPX • SNA • APPC • SMTP • WAN • WAN/LAN • WML • Ethernet Switching • 10Base-T Switching • Gigabit Ethernet • Routing (e.g. OSPF) • WAP • Jini (Sun) • ATM • HTTP • Ethernet • Windows NT Server • OS/2 LAN Server • Novell Netware • Security skills <p><u>Operating Systems:</u></p> <ul style="list-style-type: none"> • Windows NT • Windows 2000/ME • Unix • HP-UX • AIX • Solaris • Linux • Apple OS <p><u>Messaging, Office and Groupware:</u></p> <ul style="list-style-type: none"> • Lotus Notes/Domino • cc:mail • Novell Groupwise • Microsoft Exchange 	<p><u>Web/E-Commerce:</u></p> <ul style="list-style-type: none"> • JavaBeans • Java Server Pages • Active Server Pages • XML • PHP • VoiceXML • HTML • XHTML/DHTML • JavaScript • VBScript • JScript • CGI • Perl • Cold Fusion • ISA server • IIS, Apache servers • Visual Interdev • Microsoft .Net (Visual.Net, ASP.Net) • E-commerce project or subject-matter expertise <p><u>Enterprise Applications and Suites:</u></p> <ul style="list-style-type: none"> • Oracle Enterprise Apps • PeopleSoft • J.D. Edwards • Baan • Lawson • SAP • ABAP • Siebel • Project or functional experience <p><u>DBMS/RDBMS:</u></p> <ul style="list-style-type: none"> • Oracle • DB2 • Sybase Adaptive Server • Microsoft SQL Server • Visual SQL • Progress/Apptivity • dbase/xbase • Access 	<p><u>Certifications:</u></p> <ul style="list-style-type: none"> • Certified Information Systems Auditor(CISA) • Certified Information Systems Security Professional(CISSP) • Certified Network Security Professional(CNSP) • Certified Computing Professional(CCP) • Certified Internet Professional(CIP) • Certified Network Professional(CNP) • Certified Novell Engineer(CNE) • Master Certified Novell Engineer(Master CNE) • Certified Novell Administrator(CNA) • Novell Certified Directory Engineer(NCDE) • Cisco Certified Internetwork Expert(CCIE) • Cisco Certified Network Professional(CCNP) • Cisco Certified Network Associate(CCNA) • Citrix Certified Enterprise Administrator(CCEA) • Citrix Certified Administrator(CCA) • Compaq Master Accredited Systems Engineer(Master ASE) • Compaq Accredited Systems Engineer(ASE) • CompTIA PC Technician(A+) • CompTIA Internet Technician(I-Net+) • GIAC Certified Intrusion Analyst(GCIA) • GIAC Certified Incident Handler (GCIH) • GIAC Certified Firewall Analyst(GCFW) • GIAC Systems and Network Auditor(GSNA) • GIAC Certified Unix Security Admin(GCUA) • GIAC Certified Windows Security Admin(GCWN) • GIAC Security Essentials Certification(GSEC) • IBM DB2 Universal Database Certified Solutions Expert(DB2) • LAN Server Engineer(LSE) • Linux Professional Institute certification • Lotus Certified Lotus Specialist (CLS) • Microsoft Certified Solution Developer(MCSD) • Microsoft Certified Systems Engineer(MCSE) • Microsoft Certified Systems Engineer + Internet (MCSE+I) • Microsoft Certified Professional(MCP) • Microsoft Certified Professional+Internet(MCP+I) • Microsoft Certified Trainer(MCT) • Microsoft Certified Database Administrator(MCDBA) • Oracle Certified Professional (OCP) • Project Management Professional(PMP) • Prosoft Master CIW Enterprise Developer • Prosoft Master CIW Administrator
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<p><u>Project Experience:</u></p> <ul style="list-style-type: none">• Significant project experience in data warehousing, Web, ERP/ERM, CRM, and other development environments	<p><u>Application Development Tools, Languages:</u></p> <ul style="list-style-type: none">• Visual C++• Visual J++• C++• C• Visual Basic• Java• Smalltalk• Delphi• SQL Windows• PowerBuilder• Oracle Developer• Progress/Development tools• Cobol(4Q2001)• RAD	<p><u>Certifications (cont.d)</u></p> <ul style="list-style-type: none">• Prosoft Master CIW Designer• Prosoft Master CIW Website Manager• Prosoft Master CIW Associate• Red Hat Certified Engineer(RHCE)• Siebel Certified Consultant(SCC)• Siebel Customer Certified Consultant(SCCC)• Sun Certified Programmer for the Java 2 Platform• Sun Certified Developer for the Java 2 Platform• Sun Certified Enterprise Architect for the Java 2 Platform, Enterprise Edition• Sun Certified Network Administrator for Solaris OS• Sun Certified Systems Administrator for Solaris OS• Sun Certified Programmer for the Java 2 Platform
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EXECUTIVE SUMMARY & SUMMARY DETAIL

SKILLS PAY – Executive Summary

- **Median bonus premium pay across all 83 surveyed skills steadily declined throughout 2001, down 10% from 1Q01 to 4Q01, equal to a drop in bonus pay of nearly 1% of base salary, to an average 8.1% of base at the median.**
- **Overall skills pay has fallen 21% since 3Q2000 and 13% since 4Q2000, down from an average 10.2% and 9.3% of base salary at median respectively, with significant declines in several skills pay categories during the fourth quarters of both 2000 and 2001 as chief contributing factors.**

	% of Base Salary/4Q2001		
	P10	Median	P90
Average - All 83 Skills Reported	6.1%	8.1%	10.2%
Deltas: 4Q2001 vs 3Q2001		-6.0%	
4Q2001 vs 2Q2001		-6.8%	
4Q2001 vs 1Q2001		-10.2%	
4Q2001 vs 4Q2000		-13.3%	
4Q2001 vs 3Q2000		-20.7%	

SKILLS CATEGORY	Skills Bonus as % of Base Salary(Median)					
	3Q2000	4Q2000	1Q2001	2Q2001	3Q2001	4Q2001
Networking and Internetworking	10.5%	9.7%	9.3%	9.2%	8.6%	7.9%
Messaging and Groupware	10.3%	10.3%	10.3%	9.3%	8.8%	8.0%
Enterprise Applications & Suites	12.1%	11.8%	10.6%	9.5%	8.5%	8.5%
Development Tools & Languages	8.9%	8.3%	8.3%	8.0%	8.8%	8.0%
Web/E-Commerce Development	10.1%	8.7%	8.7%	8.4%	8.8%	8.3%
Database	10.4%	9.4%	8.8%	8.7%	9.1%	8.9%
Operating Systems	9.8%	8.6%	8.2%	8.0%	7.6%	7.0%
ALL SKILLS COMBINED	10.2%	9.3%	9.0%	8.7%	8.6%	8.1%

Tables 1&2 – Quarterly Technical Skills Pay, 2000 & 2001

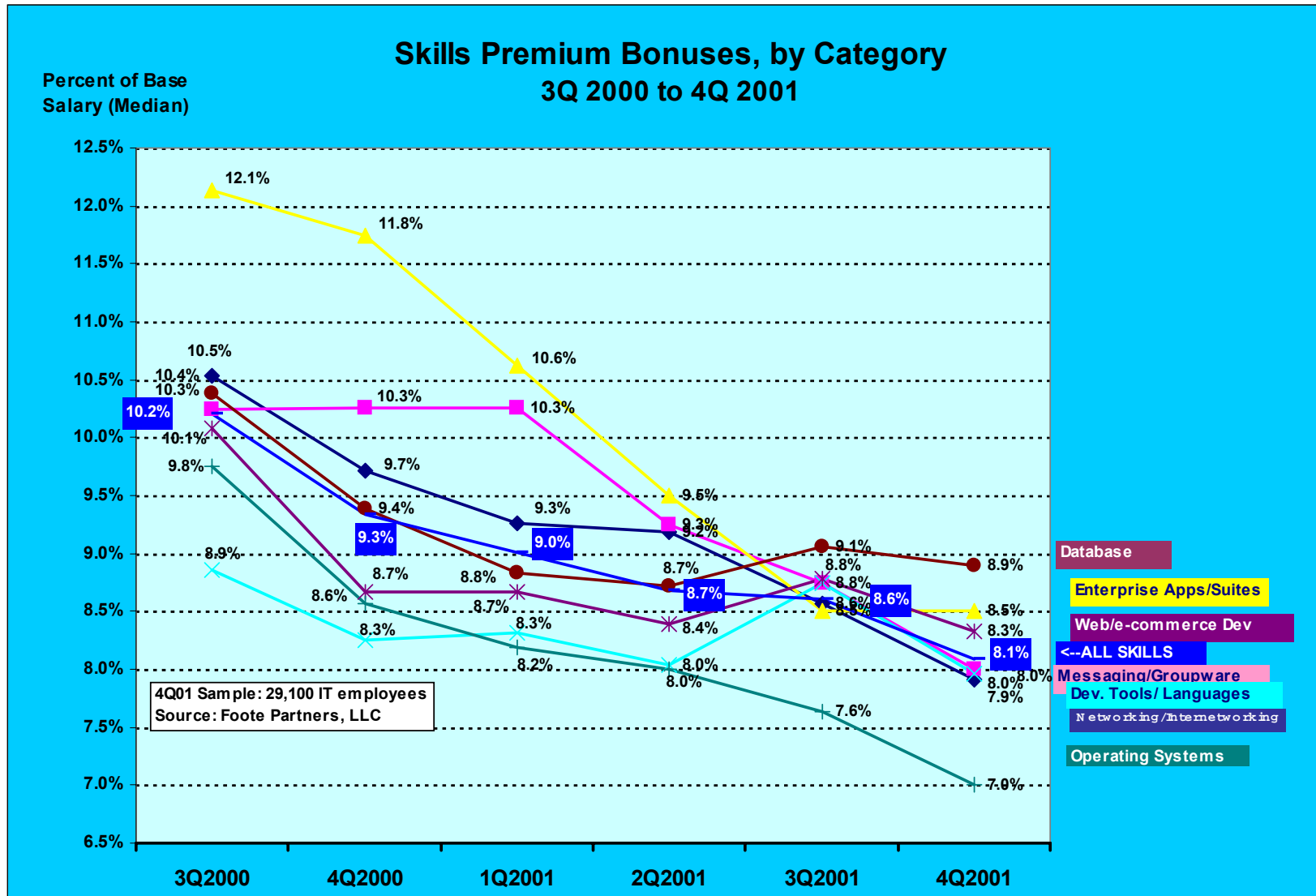


Figure 1 – Quarterly Technical Skills Pay, 2000 & 2001

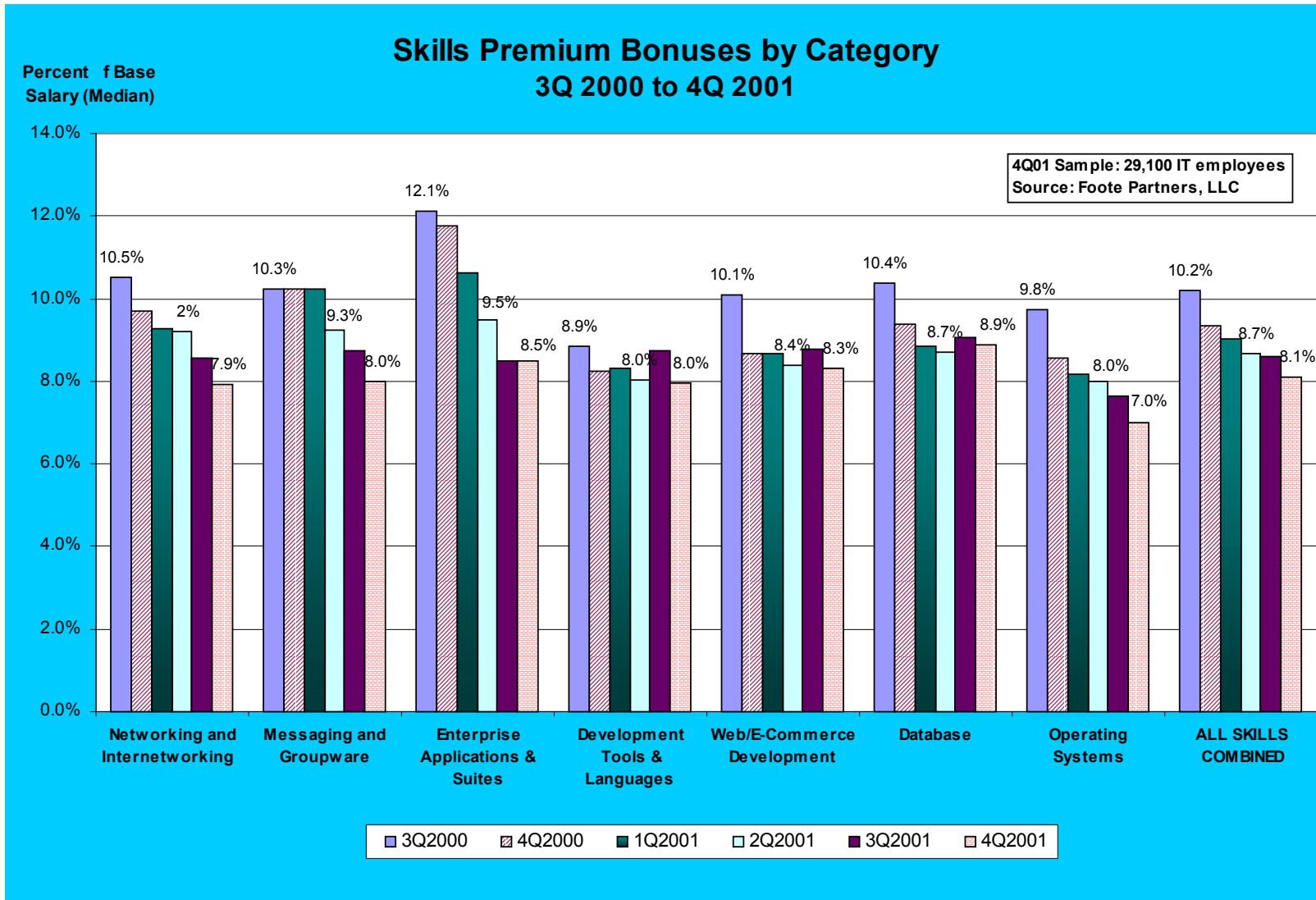


Figure 2 – Quarterly Technical Skills Pay, 2000 & 2001

EXECUTIVE SUMMARY & SUMMARY DETAIL

SKILLS PAY – Summary Detail

HOT: Database skills

- Database skills held their value in the past year, leading all skills categories in averaging nearly 9% in median skills premium pay. Strong performers for the year in this category: **Oracle DB, Microsoft SQL Server, and Sybase Adaptive Server.**

HOT: Rapid Application Development

- Rapid application development earned the highest median skill premium of all 83 skills in the HTSCPI in 2001, ranging 16% to 19% of base pay, and from 14% to 23% at the 10th and 90th percentiles, respectively.

WARM: Applications Development Tools/Languages

- This skills group made a strong showing in 2001, hitting a peak in the third quarter (8.8% of base pay) before losing a half point in the final quarter to conclude the year down 4% (to 8% of base).
- Strong performers: **RAD experience, Oracle Developer, C++, Progress, SQL Windows.**

WARM: Web/e-commerce skills

- This skill group also held or increased its value for each quarter in 2001, eventually surpassing the overall average for all skills surveyed, but losing about 5% value in 4Q, to an average 8.3% of base pay.
- Showing strength throughout the year: **XML, XHTML, all scripting languages, PHP.** Showing weakening: **CGI, IIS, Apache, Active Server Pages, JavaBeans.**

RETURNING: Enterprise Applications/Suites skills

- Following steep quarterly declines of 10%-11% throughout late 2000 and most of 2001 -- in which the average median bonus declined from 12% to 8.5% of base salary -- Enterprise Applications/Suites skills pay leveled out in 4Q2001.
- Gaining back lost value: **SAP, Siebel.**

SKILLS PAY – Summary Detail

COOLING: Networking/Internetworking skills

- This category has earned above-average 9% to 10.5% of base pay premiums throughout most of the past two years. But declines in several related skills in 3Q and 4Q 2001 has pushed this group below the overall average premium pay, finishing 2001 at 7.9% of base.
- Despite 25% - 30% pay growth in 2001 for VoIP and WML skills(to 9% and 10% of base pay respectively, losing the most value this year was: **ATM, Routing, HTTP, 10base-T Switching, NT Server, Gigabit Ethernet, Ethernet Switching, TCP/IP, IPX.**
- But...with strong growth in base pay for networking-related jobs this year, our research indicates that pay for networking skills is not declining, but rather is being shifted into larger base salaries. This is an important and influential new trend in IT compensation

COOLING: Messaging and Groupware skills

- Led by both **Microsoft** and **Lotus Notes skills value erosion**, Messaging and Groupware skills pay declined 22% from 1Q to 4Q 2001, to 8% of base pay, including a 9% drop in the final quarter of the year.

COLD: Operating Systems skills

- Operating System skills pay has declined 28% since 3Q 2000 in our survey, including a 15% drop in 2001 alone (minus 8% in 4Q alone), and earns the lowest average median skills pay of any category in our survey: 7% of base pay vs. an 8.1% average across all skills.
- Declines in **Solaris** (-22% from 1Q to 4Q 2001) and **Windows NT** (-44% in the period) is attributed to a combination of planned vendor phase-outs, recessionary spending cuts on servers and PCs, and layoffs. By contrast, **Linux** skills retained their value in 2001.

EXECUTIVE SUMMARY & SUMMARY DETAIL

SKILLS PAY – Summary Detail

Hottest/Coldest Skills – 2001

HOTTEST SKILLS (20%+ growth in 2001 <u>or</u> 10%+ growth in 4Q2001)	% change 4Q01 vs. 3Q01	% change 4Q01 vs. 1Q01
VoIP	13%	38%
WML	11%	25%
Novell Netware	20%	20%
Siebel	13%	13%
SAP	14%	-20%

COLDEST SKILLS (20%+ decline in 2001 <u>or</u> 15%+ decline in 4Q2001)	% change 4Q01 vs. 3Q01	% change 4Q01 vs. 1Q01
ATM	-33%	-50%
cc:mail	-29%	-44%
Windows NT	-17%	-41%
Routing (e.g. OSPF)	-18%	-40%
PowerBuilder	-17%	-38%
Lawson	-11%	-38%
J.D. Edwards	-11%	-38%
HTTP	-25%	-33%
10Base-T Switching	-20%	-33%
Ethernet	-22%	-30%
ABAP	0%	-30%
Delphi	-25%	-25%
Ethernet Switching	-13%	-22%
Solaris	-13%	-22%
CGI	-20%	-20%
Active Server Pages	-11%	-20%
Visual C++	-17%	-10%
Cold Fusion	-17%	0%

Highest/Lowest Paying Skills – 4Q2001

HIGHEST PAYING SKILLS	% of base pay 4Q2001*
Rapid Application Development experience	19%
Security skills (projects)	16%
XML	14%
Oracle DB	13%
WAN savvy, with LAN	12%
Java Server Pages	12%
Microsoft SQL Server	12%
WAP(Wireless Application Protocol)	11%
PeopleSoft	11%
Oracle Enterprise Apps	11%
Oracle Developer	11%
JavaScript	11%
	* at median

LOWEST PAYING SKILLS	% of base pay 4Q2001*
ATM	2%
SMTP	2%
Smalltalk	2%
Cobol(4Q01)	4%
CGI	4%
SNA	5%
cc:mail	5%
PowerBuilder	5%
Cold Fusion	5%
	* at median

EXECUTIVE SUMMARY & SUMMARY DETAIL

CERTIFICATION PAY – Executive Summary

- Average median bonus premium pay across all 53 surveyed certifications **remained fairly constant throughout 2001, at 8.3% to 8.6% of base pay in each quarter**, losing only 0.3% of base pay from 1Q to 4Q.
- **Unlike skills pay, overall certification pay has risen almost 4% since 4Q2000, from 8% to 8.3% of base pay**, bolstered by steady growth in pay for certifications relating to project management, database, and security.

	% of Base Salary/4Q2001		
	P10	Median	P90
Average - All 53 Certifications Reported	5.72%	8.25%	10.57%
Deltas: 4Q2001 vs 3Q2001		-4.0%	
4Q2001 vs 2Q2001		-1.4%	
4Q2001 vs 1Q2001		-3.9%	
4Q2001 vs 4Q2000		3.7%	

CERTIFICATIONS CATEGORY	Certifications Bonus as % of Base Salary(Median)				
	4Q2000	1Q2001	2Q2001	3Q2001	4Q2001
General	7.0%	8.3%	7.3%	6.8%	6.3%
AD/Programming Languages	9.7%	8.2%	7.6%	7.9%	7.6%
Databases	10.0%	10.3%	10.7%	11.3%	11.3%
Webmaster/Internetworking	9.3%	10.7%	8.8%	9.1%	8.8%
Networking	9.5%	11.0%	9.8%	9.6%	9.2%
Systems/Network OS	6.0%	7.0%	8.0%	8.0%	7.5%
Security	6.8%	7.0%	7.6%	8.3%	8.0%
Project Management	12.0%	13.0%	13.0%	14.0%	14.0%
ALL CERTIFICATIONS COMBINED	8.0%	8.6%	8.4%	8.6%	8.3%

Tables 3&4 – Quarterly Technical Certification Pay, 2000 & 2001

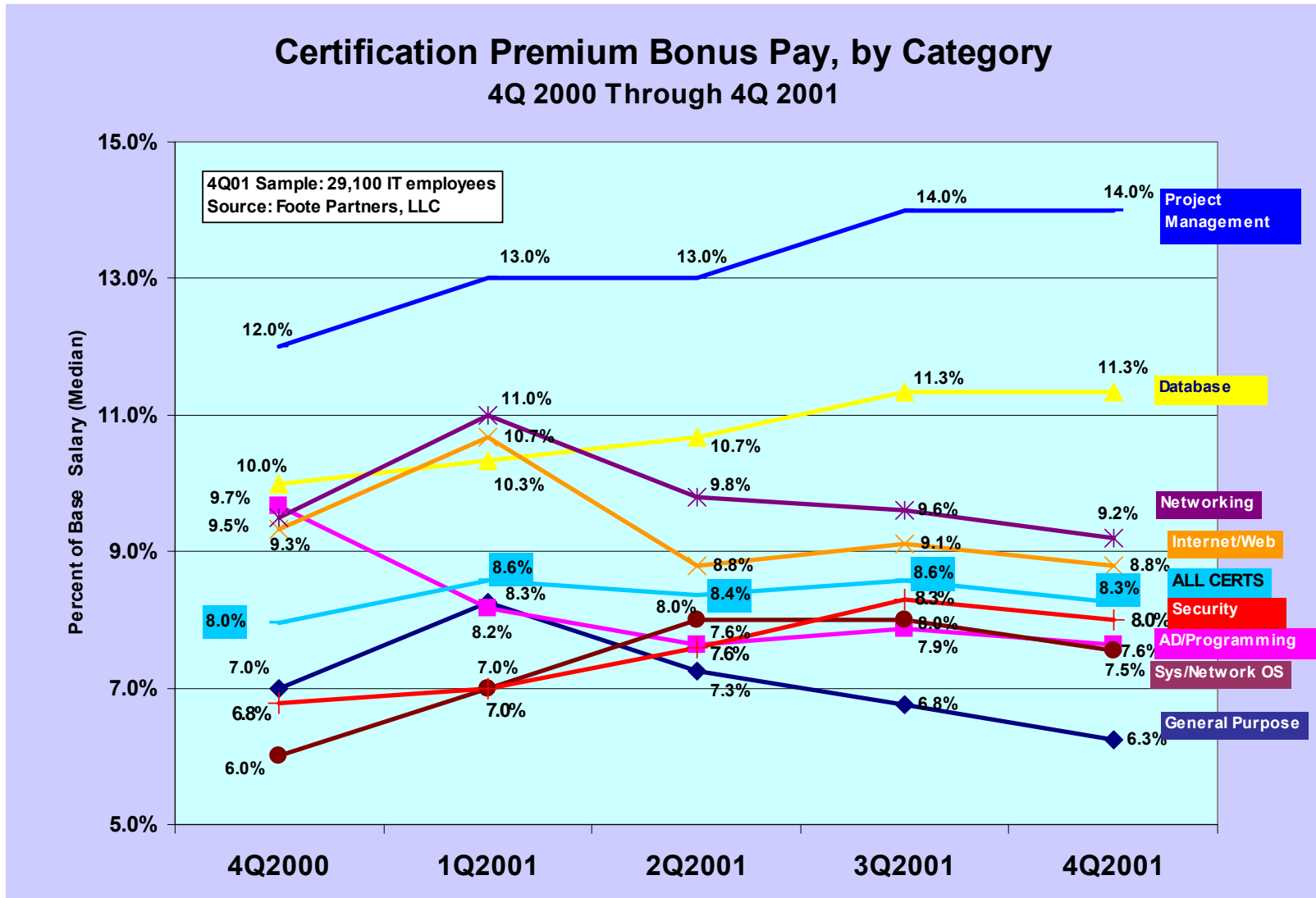


Figure 4 – Quarterly Certifications Pay, 2000 & 2001

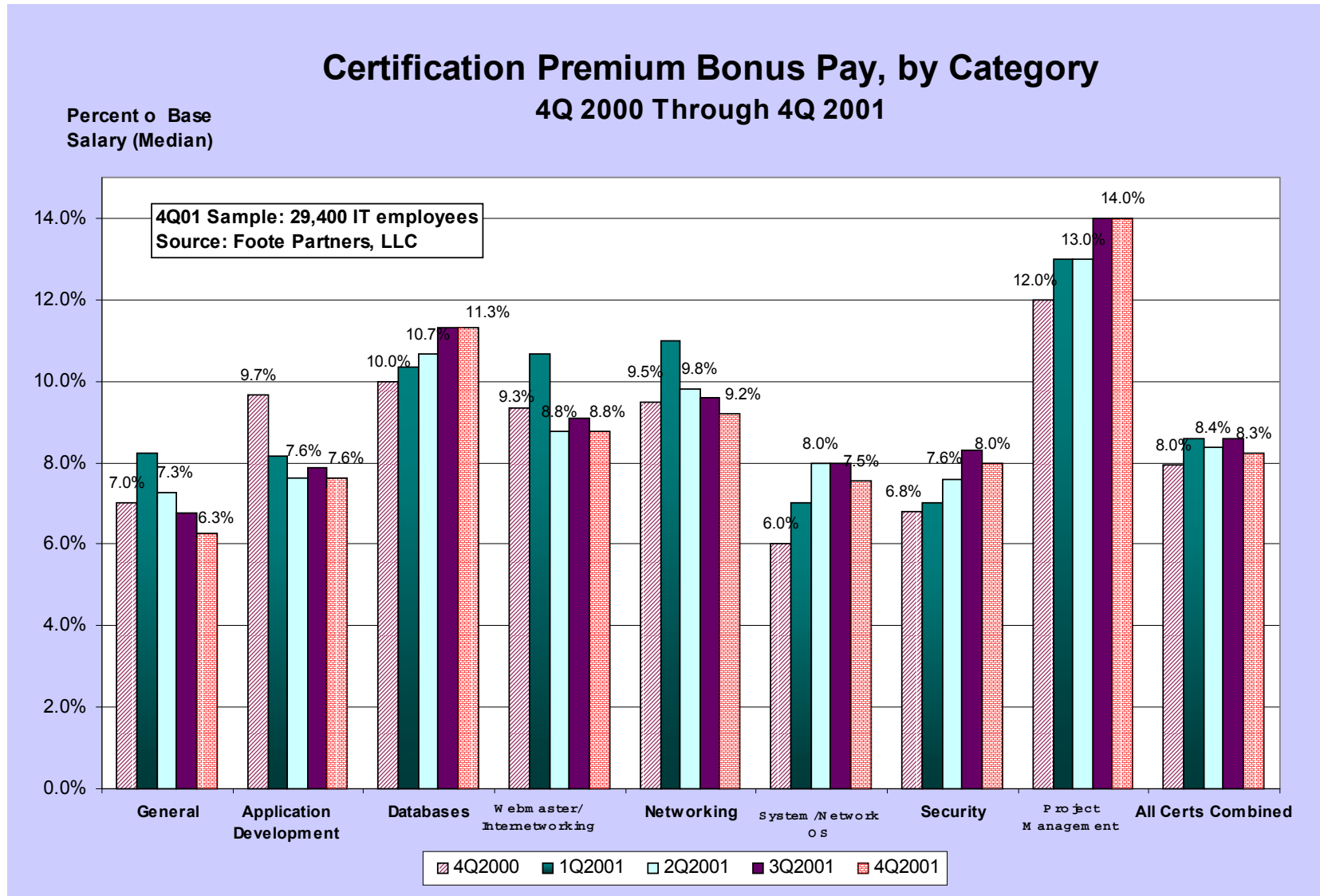


Figure 4 – Quarterly Certifications Pay, 2000 – 2001

EXECUTIVE SUMMARY & SUMMARY DETAIL

CERTIFICATION PAY – 2001

HOT: Project Management Professional(PMP) certification

- The PMP continues to earn a significantly higher premium than any other certification surveyed: 14% of base pay (at median), up from 13% in 1Q2001 and 12% in 4Q2000.

HOT: Database certifications

- This category earned the next highest bonus premiums in the fourth quarter at 11.3% of base pay (up 10% from 1Q and 13% from 4Q 2000).
- Strong performers: **Microsoft Certified Database Administrator (MCDA), Oracle Certified Professional (OCP).**

HOT: Security certifications

- The security group achieved the highest growth of any certification category in the first three quarters of 2001, up 19% from 1Q and 22% from 4Q2000. Pay leveled off in the final quarter of 2001, finishing the year +14% for average premium pay of 8% of base pay across ten security certifications.

- Leading 2001's outstanding performance: **GIAC's Intrusion Analyst(GCIA), Incident Handler(GCIH), Firewall Analyst(GCFW), Unix Security Administrator(GCUX) certifications; Certified Information Systems Security Professional (CISSP)**

WARM: Applications Development and Programming Language certifications

- Following a sizable 16% drop in value in 1Q2001 over 4Q2000 due to eroding Siebel and Sun certification pay, average pay for this category leveled off the rest of the year, finishing at 7.6% of base pay (down 7% for the year).

WARM: Webmaster/Internetworking certifications

- Also experiencing a significant drop in value early in 2001, these certifications leveled off the rest of the year, finishing at 8.8% of base pay and well above the 8% average bonus pay for all surveyed certification
- Adding value: **Prosoft's Master CIW Administrator and Enterprise Developer; CompTIA Internet Technician**

EXECUTIVE SUMMARY & SUMMARY DETAIL

CERTIFICATION PAY – 2001 (cont.)

WARM: Systems/Network Operating Systems

- Premium pay for these certifications exploded from 4Q2000 to 3Q2001, gaining 33% in value. Despite a decline in 4Q2001 to 7.5% of base salary, pay still grew an overall 6% for the year.
- Influential: the supply of **Microsoft Certified Systems Engineers(MCSE)** has expanded so significantly that it has narrowed the supply/demand gap, driving value down; the introduction of new Microsoft operating systems;

COOLING: Networking certifications

- Down over 16% for 2001, from 11% of base pay to 9.2%, but still well above the average of all certifications surveyed.
- But...with strong growth in base pay for networking-related jobs this year, our research indicates that pay for networking certifications is not declining, but rather is being shifted into larger base salaries.

COLD: General Certifications

- Bonus pay for such certifications as **CompTIA A+** and **Microsoft's Certified Professional(MCP)**, typically the domain of new, inexperienced technical workers, has plummeted--down 24% for 2001, to 6.3 % of base pay--as employers channel bonus pay to more experienced specialists.

EXECUTIVE SUMMARY & SUMMARY DETAIL

CERTIFICATIONS PAY – Summary Detail

Hottest/Coldest Certifications – 2001

HOTTEST CERTIFICATIONS (20%+ growth in 2001 or 10%+ growth in 4Q2001)	% growth 4Q01 vs. 3Q01	% growth 4Q01 vs. 1Q01
Novell/Certified Novell Engineer (CNE)	0%	60%
GIAC Certified Intrusion Analyst (GCIA)	0%	50%
Microsoft Certified Database Administrator (MCDBA)	0%	33%
GIAC Certified Unix Security Administrator (GCUX)	0%	33%
GIAC Certified Firewall Analyst (GCFW)	0%	29%
LAN Server Engineer (LSE)	0%	20%
GIAC Certified Windows Security Administrator (GCWN)	-14%	20%
Siebel Certified Consultant (SCC)	17%	0%
Siebel Customer Certified Consultant (SCCC)	14%	0%

COLDEST CERTIFICATIONS (20%+ decline in 2001 or 10%+ decline in 4Q)	% change 4Q01 vs. 3Q01	% change 4Q01 vs. 1Q01
Microsoft Certified Professional (MCP)	-17%	-38%
Microsoft Certified Systems Engineer/Win2K, NT (MCSE)	-14%	-33%
Cisco Certified Network Associate (CCNA)	0%	-31%
CompTIA PC Technician (A+)	0%	-29%
Microsoft Certified Systems Engineer+Internet (MCSE+I)	-80%	-27%
Microsoft Certified Trainer (MCT)	-80%	-21%
Sun Certified Network Administrator for Solaris	-14%	-14%
Sun Certified Developer for Java 2 Platform	-13%	-13%
Sun Certified Enterprise Architect for Java 2 Platform, EE Tech	-11%	-11%
Compaq Master Accredited Systems Engineer (Master ASE)	-18%	0%
Prosoft CIW Associate	-14%	0%
Compaq Accredited Systems Engineer (ASE)	-13%	0%

Highest/Lowest Paying Certifications – 4Q2001

HIGHEST PAYING CERTIFICATIONS	% of base pay 4Q2001*
Project Management Professional(PMP)	14%
Oracle Certified Professional (OCP)	12%
Microsoft Certified Database Administrator (MCDBA)	12%
GIAC Certified Intrusion Analyst (GCIA)	12%
Microsoft Certified Trainer (MCT)	11%
Microsoft Certified Systems Engineer+Internet (MCSE+I)	11%
Prosoft Master CIW Enterprise Developer	11%
Prosoft Master CIW Administrator	11%
Microsoft Certified Solution Developer (MCSD)	10%
IBM DB2 Universal Database Certified Solutions Expert (DBU)	10%
CompTIA Internet Technician (I-Net+)	10%
Cisco Certified Internetwork Expert (CCIE)	10%
Cisco Certified Network Professional (CCNP)	10%
Novell/Master Certified Novell Engineer (Master CNE)	10%
Citrix Certified Enterprise Administrator (CCEA)	10%
	* at median

LOWEST PAYING CERTIFICATIONS	% of base pay 4Q2001*
Certified Computing Professional (CCP)	4%
Microsoft Certified Professional (MCP)	5%
CompTIA PC Technician (A+)	5%
GIAC Security Essentials Certification (GSEC)	5%
Lotus/Certified Lotus Specialist (CLS)	6%
Prosoft Training CIW Associate	6%
	* at median

TRENDS AND PREDICTIONS

KEY TRENDS – Skills and Certifications

GENERAL

- Beginning in late 2000 and continuing to the present, employers have been reluctant to pay skills bonuses to junior staff or inexperienced workers, to those not well-matched to priority projects, and others whose return on investment is not assured. Though a general trend in premium bonus pay, our research indicates particular focus on skills concentrated in:
 - Enterprise Applications/Suites; Network/Internet- working**
- However, growth in base pay for networking-related jobs in 2001 has been the highest of any IT employment category (+12.1 % vs. +5.8 overall). Our research indicates that pay for networking certifications is not declining but instead is being shifted into larger base salaries---an important trend going forward.
- Total skills and certifications cash bonus pay rose 2.3% in 2001 according to our findings. As available funds for skills premium pay flow away from less capable employees, they have increasingly been directed to upper echelon “impact” IT workers who are receiving larger and sometimes additional bonuses. This is particularly so in:
 - Database; Web/e-commerce development; Development tools and languages**
- Our research indicates more emphasis on team- and project-based skills incentive pay plans during the economic downturn, as budgets undergo case-by-case scrutiny to focus resources on projects that produce tangible, near-term benefits.
- 59% of certificants report having received a raise within the first year of attaining their primary certification.
- 78% felt that their certification had a significant impact on getting that raise.
- We predict continued dominance of the **Project Management Professional(PMP), rapid applications development (RAD), and project-related security skills** as the highest paying certifications/skills in our surveys. The PMP is an enabler for repeating what works, managing complexity, reducing risk, and predicting outcomes. RAD skills popularity is driven by a continual need to reduce cycle time and operate efficiently and with maximum flexibility. Security skills have grown with the popularity of web-enabled solutions and e-business explosion.

KEY TRENDS – Skills and Certifications

CERTIFICATIONS

- The average certificant currently holds 3 or 4 different technical certifications. 80% of the certificant polled said they plan to pursue additional certifications in the next twelve months.
- The largest number of technical certificants work jobs in networking—network engineering, network management and network administration (31 percent of those interviewed or surveyed). We predict this will increase to 35%-40% in the next two years.
- Our research suggests a growing popularity in vendor-independent certifications, such as **ProSoft Training's CIW (Certified Internet Webmaster)** series and the **Global Information Assurance Certification (GIAC)** series.
- Certification “cross pollination” and networking is becoming increasingly common between vendor-neutral certifications and vendor-specific certifications purveyors

Examples: product vendors accepting or requiring a vendor-neutral certification as a requirement toward earning the vendor's certification

- Novell Corp. has replaced its **Certified Novell Engineer** Networking Technologies exam with **CompTIA's Network+** exam
 - CompTIA's ITProject+** is now a core requirement for the **Master CNE** level, and **CompTIA Server+** has become an **MCNE** elective.
 - Microsoft is accepting a combination of CompTIA certifications in place of an elective in its **Microsoft Certified Systems Administrator** track
- Examples:* vendor-neutral certifications accepting or requiring vendor-specific certifications:
- Candidates for **ProsoftTraining's CIW Security Analyst** title must hold a networking certification from either **Microsoft (MCSE)**, **Cisco (CCNP or CCIE)**, and several vendor-neutral **Linux** certifications.
 - The most advanced **CIW** titles provide "fast tracks" for individuals who already hold a Microsoft, Novell, or Intel certification.

KEY TRENDS – Skills and Certifications

SECURITY CERTIFICATIONS

- More accelerated growth in security skills and certification pay is anticipated as security skills continue to grow in importance with more business being launched online. While they must continue to master new technologies for protecting IT systems, security professionals are under increasing pressure to understand their company's entire business and pinpoint the security risks that are most threatening to the company's bottom line.

Moreover, we predict greater diversification in security professionals' skill sets including:

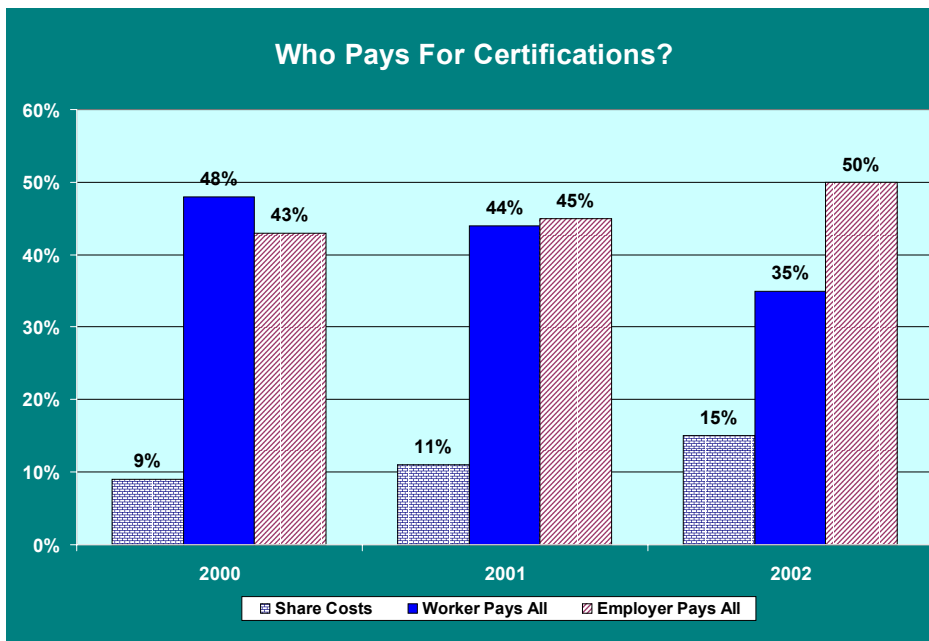
- The inclusion of basic network engineering and operations skills into security jobs regardless of specialization.
- Rapid growth in new security niches (e.g. forensics and intrusion detection).
- New technologies with broad appeal (e.g., Microsoft's XP and .NET).
- The continued supply-and-demand gap for security professionals (one of the widest of any IT job category).

- The most highly valued experience, knowledge and skills in security jobs over the next several months which will influence skills and certifications demand and premium bonus pay:
 - Remote and wireless access
 - Authorization, authentication mechanisms
 - Bulletproofing B2B exchanges
 - Architecture
 - Privacy expertise (e.g. HIPAA, Gramm-Leach-Bliley compliance)
 - Selecting and managing ASPs and outsourcing partners
 - Risk management
 - Embedding benchmark practices, using metrics to measure effectiveness
 - Developing stronger user-awareness policies
- “Soft” skills will reap additional rewards for security pros beyond purely technical skills: attitude, diplomacy, patience, interpersonal and communication skills.

KEY TRENDS – Skills and Certifications

PAYING FOR CERTIFICATIONS

Employers are bearing more of the costs of their workers' skill certification programs: 53% of those surveyed report that their certifications were funded entirely by their employer (up from 43% in 2000). Only 34% responded that they paid all costs of their certifications, down from 48% in 2000.



ABOUT FOOTE PARTNERS LLC

Foote Partners LLC is New Canaan, Connecticut based research and consulting firm comprised of former Gartner Group and META Group information industry analysts and consultants, McKinsey & Company management consultants, human resources executives, IT managers, and Fortune 500 professionals. We advise government and leading corporations in strategic and tactical matters benefiting most from uniting the IT, business, and HR communities.

Our research division, **Foote Research Group**, compiles and publishes IT and HR research products which have helped more than 900 companies solve their most difficult information technology workforce problems, strengthen their management capabilities, and build first-class IT organizations. We employ innovative data collection methods and analytical techniques in continuously tracking 30,000 IT workers in 1,860 employers to produce the freshest, most advanced total compensation benchmarks for IT workers available in the North America and Europe including:

- Quarterly **IT Market-Priced Salary Survey** of 85 key IT positions in 88 cities
- Quarterly **Hot Technical Skills and Certifications Pay Index (HTSCPI)**, featuring market pricing nearly 140 skills and certifications.

In our management consulting division, our **Enterprise Project Management Practice** and **Organizational Transition Practice** areas bring key capabilities to companies in need of cross-functional management expertise, enterprise project integration and delivery, and advanced team development. Our clients want project delivery that is more predictable, and to incorporate successful practices into their environments for getting work done that are more repeatable.

Our **Human Capital Management Practice** and **e-HR Practice** areas help companies build an HR agenda that leverages new technology, proven management processes, successful strategies for human capital management, and innovative e-solutions for HR.

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