

Favorite part of the job: "Working with the people in the community, understanding their needs, and creating a successful company around that."

Toughest aspect of the job: "You can't meet all of the community's needs at once."

Salary: \$125,000

5. ETHICAL HACKER



It's the dream job for a generation of hackers: A company paying you to break into its network. By simulating attacks from the Net or from an internal source, ethical hackers

locate weak spots in a company's network. Then they work with clients to prioritize which are the most serious threats, and suggest solutions. Jeff Moss, director of security assessment services at Secure Computing in San Jose, Calif., and founder of hacker convention Def Con, got his first computer around age 12 and was a network consultant before he found this outlet for his hacking hobby.

Network weaknesses usually develop when fast-growing companies add new technologies to their networks without following a defined security policy or having a dedicated security expert manage the process. Another potential open door for hackers, says Moss, is a router or firewall programmed to let in too many protocols and applications. Clients are often rattled by his team's quick break-ins that exploit these common weaknesses. "First they're in denial, then they're terrified," says Moss. "We usually have to tell them that it's not the end of world, that problems are solvable." Besides performing intrusion tests, Moss also puts on hacking demonstrations at trade shows to evangelize the need for intrusion testing.

Evolution: Only the "ethical" part of the title is new. The best hackers, like Moss, were illegally penetrating networks long before there was a market for that skill. But as more companies put operations and sensitive data on the Web, demand for intrusion testing experts (once known as "tiger teams") is exploding. "This is a huge paradigm shift for those of us who grew up learning how to break into things and are old enough to have real jobs," says Moss.

Skills needed: An ethical hacker with a college degree is rare, says Moss. Instead, expertise in multiple operating systems, applications, security software, and networking protocols, along with a good reputation, are the best credentials.

Favorite part of the job: "Constantly dealing

with new situations, new technologies, and new networks. And there's always something interesting to talk about."

Toughest aspect of the job: "There's a lot of demand to generate business and do billable work. You can't spend a week on an interesting problem just because it's fun."

Salary: \$60,000-\$140,000

6. EMAIL CHANNEL SPECIALIST

Some top Web businesses believe plain-old email is the next great channel for new products, services, direct-marketing efforts, and sales. In-house experts such as Robert Seidman, vice president of email at Schwab's Electronic Brokerage Enterprise, oversee outbound email channel operations, from product development and strategic planning to corporate policy issues. Defining a policy for the use of outgoing email, Seidman says, is a simple step to ensure email products provide value to customers, and aren't just a cheap and easy solution for the company.



By designing subscription-based services, email developers offer content that customers choose to receive—not spam. Schwab's daily email alerts deliver information such as closing results for market indices and the client's customized list of stock and mutual fund holdings. Seidman directly oversees the testing of new products to learn what customers will find acceptable. Schwab is currently experimenting with HTML email, which allows for richer content and graphics. Later this year, Schwab will begin testing the addition of some marketing messages, such as updates on financial services or new features on Schwab's Website, within the body of its existing email products. n **Evolution:** Initially, Internet businesses focused their Web efforts on creating online brands and securing customers. Now, email looks like a natural complement to existing Web products.

"If we're communicating with customers by email five times a week, that may drive more traffic to our site," says Seidman. "It's potentially a tremendously powerful tool."

Skills needed: Software development experience is required to work with technicians on design issues and rollout schedules. But an email channel manager must also understand customers' needs and anticipate how they would use certain services. Seidman has worked on product development in the software and Internet space for the past seven years, but he is also uniquely

qualified for his new role: In 1994, he created Seidman's Online Insider, an email newsletter that now has 50,000 subscribers.

Favorite part of the job: "Being at the forefront of the industry. Schwab wants to be the smartest company in the world about email, and I've been given license to figure out how to do that."

Toughest aspect of the job: "Adapting quickly and changing on the fly as we learn what works and what doesn't."

Salary: \$95,000-\$180,000

7. CONSUMER EXPERIENCE MANAGER

Mark Reese, the chief e-commerce officer for educational-toy seller toysmart.com, monitors the total quality of a customer's experience, from shopping the company's site to the delivery of orders. Reese works with the content team and Web applications developers on new features and functions that will make the shopping experience better and easier. For example, toysmart.com's new Website includes customized, one-click searches based on toy category, age group, and price range. Reese also oversees operations for the back end of the transaction process, such as order fulfillment, supply-chain management, delivery, and billing. He's often in the warehouse watching orders go out the door, and frequently shops toysmart.com under false names. For all strategic decisions, and with any proposal of new technologies or services, Reese ensures that first consideration is given to how it will affect customers.



"I put every idea through that filter to make sure that we have considered its effect on any part of the transaction process," says Reese. "Our CEO likes the fact that there's one person accountable for the end-to-end customer experience."

Evolution: In the race to launch ecommerce operations, companies may have neglected customer service in favor of issues such as marketing, price, and strategic alliances. But the Web offers new ways to develop relationships with customers, collect personal information, and design better-targeted products and services (see "Devil's in the Details," May '99). An expert dedicated to the online customer experience can help bring ecommerce to the next level of personalization and customer interaction.

Skills needed: Reese likens his role to that of a chief operating officer. Operations experience, systems engineering skills, and creative and strategic thinking capabilities are essential. "You have to be both a right-brain and a left-