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CISCO SYSTEMS USERS MAGAZINE

FOURTH QUARTER 2001

Best of Networkers 2001

A Bag of Tricks, Tips, and
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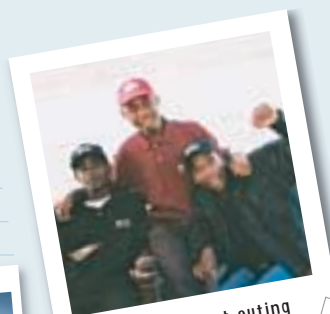
Boosting Network
Uptime



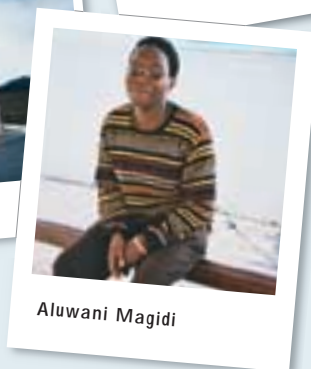
BY JENNIFER REDOVIAN



Houwteq (ISSA) main building



Students on boat outing



Aluwani Magidi



Magidi at classroom PC

Against all Odds

*Doors open wide
for determined
graduates of the first
Cisco Networking
Academy in Africa.*

IN MID-1999, 19 STUDENTS TRAVELED several hundred miles from their homes throughout Africa to a mountaintop facility to be part of the first Cisco Networking Academy™ on that continent. All were unemployed but held computer science and related college degrees. All were black indigenous Africans who traditionally had been victims of institutional discrimination. And most had never even seen a router.

Fast-forward 18 months from the start of the pilot Academy program. . . . The graduates not only earned their CCNA® certification in record time—passing the exam on the first try with high marks—but more than half of them have also achieved their CCNP® certification. One has his CCIE® credential, while another three have passed the written CCIE exam and are preparing for the rigorous hands-on lab. All have information technology (IT) jobs in their native Africa.

Given this 18-month timeframe, the students' certification milestones are unprecedented—but hardly difficult to fathom. A brief glimpse into their sheer determination and enthusiasm for bucking the odds reveals volumes.



Larson and his wife Jerri (standing left and second from right) with Houwteq students

Seeds for Success

In May 1999, Bob Larson, Cisco CCNP Academy trainer at Greenriver Community College in Kent, Washington, was one of several Networking Academy instructors who received an e-mail from Robert Lewis, Cisco's senior manager for learning and development in Europe, the Middle East, and Africa. Lewis was searching for a seasoned trainer to lead the CCNA portion of the first Cisco Networking Academy in Africa. The e-mail was "short and a bit mysterious," recalls Larson, "and it happened to arrive at a time when I was eager to do something different."

Barely six weeks later, Larson was settling into a temporary apartment and finding his way around Strand, a beach community about 25 miles from Cape Town, South Africa. Roughly 25 miles farther inland was the Cisco Networking Academy site in a fenced compound then known as Houwteq but today called the Institute for Satellite and Software Applications (ISSA). During Apartheid, the compound served as a government base for covert satellite surveillance and rocket launch and testing.

Soon after Nelson Mandela was elected president of South Africa in 1995, the facility shut down hastily. "It looked as if people got up from their chairs and went home thinking they'd be back the next day," says Larson. "Their papers were still sitting on desks and in fax machines. It reminded me of an *Outer Limits* TV episode."

As part of a drive to address the skills shortage in information and communications technologies, the South African government decided to use the Houwteq facility as a base for training black graduates in high-technology areas. The newly formed ISSA was also viewed as an important start to re-address racial imbalance by offering new training and career opportunities to young blacks from throughout South Africa. And the Networking Academy program became a key part of this plan, notes Lewis.

Nothing to Lose . . .

"I heard about the Houwteq Cisco Networking Academy during my final year of getting a bachelor's degree in com-

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Academy, Continued from page 85



Gwen Lefifi

puter science. I knew people who had computer science degrees but were still unemployed,” says Johannes Phago, the first of the original Houwteq students—and the first black South African—to earn his CCIE credential (routing and switching track). “My lecturer at the university made me and the whole class believe that networking was the biggest revolution in the world—bigger than what we witnessed in South Africa. Although I didn’t know anything about Cisco, even then I knew that a computer science degree plus Microsoft certification equaled employment. The government was saying that Cisco certification makes other certifications look like one of Snow White’s dwarfs. The government was also offering a full bursary and subsistence allowance for previously disadvantaged, unemployed science graduates to study at the Houwteq Networking Academy. . . . I had nothing to lose.”

A senior network engineer at

Business Connection in Johannesburg (www.busconn.co.za), Phago is now enjoying “a whole lot of respect and exposure” and has doubled his salary since obtaining his CCIE certification.

“I searched for a good job for a year while working as a desktop support technician, but at every interview, I’d

“Being in the Houwteq program was an eye-opener. I learned that hard work does pay, and to face challenges and not run away from them. . . . I learned that perseverance is the mother of success.”

—MARIA MARAKALLA, CCNA, IT SPECIALIST, TELKOM

get asked if I had any completed certifications. I realized a certificate was the only vehicle into the lucrative IT industry, and the Houwteq program came to me at the right time,” says Daniel

Sedibeng, a network systems consultant at Sourcecom Technology Solutions in Johannesburg (www.sts.co.za). “After completing my CCNA, the IT industry doors opened wide. I had three good offers from companies competing against each other for my services. Without Cisco and our government, especially Andile Ngcaba, the director general of the Department of Communications in South Africa, none of this would be possible.”

In fact, all of the Houwteq students were recruited by companies and were placed in jobs before they left for December holidays in 1999.

With a CCNP also under his belt, Sedibeng has already passed the written portion of the CCIE exam (routing and switching track) and is

studying for the lab.

Far From Home, Full of Determination

Phago, Sedibeng, and the rest of the students all traveled at least a few hundred miles from their homes throughout Africa to attend the months-long Academy program at Houwteq. “My greatest challenge was, and still is, being separated by approximately 1200 kilometers from my family,” says Mpfane Simani, who started at Houwteq as an assistant helping Larson set up lab exercises and performing other administrative duties. After sitting in on the class and many long evenings of self-study, Simani went on to earn both his CCNA and CCNP certifications and is now the CCNA instructor for the Networking Academy program at ISSA. “The greatest benefit in being part of the program was the demystification of data communications and how the Internet works,” notes Simani,

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Networking Academy in a Nutshell

The Cisco Networking Academy program is a comprehensive e-learning program, offering ten semesters that provide students with the Internet technology skills essential in a global economy. The Web-based, hands-on curriculum is taught in more than 8000 high schools, secondary schools, colleges, and universities in 130 countries. The CCNA (Cisco Certified Network Associate) curriculum consists of semesters one through four (280 hours) and provides a basic foundation in networking. Semesters five through eight (280 hours) comprise the CCNP (Cisco Certified Network Professional) curriculum, which covers more advanced network configurations and diagnosing and troubleshooting network problems. Two new courses, “The Fundamentals of UNIX” sponsored by Sun Microsystems and “The Fundamentals of Web Design” sponsored by Adobe, are also being taught in the Academy program. For more on the program, visit the URL cisco.com/edu/academy/.

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To us, Bob Larson is a father, friend, and mentor.”

—WALTER MATEMANE, CCNA, CCNP, FUTURE CCIE
PRESALE NETWORK ENGINEER, BUSINESS
CONNECTION

who is fiercely determined to add CCIE to his list of credentials.

The students shared the Houwteq facility with approximately 65 other indigenous black African students who were being schooled in electrical engineering, Microsoft platforms, and other technology subjects. Because the South African Academy was a pilot program, the students were required to have a computer science or related degree from a university program. “All 19 of them were college-degreed and unemployed—and probably considered unemployable under that system. Discrimination toward indigenous black Africans is still very real there,” says Larson.

Until Mandela became president, Apartheid laws prevented the indigenous black population from working in certain posts and kept black students from gaining education in math, science, or technology on a par with their white counterparts. “Although the majority of Bob’s students would’ve been spared the most severe restrictions of Apartheid while in college, I know anecdotally that their earlier studies were often self-motivated and self-directed, because their teachers could not assist them with math or science topics due mostly to their own lack of training,” according to Cisco’s Lewis. “These students brought with them a level of dedication and motivation far in excess of what one might call the norm. This, combined with Bob’s tremendous dedication to his students, really created the conditions for success.”

Galvanizing Forces, Lasting Bonds

The students’ self-determination was

challenged from the get-go. An administrative hitch left them without an Academy instructor for more than two months. So, while Larson was commissioned to teach semesters three and four of the CCNA curriculum within three months, he also squeezed semester two into that time-

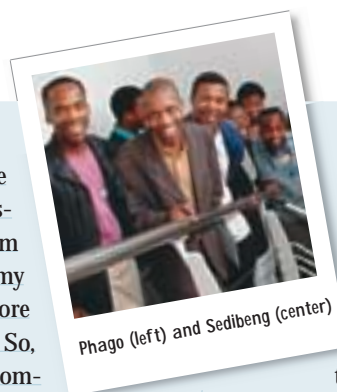
Houwteq is not just our story. It involves our country and the world. And we have been privileged to have starred in it—to have a legacy for the present students to follow in both academic excellence and leadership.”

—JOHANNES PHAGO, CCNA, CCNP, CCIE NO. 7105

frame. The students had already absorbed the first semester’s material on their own by reading books and quizzing one another. “By the time I got to Houwteq, they not only knew the material required for the first semester, but they knew it backwards and forwards. They knew enough to ask me some very challenging questions,” says Larson.

What’s more, the students also set up the practice lab equipment, made up of routers and switches, and provided their own technical support. The network at the Houwteq facility enabled them to get a glimpse of how the networking world really works. “Most of them hadn’t been exposed to a network before,” Larson adds. “While the network at Houwteq was a little bit older for the time, it was still state of the art because the facility had been a rocket launch center.”

Tragically, the students’ determination was put to the worst kind of test a few weeks into the program, when their classmate, Sharen Badri, died suddenly



Phago (left) and Sedibeng (center)

of heart failure. “Sharen was the one who rallied the others into setting up the lab equipment, because he knew that it was up to them to get their education going. He also evolved into the tech support guru among the students. He was so vibrant and had so much enthusiasm for the program,” recalls Larson. But instead of

shattering their spirit, Badri’s death was a galvanizing force—making the students’ will to learn and fulfill their classmate’s dream even stronger. The experience also contributed to a bond that Larson shares with the Houwteq students to this day.

“The program wasn’t easy, but we rallied together,” says Phago. “Many educated and influential doomsayers who knew how difficult the Cisco certification is to get told us that we didn’t stand a chance. One of the greatest benefits for me was proving them wrong, showing them that all we needed was a chance.”

It’s perfectly clear, however, that *chance* has very little to do with the success of these pioneering Cisco Networking Academy graduates. ▲▲

AFRICAN ACADEMY UPDATE

Today, there are 306 students in 15 Cisco Networking Academies at colleges and universities throughout South Africa. An additional 486 students are in Academies spread across sub-Saharan Africa in 29 countries, of which 21 are officially designated as least developed countries by the United Nations.

The current Cisco Networking Academy at ISSA has 28 students—all of them women.