

My career

Web operations engineer

Jason Thomas



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BLS fast facts: Network and computer systems administrators

- May 2012 employment: 350,320 (excludes self-employed workers)
- 2010–20 projection: 28 percent growth (faster than average)
- May 2012 median annual wage: \$72,560
- Typical education and training: Bachelor's degree
- May 2012 top-emplying industries: Computer systems design and related services; management of companies and enterprises; colleges, universities, and professional schools; elementary and secondary schools; and wired telecommunications carriers

What do you do?

I provide technical support for the Web developers who manage two of my company's most popular websites. Whenever the developers run into a problem they can't fix, I help them find solutions.

Every problem is different, so I need to understand all the systems that make the websites work: databases, programming, networking, and lots more. By comparison, a Web developer usually only needs to know Web programming but will know it better than I do.

I also maintain the computer servers that host the two websites. These websites offer software applications that enhance our products. And to keep up with user demand and to accommodate new visitors, I have to improve how the current systems work and add more servers, sort of like remodeling and expanding a house.

To help me add new servers, I develop automation tools that act like a printing press.

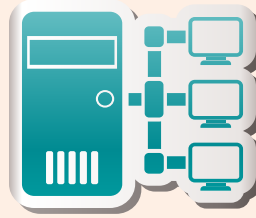
For example, I can bundle into a single template all the tools, settings, and data a server needs to work with one of our websites, and then easily install the template on as many servers as that website needs.

Describe your educational background.

When I started my bachelor's degree in computer engineering, I didn't know what my career would be. But I was sure I wanted to work with computers. Computer engineering comes in two "flavors": hardware (electrical engineering) and software (computer science). I concentrated in computer hardware for my bachelor's degree but switched to software for my master's degree because I was already working with software as a systems administrator.

The most important things you learn in school come not from the material but from the professors' experience in the field. They can provide examples of real problems, their thinking process, and how they found a

solution. But no textbook or course can keep up with how fast the industry is changing. Little of what I learned 5 years ago is still applicable today.



What was your first job out of college?

I started as a systems administrator in an internship I discovered at one of my school's career fairs. I was eventually hired full time. I dealt with a variety of basic problems that took minutes to solve. For example, if a customer had trouble accessing the server, I might have solved the problem with a simple password reset. The problems I deal with today can take hours to solve, but that experience helped me build a foundation of knowledge that I still use.

The best way to encounter more problems and learn more solutions is by getting experience. In technology, there is no one solution—but there certainly are wrong ways of approaching a problem. My job is to find the most efficient solution.

How did you get this job?

I've been in my field for 5 years now, so I have met a lot of professional systems administrators. One of these contacts in my network recommended me for an open position at the company where he works.

What else led you here?

I've been working with computers since I was young. I started my first computer job when I was 15 years old. I was passionate about the work, so I decided to pursue a computer engineering degree.

After my first job out of college, I worked for a national media company as an associate systems engineer. The work was similar to what I did in my first job, but I also had the opportunity to take on more problems. I was then promoted to a systems engineer doing even more difficult work. Two years later,

when I no longer felt challenged by my job, I joined a start-up company.

At this start-up company, I had more responsibilities and less help. I had to learn to be more creative with my solutions to reduce costs and time. Five months later, I joined the company I now work for.


What's been one of your biggest challenges?

When I started working remotely from home, I found it difficult to communicate with my coworkers. I couldn't walk to their cubicle or talk over lunch. I mostly read emails. It was affecting my work. For example, I would have trouble figuring out whom to approach for help with a specific problem because I knew little about my coworkers or what they could do.

I had to put in a lot of effort to know them better. Whenever I went to the main office, I introduced myself and socialized. I also set up a chat room for us to talk online during the day and after hours.

What's your best advice?

Job experience and networking are crucial. Working as an intern while pursuing a degree will help you land your first job. Once you have a bachelor's degree, experience usually trumps education. Networking will help you throughout your career. You can learn new things from the people you meet and get your name recognized, for example.

The work is demanding and, especially early on in your career, you might be on call. You have to really want to do this. Professionals in my field are motivated and self-driven. Seek new challenges—not more money. 

Jason Thomas was interviewed by Dennis Vilorio, an economist in the Office of Occupational Statistics and Employment Projections, BLS. Dennis can be reached at (202) 691-5711 or vilorio.dennis@bls.gov.