



## Cisco Routing and Switching Certification

### Case Study Subject

Ismael Aguayo, Network Engineer

### Industries

Manufacturing, technology, retail, medical

### Cisco Certifications

CCENT, CCNA Routing and Switching, CCNP Routing and Switching

### Professional Benefits

- Ability to accomplish more complex projects
- Increased confidence on the job and recognition by colleagues as a source of expertise
- Expanded opportunity for promotion, job offers, and salary increases
- Solid foundation in networking vital for future exploration of new technology areas

### LinkedIn Profile

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# Career Acceleration with Cisco Routing and Switching

## Hooked on Technology, and Certification

Engage network engineer Ismael Aguayo in conversation, and he will almost certainly take it into a discussion about his passion for networking. He is a self-proclaimed, dedicated "cert junkie"—so dedicated to IT networking that he has built his own testing lab in his garage, spends his Saturdays studying, and even tutors his buddies twice a week on Cisco networking technologies.

Becoming Cisco certified was just a logical progression for a guy who grew up with technology toys and whose mother was a software programmer. At the moment, Ismael has earned his CCENT, CCNA Routing and Switching, and CCNP Routing and Switching certifications. And, he has plans to achieve a CCIE Routing and Switching certification, and CCNA Security and CCNP Security after that.

Ismael describes the role of network engineer as "an IT job you can't just wing—you've got to know your stuff." And it's for that reason that he was drawn to Cisco certification. "Not just anybody who's good at reading and taking notes can pass the test," he explains. "Every time you get a Cisco cert, you can go to your boss with confidence and say, 'Yeah, I know what that is, and I know how to implement it or design it.'"

Ismael started his career as an intern at the age of 20 at a rocket and missile propulsion manufacturer, where he served as a junior network engineer. He began to build his Cisco foundational knowledge with CCENT certification and kept on going.

## Toes in the Water with CCENT, Waist-Deep with CCNA

"CCENT," he states, "showed my boss that I was dedicated—that I had a passion for the technology and wasn't just studying for a paycheck. It gave me confidence because the team saw that I was accomplishing something with certification and wanting to excel."

Three months later, he was pursuing his CCNA Routing and Switching certification, what he calls venturing "waist-deep" into the certification waters. "With CCNA I saw much more of the spectrum of networking and became a lot more comfortable taking projects," Ismael says. "It's where I went from being just another engineer on the team to someone who was getting even more serious and who people could come to with questions."

Perceiving Ismael's value to the company, his employer promoted him to network engineer.



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– Ismael Aguayo

### Chest-Deep with CCNP

By the time Ismael earned his CCNP Routing and Switching certification, he was working for a leading IT company. CCNP Routing and Switching allowed him to move “chest-deep” into network engineering. He was now diving deeper into knowledge of protocols, load balancers, BGP gateways, and the intricacies of packet design. “CCNP helped me tremendously because now I felt even more comfortable with routing technologies,” he adds.

And the benefits were tangible at this point for Ismael as well. “Once I got my CCNP, more job offers were coming in. It was motivating, just the difference in pay scale and opportunities, going from CCNA to CCNP.”

### The Real Deal at Age 26

Ismael moved on to work as a network engineer for a supermarket chain, and from there to a network engineering role for a global player in the confection industry. There he found a long list of vulnerabilities and flaws in the networking system. “Because I was Cisco certified,” he says, “I understood those issues and was able to fix them. I also instituted best practices. When you present problems to your boss, you also have to present good solutions, and I was able to do that.”

At 26 years old, Ismael was responsible for managing global sites for the entire company and its thousands of employees, all of whom depended on him to keep their computers performing flawlessly. He also oversaw the company’s networked manufacturing equipment—central to his employer’s massive production—to prevent costly breakdowns.

Ismael has recently made the transition to work as a network engineer in a large university medical system. Two of his current projects there are migrating clinics from one network design to another and providing the network connectivity for a new virtual machine environment.

### Finishing the Foundation

Ismael has his sights set on CCIE Routing and Switching next. While his further goal is acquisition of CCNA and CCNP Security certifications, he has chosen to complete the Cisco Routing and Switching certification track first, and advises this path for others eager to gain the strong foundation in networking essential for pursuing other technologies.

“When you build that house, you’re not building the windows first or the roof first. Build a strong foundation because I guarantee you, when you study Wireless, or you study Security, you’re going to run into CCNA Routing and Switching concepts and technology,” he states.

Cisco certifications are not like others, Ismael insists, because Cisco training ensures that students come away with deep knowledge. The training and certifications keep him current, he maintains, because the Cisco curriculum is continually updated—not only for legacy tech, but especially for future tech—so it can be aligned with leading-edge technology. It’s how smart companies relentlessly ensure a competitive position, he adds.



### Keep the Faith, Stay the Course

Ismael advises other Cisco certification aspirants not to give up, even if they fail a test. “It’s not a matter of if you’re going to pass an exam, it’s a matter of when. Focus on one certification, focus on one topic, focus on one technology. Have a passion for it, learn it, study it, implement it. Not just in your brain and gaining the knowledge, but also hands-on.”

Having built up his certification foundation from CCENT to CCNA Routing and Switching to CCNP Routing and Switching, Ismael already appears to be a lifelong learner. His passion for networking is one thing that keeps him motivated on the certification path. “And come on,” he chuckles. “Cisco is the top dog.”

### For More Information

To begin your exploration of Cisco Routing and Switching certifications, visit <https://learningnetwork.cisco.com/community/certifications/ccna>.