

# Curriculum Vitae

## Personal Details

Name	Marc N Daya
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## Profile

An experienced IT professional that works well on own initiative and as part of a team. Experience with all phases of the software development life-cycle, and system maintenance and administration. Dedicated to producing robust, tested and maintainable systems.

## Proficiencies

Languages	Java, Python, PERL, C/C++, Shell-scripting
Operating Systems	Windows, GNU/Linux, FreeBSD
Applications	Microsoft SQL Server, Vim, Emacs, Perforce, Subversion

<b>Spoken Languages</b>	English (first language)
	Afrikaans (second language)

## Experience & Skills Development

2008.05 – present	Intec, Interconnect	<ul style="list-style-type: none"><li>• Development and maintenance of wholesale billing solution for telecommunications operators and service providers.</li><li>• As a senior developer, mentoring developers to facilitate continuous code and product improvement.</li></ul>
2008.01 – 2008.03	SKA South Africa/Karoo Array Telescope, Computing	<ul style="list-style-type: none"><li>• Gathering system requirements for the Karoo Array Telescope and computing subsystem.</li></ul>
2007.10 – 2007.12	Postilion, Product Development (Core)	<ul style="list-style-type: none"><li>• New feature development on, and maintenance of, EFT transaction engine and Postilion SDK.</li></ul>

2007.05 – 2007.09

#### Postilion, Product Development – Pune, India

S1 Corporation, Postilion's parent company, maintains a development team in Pune, India. Between May and October of 2007 I relocated to this office to help establish a Postilion development team, and to assess the feasibility of unifying the development of a Postilion family of products and a S1 family of products that provide similar services.

- Trained and mentored Indian development team.
- Supported developers that were new to a GNU/Linux environment; assisted with installation and networking.
- Managed contractors assigned to migration projects to ensure timely delivery of quality products.
- Assisted with the recruitment of developers for the Postilion development team.
- Developed a generic XML message API for the Postilion SDK.
- Developed a bridge as a short-term solution for integrating a Postilion system into an environment where S1 interfaces already exist.

2005.09 – 2007.04

#### Postilion, Product Development (Tools)

It was while I was a member of the Core Team (2003.01 – 2005.08) that I was tasked with maintaining and improving the development teams' primary testing tool in addition to my other duties. A separate team was created to house this tool and I worked full time to overhaul the code base in an effort to improve performance and improve its extensibility and maintainability. The success of this tool is dependent on its meeting the needs of the developers who use it, and thus required continuous communication with the developers to find ways to improve their testing experience.

Among the features provided by this tool are:

- A domain specific test script language (implemented using ANTLR as the parser generator) that provides high-level message construction and query facilities.
- Abstract messaging interfaces to allow the tool to be used with any messaging application.
- A database abstraction to facilitate integration to any relational store.
- Bash and CMD scripts that provide a consolidated interface to its components.

To facilitate discussion, and to distribute news about the tool, I set up and maintained a Simple Machines forum.

During this period the Core development project to port Postilion products to a Unix platform began in earnest. As I was already working quite closely with the Core team, I had the opportunity to indulge my enthusiasm for GNU/Linux and contribute (both knowledge and product) to the project.

- Modified a Python application launcher to run Java applications as true daemon processes in GNU/Linux.

- Provided support to testers that were new to a GNU/Linux environment, assisting with network configuration (mainly to gain access to resources in a Windows domain), daemon management, and file system management.
- Contributed to discussions about the challenges of, and approaches to, deploying in a Unix environment.

2003.01 – 2005.08

Mosaic Software (now Postilion), Product Development (Core)

The Core team is responsible for both the online core of the Postilion environment, and the SDK upon which related applications build. Work on the core application requires one to be constantly mindful of:

- Performance
- Thread-safety and resource/database contention
- Data integrity

Changes to the SDK had to be made with equal care and were, in their own way, no less challenging, requiring attention to:

- Performance (particularly of database bound operations).
- Backwards compatibility (with respect to both the interface and behavior).

During my tenure I also had the opportunity to act in a support role, assisting other development and implementation teams with issues that arise at the clients to whom they provide service. This role required:

- Effective prioritization of issues.
- Managing the developers to whom issues were assigned, to ensure that the most critical and urgent were quickly resolved.
- Providing temporary solutions or workarounds for the less urgent issues until they could be properly addressed.

2001.08 – 2002.12

Mosaic Software (now Postilion), Product Development (Interchanges)

The Interchanges team is responsible that various interfaces that allow the core online engine to integrate into such EFT networks as VISA, the MasterCard Credit and Debit Switches and Europay. During my time in this team I had the opportunity to practice both technical and inter-personal skills.

- Developed proof-of-concept for a client-server mobile application that is driven by text messaging.
- Integrated a Postilion application into client's native Windows (C++) application by exposing it as a Component Object Model (COM) object.
- Trained client developers in the use of the Postilion SDK.
- Mentored junior developers destined for other teams.

2001.02 – 2001.07

Mosaic Software (now Postilion), US Regional Development

Postilion's regional development teams focus on adapting existing products where necessary to ensure compliance in a given region, and on developing the necessary software to integrate a Postilion system into a customer's environment.

- Managed the development (by a junior developer) of a Postilion interface to the customer's core banking system.
- Installed and configured the Postilion system on-site.
- Tested and certified the system with the regional EFT switch (PULSE).
- Worked on-site with the client quickly resolve outstanding issues during final testing and implementation.
- Developed a visual tool (in Swing) for the ad-hoc creation of EFT messages.

This is an important project for me as I gained valuable experience in working with a client to take a project from the planning stages, all the way through to final implementation.

2000.05 – 2001.01

Mosaic Software (now Postilion), Product Development (Interchanges)

- Prototyped, with another developer, a system that has since become the core of the Postilion retail offering.
- Standardized GNU/Linux testing of Postilion cross-platform merchant API.
- Maintained and serviced existing products.
- Implemented urgent client requirements without compromising the integrity and maintainability of the product code base.

1997, 1998

Mindspring Computing

Mindspring Computing provides its clients systems integration, bespoke development, and consulting services. Here, my classroom-cultivated appreciation of a Unix environment grew to an unbridled enthusiasm that continues to this day. While employed at Mindspring, I:

- Was responsible for configuration and maintenance of GNU/Linux file, mail and DNS servers.
- Installed and configured Linux systems for clients.
- Maintained home GNU/Linux mail- (uucp) and file-server.
- Performed bespoke database development.

## Tertiary Qualifications

1995 – 1999

BSc. (Hons) degree, majoring in Computer Science and Economics, at the University of Cape Town. Graduated with distinction.

## Informal Experience

I am an enthusiastic GNU/Linux hobbyist, and no residence that I've occupied has gone very long without a GNU/Linux or FreeBSD server; most have

served in predominantly Windows environments. Over a period of years I have worked with a number of distributions (with Gentoo Linux my current favourite) to build servers that provide:

- file-serving and domain-controller services to Windows clients (using SAMBA)
- name resolution
- DHCP services
- an Internet gateway
- mail spooling

Cape Town, South Africa, August 12, 2008