

CURRICULUM VITAE FOR ANDREW ALSTON

PERSONAL DETAILS

Name: Andrew
Surname: Alston
ID Number: 790221 5147 083
Nationality: South African
Languages: English
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EDUCATIONAL BACKGROUND

Highest Standard Passed: 8 **Year Completed:** 1994
School: Stirling High School
Subjects: English
Afrikaans
Accounting
Mathematics
Science
Geography
Computer Science

CAREER HISTORY

Name of Company: TENET (Tertiary Education and Research Network of South Africa)
Period of Time: February 2006 – November 2011
Position: Chief Technology Officer
Job Description:

- Oversaw the migration from an outsourced network to a fully internally built and managed network

- Designed and implemented both the third generation and SANReN networks
- Responsible for technical budgets
- Responsible for all technical operations within TENET
- Responsible for all technical liason with clients within TENET
- Recruited, hired and managed a team of engineers
- Left to seek new challenges as a private consultant.

Name of Company: University of Cape Town

Period of Time: Feb 2004 – January 2006

Position: Senior network engineer

Job Description:

- Design and implementation of new network technologies
- Evaluation of network products
- Extensive work done on UCT's ICT refresh
- Moved to TENET as a natural growth point in my career

Name of Company: FirstRand Bank

Period of Time: April 2002 – December 2003

Position: Security Systems Auditor

Job Description:

- Handling Network Audits / Server Security Audits
- Assisted Internal Risk Services Division with security related issues
- Assisted in the formation of a forum to review security posture within the bank
- Gave large amounts of input into the purchasing of auditing tools / software
- Contract ended

Name of Company: Netcom Solutions SA

Period of Time: Sep 2001 – March 2002

Position: Security Analyst

Job Description:

- Handling Network Audits / Server Security Audits
- Policy Design And Implementation
- Firewall Systems Design
- Analysis Of Monthly IDS Reports
- Writing And Testing Of New Security Exploits

- Left due to company bankruptcy

Name of Company: Orbtech Solutions

Period of Time: Aug 2000 – Aug 2001

Position: Snr Programmer/Network Security Engineer

Job Description:

- Designed Custom Firewall Software
- In Charge Of Secure Isp Project
- Handled All Network Security
- Involved In The Writing Of The Budditrack Transaction Processor
- Promises Not Fulfilled / Salary Issues / Contract Negotiation Issues

Name of Company: Citec Network Securities

Period of Time: Feb 1999 – Aug 2000

Position: Director

Job Description:

- Handled All Client Issues With Regards To Security
- Handled All Of Citecs Internal Security
- Designed And Installed FreeBSD Based Firewalls For Clients
- Implemented PIX Solutions / Private Eye Solutions For Clients
- Left Due To Company Being Fully Integrated With Citec

Name of Company: Dynamic Network Solutions

Period of Time: Jun 1998 – Jan 1999

Position: Company Founder

Job Description:

- Company involved primarily in security activities
- Oversaw systems audits / finances etc
- Company was bought by Citec

Name of Company: Interlink Internet Services

Period of Time: Jun 1997 – May 1998

Position: Installation – Free BSD

Job Description:

- In Charge of all FreeBSD installations for clients
- Setup of Firewalls and Security Installations for clients
- Client Liasons with regards to technical issues
- Setup of dial-on-demand mail systems
- General Systems Administration / Router Administration for Interlink
- Left due to company being bought out by MWeb

Name of Company: Gateway Internet Services

Period of Time: Jun 1996 – May 1997

Position: Systems setup – Gateway Internet Solutions

Job Description:

- Setup all systems for Gateway Internet Solutions
- In charge of all routing / security / ras features for the ISP
- Designed and implemented long distance analog leased line solutions with multiple NAT systems (Primarily done with Linux)
- Left due to company bankruptcy

Name of Company: Network 3 Computer Services

Period of Time: 1993 - 1994

Position: General shop assistant

Job Description:

- General Shop Assistant
- Assembly of computers for customers
- Technical consultations to clients on DOS/Windows 3.1 related issues
- Left due to company closure

SKILLS SUMMARY

Information Technology related:

Networking

- Extensive experience in all aspects of service provider networking, including but not limited to, design, implementation and deployment of infrastructure.
- Experience with technologies at both the L2 and L3 network layers
- Extensive DWDM implementation and operation experience (Primarily Cisco ONS based from a vendor perspective)
- Extensive SDH deployment experience
- Experience with advanced metro-e design and deployment
- Extensive MPLS experience
- Fully competent with most common routing protocols (OSPF, IS-IS, BGP etc)
- Fully comfortable and experienced with working on Cisco, Juniper and Alcatel platforms

Programming

- Proficient in C programming, including the writing and developing of raw socket applications.
- Proficient in BASH / TCL Scripting under various unix environments

Databases

- Extensive usage of various SQL based packages, including MySQL and Postgres
- Integration of C based applications with SQL Based databases, including the writing of security logging systems interfaced to SQL backends

Security Devices / Firewalls / Applications

- Extensive experience with various Firewall implementations, including by not limited to products from Cisco, Juniper, Checkpoint and Fortinet
- Extensive security design and implementation experience at a network level, including the use of pvlan technologies, IPv6 security implementations, IPS deployments etc.
- Extensive development experience in the area of packet diversion and protocol analysis through the use of divert sockets. All applications I have written for these purposes were written in C using BSD based sockets and POSIX threading.

Operating Systems

- Highly experienced in the installation, use and administration of FreeBSD, Linux, AIX and various other unix based derivatives. This includes programming work done on the Linux and FreeBSD kernels and their subsystems.
- Having written modifications to the FreeBSD file systems and Linux file systems I have an excellent knowledge of the base workings of these systems.
- I also have many years of experience with the various Microsoft based operating systems.

Information Security Standards

- Having qualified as a Certified Information Systems Security Professional (CISSP), I have a good grounding of the ISC² standards. The CISSP qualification and the standards that surround it are also heavily tied to the BS7799 / ISO17799 standards.
- I have worked with the BS7799 and ISO17799 standards and have an excellent understanding of such things as Information Security Management Systems (ISMS) and Information security policies and procedures related to these standards.

Auditing and Investigative Procedures

- Having done Information Technology audits on both corporate and government networks in the past my knowledge of auditing procedures is extensive. This includes auditing of base level operating system/application security, and security reviews of policy and procedure documents in place within an organization
- Due to my experience in systems analysis gained in the auditing field, as well as extensive past experience dealing with response to security incidents, I have a very practical knowledge of incident investigation and analysis of systems at this level

OTHER:

Management Skills

As CTO of TENET I was directly responsible for managing all technical operations of the organization, which serves a client base of 23 institutions, 180 campuses and over six hundred thousand students. During this time I also acted as advisor to the board on technical issues, and was responsible for the financial aspects of the technical operations within TENET.

Business Unit Development skills

While at Netcom Solutions I helped develop the Risk Analysis Division in conjunction with Bruce Anderson. This included the development of product sets, the setting of pricing on said product sets, the scoping of new products for the division and the scoping of new staff for the division.

CAREER ACHIEVEMENTS / HIGHLIGHTS:

At TENET, with the assistance of my team, we designed, deployed and ran what is still today the fastest network in sub-Saharan Africa, with a combined aggregated

interface speed in excess of a terabit a second. The TENET network was also run with a 5 9s availability in terms of all elements directly under TENET's control. The availability was achieved through the introduction of proper change management and procedural controls.

In my work with the UbuntuNet Alliance (while still with TENET), the first African academic peering was implemented, and within 6 months the UbuntuNet Alliance was the most peered network on the African continent, with a total of over 500 adjacencies and offloading in excess of 60% of traffic onto settlement free peering.

While at TENET I successfully negotiated for, and implemented the first Google Global Caches on the African continent. Access to these caches was also supplied to the commodity sector via the Johannesburg Internet Exchange and the Cape Town Internet Exchange. This was directly responsible for significant price drops in the broadband market due to a drop in costs experienced by commodity providers through sourcing this content freely at the exchanges.

TENET in partnership with SEACOM was responsible for landing the first 10G SDH circuit on the continent, and all technical designs and implementation for this project were done by myself, including the 10G backhaul required to backhaul the traffic throughout South Africa.

I was also responsible for negotiating and setting up the first 10G network interconnects with third parties in South Africa.

Through my work with the UbuntuNet Alliance (on going), the design and procurement of the trans-african academic backbone is now largely complete and circuit rollout covering 13 African countries will begin shortly.

The network design for the TENET / SANReN network for which I was responsible was awarded the Cisco Public Sector global deal of the year award in 2008.