Heinrich Strauss

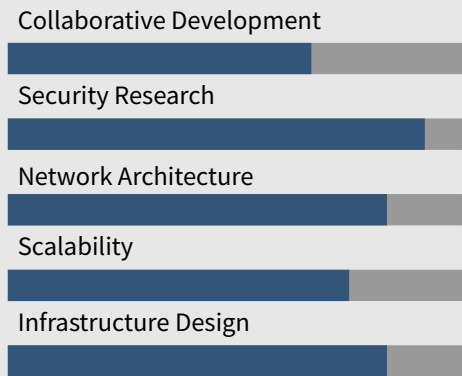## Messaging/Security Engineer

02 January 1985

Northern Suburbs
Cape Town, ZA

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About me

I enjoy new engineering challenges, especially in a large network or the Internet Service Provider space. I am passionate about creating solutions for the local industry that exceeds the quality of solutions available abroad. I believe that the Internet enables human-interaction, education and business opportunities to flourish in a global economy, without deference to the challenges local to consumers.

Skills

Collaborative Development

Security Research

Network Architecture

Scalability

Infrastructure Design

*   The scale is from 0 (cursory awareness) to 6 (expert).

Attributes

goal-oriented⋆5 opinionated⋆4.5
curious⋆5.5 patient⋆4.5 cautious⋆5

interests

The provisioning and development of secure, first-class, next-generation information solutions for South Africa and the continent. Security (while important) should enable, not restrict, the use and development of business functions.

education

since 2014	M. Sc. (Computer Science) candidate	University of Cape Town
	By dissertation in Information Security	
2013	B. Sc. (Hons.)	University of Cape Town
	Majoring in Computer Science. Mini-Thesis project entailed real-time compression of super-scale data (data rates in excess of 1 Tib/s) for the Square-Kilometer Array (SKA) project.	
2002–2004	B. Sc. (*summa cum laude*)	University of the Western Cape
	Dual-major in Computer Science and Mathematics	
1997–2001	High school	Hottentots-Holland High School
	Subjects (all Higher Grade): English (first language), Afrikaans (first language), Biology, Science, Mathematics,	

academic publications

Dec. 2016	Textbook: M.IT. Networks course notes (*in progress*)
Oct. 2016	Paper: Reliable Key Distribution in Smart Micro-Grids
Mar. 2016	Paper: Key Management for Secure Demand Data Communication in Constrained Micro-Grids

conferences

Dec. 2016	B-Sides Cape Town 2016	Cape Town, ZA
	Head of Workshops on the Conference Organising Committee	
Oct. 2016	CRITIS 2016	Paris, FR
	To present a paper on distributed authentication in a constrained network.	
Mar. 2016	INTRICATE-SEC 2016	Crans-Montana, CH
	Presented a published paper on key-management on a constrained hardware platform.	

references

2016	Mr. Brendan Hide	4Di Technologies, Cape Town, ZA
	+27 83 448 3867	
2015	Mr. Shahid Sulaeman	Secure Vision, Cape Town, ZA
	+27 21 300 1001	
2010	Mr. Jonathan Shiffman	Web Africa Networks, Cape Town, ZA
	+27 83 443 1124	

personal information

I am a Capetonian fluent in English and Afrikaans, with a strong interest in understanding other written languages. I enjoy networking in both the computing and social senses of the word, playing drums and photography. For relaxation, few things outrank a walk on the beach or a traffic-less drive around Chapman's Peak.

work experience (permanent employment)

| 01/11–12/12 | Internet Solutions (a division of Dimension Data) | Bryanston, ZA |

Position Held – E-mail Security Engineer

Technical Specialist in E-mail and Anti-Spam Technologies; Responsible for Back-End Infrastructure, Customer-Facing Interfaces, Vendor Management and Fourth-Level Support on Windows, BSD and Cisco-Proprietary Operating Systems

Reason for Leaving – Furtherance of Academic Studies (in Cape Town).

| 03/08–12/10 | Web Africa Networks | Cape Town, ZA |

Position Held – Senior Engineer

Technical Specialist in the areas of Messaging, Hosting, Virtualization, Server and Security Configuration; Fourth-Level Support

Reason for Leaving – To join a large Network Service Provider.

| 02/05–02/08 | Sun International Head Office | Sandton, ZA |

Position Held – Messaging Systems Co-ordinator (group-wide)

Technical Specialist in Messaging and Collaboration; Testing Laboratory administration; Third-Level Support; Infrastructure Deployments

Reason for Leaving – Relocation to Cape Town and introduction to the ISP-space.

not-for-profit company memberships

| 09/16– | ZA Domain Name Authority NPC | Midrand, ZA |

Registered Member. Promotion and development of the .ZA Internet Domain Namespace.

| 06/16– | B-Sides Cape Town NPC | Cape Town, ZA |

Registered Member of the Board. Promoting development of Information Security in Cape Town and South Africa. Workshop manager for the 2016 Conference and AGM.

personal projects

| 07/07– | DNS, Mail, Web Hosting | Various, INT |

Established a hosting environment for friends and family consisting of 7 nodes distributed geographically hosting in excess of 50 domains. Allows research and deployment of progressively-enhanced Internet technologies. At present, all public-facing nodes are Dual-Homed (IPv4 and IPv6), all hosted DNS zones are DNSSEC-signed, all e-mail filtered (by constrained nodes, single CPU, 128 MiB RAM) with public zones SPF-, DKIM- and DMARC-protected. IPsec VPN endpoints exist on a variety of servers. Monitoring environments are tuned to emit only actionable notices for real-time intervention as needed. All public-facing functions are redundantly provisioned and software builds are reproducible. Sites are version-controlled and monitored for changes. HTTP/2 and automated LetsEncrypt.org certificates are deployed on all hosted sites.

work experience (short-term/contract)

02/16–	**Strauss and Strauss Consultants (Pty) Ltd.**	Cape Town, ZA

Position Held – Founding Director: Information Solutions.

Dormant role until submission of M. Sc. dissertation is completed.

02/16–03/16	**4Di Technologies (Pty) Ltd.**	Cape Town, ZA

Contracted engagement – Consultant

Identity and Access Management (IAM) and Messaging/Collaboration platform refresh. Details under NDA.
Reason for Leaving – Completion of project

06/15–11/15	**#SocialStar**	Cape Town, ZA

Contracted engagement – Platform Developer

Re-engineering and re-development of platform for Social Media-based project (from the previous PresenterSearch), integrating API-based monitoring of Social Media interactions between and ranking of participants in a near-realtime competition in partnership with Samsung South Africa.

Reason for Leaving – Completion of project

05/15–06/15	**UCT Computer Science Department**	Cape Town, ZA

Position Held – Teaching Assistant

Lab-work convenor and marking of assignments for the Master of IT (M.IT) cross-discipline degree students.

Reason for Leaving – Completion of academic term

02/15–04/15	**SensePost**	Cape Town, ZA

Position Held – Intern

Three-month Internship. Details under NDA.

Reason for Leaving – Completion of internship

09/14–02/15	**Telasera Technologies (Pty) Ltd**	Cape Town, ZA

Contracted engagement – Consultant

Hosted-Messaging Platform with federated identity integration (project completed but dormant)

Reason for Leaving – Completion of project

07/14–	**UCT Linux Enthusiasts' Group (LEG)**	Cape Town, ZA

Position Held – President of University Society

Infrastructure maintenance for UCT-hosted software repositories and mirrors.

03/14–09/14	**UCT Computer Science Department**	Cape Town, ZA

Position Held – Teaching Assistant

Lab-work convenor and marking of assignments for the Master of IT (M.IT) cross-discipline degree students.

Reason for Leaving – Completion of academic term

09/13–11/13	**PresenterSearch 2013**	Cape Town, ZA

Contracted engagement – Technical Consultant

Vendor management and technical oversight on Social Media-based project in partnership with Samsung South Africa and LUX resorts.

Reason for Leaving – Completion of project