

Curriculum Vitae

Personalia

Name *Sander van der Burg*
Homepage <http://sandervandenburg.nl>
Date of birth *24-05-1984*
Nationality *Dutch*

Please contact me through my homepage for full contact details.

Profile

I am an enthusiastic and motivated person interested in software development, exploring, investigating and applying unconventional techniques, free and open-source software and collaborations between various software communities.

Work Experience

10-12 - present

Software Engineer

Conference Compass B.V.

- Continuous integration and delivery of mobile apps (approx. 100 apps/year) using Hydra: the Nix-based continuous integration service.
- Continuous deployment of microservices-based server applications in the cloud (using Amazon AWS, NixOps and Disnix). Size: approx. 200 microservices in a cluster of 6-11 machines.
- Management of the internal IT infrastructure
- Monitoring with Datadog (<http://datadoghq.com>)
- Web service and web application development (using Java EE, Node.js and Angular)
- Data migrations using Python
- Developing an XMPP (ejabberd) based chat infrastructure
- Mobile app development (for Android and iOS using Appcelerator Titanium)

09-08 - 09-12

PhD candidate

Delft University of Technology

PhD candidate at the Software Engineering Research Group

- Working on a PhD dissertation titled: "A Reference Architecture for Distributed Software Deployment"
- Publishing and presenting research at international software engineering conferences
- Developing software tools related to software deployment and domain-specific languages: NixOS, Disnix, WebDSL
- Teaching assistant for the "Concepts of programming languages" lab course, covering several programming language paradigms, such as Scala (functional programming), C (low-level) and JavaScript (prototype-based object orientation).

- 06-09 - 09-12 **Visiting researcher**
Koninklijke Philips Electronics N.V.
 Visiting researcher at Philips Healthcare
 - Applying deployment research on medical software
- 02-08 - 08-08 **Intern Healthcare Systems Architecture**
Koninklijke Philips Electronics N.V.
 MSc thesis project at the Healthcare Systems Architecture department
 - Development of Disnix – an automatic software deployment tool for service-oriented systems.
 - Applying deployment techniques on an experimental medical application.
- 05-02 - 02-08 **IT specialist**
Bosman Watermanagement B.V.
 Application development and system administration
 - Developing a web application framework based on PHP, Apache and MySQL, and a number of applications.
 - Developing a Java-based fat client application framework.
 - Integration of applications with an ERP system.
 - Supporting system administration tasks, such as workstation installations.
 - Maintaining a number of servers, such as Linux, Novell Netware and Windows 2000 machines.
- 09-03 - 02-04 and
 02-05 - 06-05 **Intern Hone/Link ADM**
IBM Nederland N.V.
 Internships at the Hone/Link ADM department
 - Developing a system measuring the usage of Java EE applications in an IBM zSeries mainframe environment, which is used to tax costs to various internal organisation departments.

Education

- 2008-2012 **PhD Software Engineering**
Delft University of Technology
 - Dissertation title: "A Reference Architecture for Distributed Software Deployment"
 - Followed courses: Scientific Writing in English, "The Art of Presenting Science", Philips Informatics Infrastructure Basic training
 - Successfully defended thesis in: June 2013
- 2005-2009 **Master Computer Science**
Delft University of Technology
 - Specialisation: Software Evolution, Model-driven Software Engineering
 - Free elective courses: Computer graphics, Speech and language processing, Methodology and Ethics
 - Thesis project at: Koninklijke Philips Electronics N.V., department of Healthcare Systems Architecture
 - Obtained diploma in 2009

2001-2005 **HBO Computer Science**

Rotterdam University of Applied Sciences

- Specialisation: Software Engineering
- Free elective courses: Linux assembly, Sailing license, Visual Basic, Astronomy
- Thesis project at: IBM Nederland N.V. Hone/Link ADM department
- Obtained diploma in 2005

1996-2001 **HAVO**

RSG Hoeksche Waard

- Languages: Dutch, English, French 1 (speech and listening skills)
- Profile: Nature & Technology (Mathematics B 1+2, Physics 1+2, Chemistry)
- Free elective courses: Economics 1, Computer Science
- Obtained diploma in 2001

Publications (selection)

- Sander van der Burg, Eelco Dolstra, **Disnix: A toolset for distributed deployment**, In volume 79 of Science of Computer Programming (SCP), pages 52 – 69, Elsevier, January 2014
- Sander van der Burg, Eelco Dolstra, **A Self-Adaptive Deployment Framework for Service-Oriented Systems**, In 6th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS). Waikiki, Honolulu, Hawaii, USA, ACM, May 2011
- Sander van der Burg, Eelco Dolstra, **Automated Deployment of a Heterogeneous Service-Oriented System**, In 36th EUROMICRO Conference on Software Engineering and Advanced Applications (SEAA). Lille, France, IEEE Computer Society, September 2010
- Sander van der Burg, Eelco Dolstra, Merijn de Jonge, Eelco Visser, **Software Deployment in a Dynamic Cloud: From Device to Service Orientation in a Hospital Environment**, In First ICSE 2009 Workshop on Software Engineering Challenges in Cloud Computing. Vancouver, British Columbia, Canada, IEEE Computer Society, May 2009

See full publication list on: <http://sandervanderburg.nl/index.php/publications>

Software (selection)

- *Disnix* (<http://nixos.org/disnix>). A tool which can be used to automatically deploy service-oriented systems in networks of machines. Disnix uses Nix for local deployment and ensures that deployment processes are reliable, efficient and reproducible. Disnix is available as free and open-source software under the LGPLv2 license.
- *node2nix* (<http://github.com/svanderburg/node2nix>). A tool that can be used to automatically generate Nix expressions from NPM's package configuration files. Integrating NPM into the Nix ecosystem makes it possible to deploy entire software systems including Node.js components from a single declarative specification.
- *NixOS* (<http://nixos.org>). I contribute to other parts of the Nix project, such as NixOS – a Linux distribution which can be installed automatically from declarative specifications in a reliably, reproducible and efficient way.

- *IFF libraries project* (<http://sandervanderburg.nl/index.php/software/iff>). A project which consists of libraries and tools capable of parsing and viewing file formats using the IFF container specification, such as images, animations and audio samples.
- Various other open-source efforts, see my GitHub page: <http://github.com/svanderburg>.

Skills

Computer platforms

- Systems: PC, macOS, IBM System Z, Amiga, Commodore 64
- Mobile: Android, iOS
- GNU/Linux: Slackware, Red Hat, SuSE, Debian, Ubuntu, Linux from Scratch, NixOS
- Microsoft: MS-DOS, Windows 3.x, 95, 98, 2000, NT, ME, XP, Vista, 7
- Other: AmigaOS, Novell Netware

Development

- Java (applications, servlets, applets, JSP, Java2D/3D, AWT/Swing, MIDlets)
- JavaScript (browser, Node.js, Appcelerator Titanium)
- C and C++ (POSIX, ANSI, GNU)
- C# (ASP.NET, WCF, Mono)
- BASIC (Quick Basic, Commodore 64 Basic, AMOS Basic, Visual Basic, Visual Basic.NET)
- Assembly: x86 (Linux and MS-DOS), Commodore 64
- Scripting: bash, Perl, PHP, Python
- Other languages: Haskell, Prolog, Scala, LaTeX
- Web development: HTML, XHTML, XML, XSL, CSS, JSON, RSS, SOAP, HTML DOM

Other

- Object-oriented analysis and design with UML
- Project methodologies: SDM, RUP, IAD, ITIL
- Databases: MySQL, PostgreSQL, IBM DB2, Sybase ASE, MongoDB
- Servers: Apache HTTP server, Node.js, Samba, ProFTPD, Apache Tomcat, JBoss, IBM WebSphere
- Amazon Web Services: EC2, S3, RDS, and Route 53

Other information

Driving license B
Hobbies Percussion and drums