Curriculum Vitae / Resume

Update: 30-december-2024 "mini"

(photo 2016)

Personalia

Full (Family) Name:	Mr (he/him) J.L.R. (John) **de Graaff**
Given names:	Jan Lambert Rudolf (calling name: **John**)
Family situation:	Single "part-time" dad for 2 daughters (now 10 and 13 years old)
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Summary – and my current Motivation Statement

First thing: my career has been **extremely diverse**, as is my personality really …
I have developed myself in many fields: technology, science, math, engineering,
communication (language, writing), marketing, psychology, and philosophy.
To provide an overview, I have created a color-based diagram ⇒ **here @right** ⇒

About my interest in **embedded systems**: I am just fascinated by Electronics
Systems, Digital Circuits, Microcontrollers, Low-level Data Comms, and connecting
the "*Embedded World*" to the "*Cloud World*" (such as a central data server).

About **Linux**: I have used Linux since 1994 (Slackware on 486SX), and I have since
used it in all my work, including developing kernel modules, scripting anything (also
deb.pkg), and setting up 100's of Cloud, Desktop and Embedded systems.

Technology-wise the largest part of my career (1998>2014) was about Networking
and IT-infrastructure, but I abandoned this because I reached a point where I had
seen it all. From 2015 onwards my focus was on creating technology (innovation),
and since 2020 that narrowed down to software development only.

About my desired job

My LinkedIn headline is succinct: "*Allround Senior Telecom + Software + Linux
Engineer with a knack for embedded systems.*"

Fitting positions: Technical Sales Consultant, Field Engineer, Systems Engineer,
Linux Engineer, DevOps Engineer, Embedded SW Engineer, Cloud SW Engineer.

Positions and Technology I do not like: Anything-MS (incl. DotNet, C#), Java (*)

(* not to be confused with JavaScript – which I just love)

Year	Role
2024	Freelance
2023	Freelance
2022	SW Developer
2021	
2020	
2019	Freelance
2018	IT Consultant
2017	
2016	[FairFlow]
2015	Prod.Dev
2014	
2013	[TWS]
2012	Network
2011	Engineer
2010	&
2009	related
2008	SW-dev
2007	
2006	[sole-proprietor]
2005	Network
2004	Engineer
2003	&
2002	SW-dev
2001	[Lucent]
2000	Technical
1999	Sales
1998	Consultancy
1997	
1996	
1995	University
1994	/
1993	MSc.
1992	
1991	
1990	

===[Education]=======================================

`sep-90 > aug-97`	**Master of Science** in **Electrical Engineering** (MSEE, **MSc.** EE) at the Delft University of Technology (DUT, NL: TUD) in NLD

Average degree (also my actual graduation degree): **8** (in the Dutch 10-based grade system)

`sep-91 > sep-92`	Bachelor (equivalent) in **Computer Science** (NL: Technische Informatica) at DUT in NLD

`sep-84 > jun-90`	**Atheneum-B (VWO)** at "OSG Nieuwediep" in Den Helder (NLD)

===[Courses, Training, and Certifications]==================

`sep-2018`	ICS2.org **CISSP** (Cyber Security Professional) certificate

`may-2017`	Cisco **CCNP** Routing & Switching (today called "Enterprise") certificate

`jun-1998`	**NIMA-A** Marketing certificate

===[Work Experience]==============================

[items below with a company logo and **(*)** *are my own companies, in which I had part or full ownership]*

`jan-22 > dec-24`	Freelance **Fullstack Developer** voor **DeconSystems BV**

Tags: Linux, Node.js, React.js, Vue.js, CouchDB, PostgreSQL, Python, MQTT, Docker, Kubernetes

DeconSystems is a specialist in solutions for industry, logistical, and building-security applications. I was tasked to design and develop: [1] a central cloud server with a REST API, a dedicated Admin Web UI, and MQTT broker+agent, and [2] an embedded Linux platform, to be used on Raspberry Pi or other small and fanless SBC devices, with its own REST API and Web UI.

`jul-24 > oct-24`	**Software Engineer** voor **Atomeus Data Solutions BV**

Tags: Linux, Node.js, React.js, PostgreSQL, Python

Atomeus is an expert in RPA (Robotic Process Automation), Data Engineering, and AI:ML (Machine Learning) solutions. Due to a strategy change, my contract was terminated early (4 months out of a 1-year contract), and I only got to develop a web-app in React.js for RPA monitoring.

`jul-15 > jun-24`	**Freelance Specialist** vanuit **De Graaff Engineering (*)**

Tags: Linux, Python, SQL, SNMP, PKI-CA, X.509 SSL certificates

Some notable projects:
- `[jul-15>nov-15]` part-time project as **Security Specialist** at "De Haagse Hogeschool" to set up a MS-Server PKI (Public Key Infrastructure) with multi-level CA (Certifcate Authority)
- I developed a system to monitor and control the transmit-power of microwave radio units, called **Remote-ATPC** (Automatic Transmit Power Control). This was a Pyyhon daemon and a web-UI (written in Python Fast-API) to display logs and graphs for monitoring.

`mar-22 > may-22`	Freelance **Senior Software Engineer** bij **Viterra BV**

Tags: Node.js, React.js, PostgreSQL

I was part of a Firewall migration team for firewall appliance replacement in all offices worldwide and set up a centralized, policy-based monitoring and control solution. Where others focused on the Fortigate configuration and (hierarchical, deeply structured) cyber-security policy definitions, I was tasked to develop a web-based umbrella dashboard and control system.

`jun-21 > may-22`	Freelance **Network Automation DevOps Engineer** bij **ING Bank**

Tags: Python, Ansible, Node.js, React.js, MS Azure Cloud, DevOps, CI/CD, Docker, Kubernetes

I was part of a LAN network migration team, to prepare and automate a fork-lift upgrade of all network equipment in all (customer services) offices worldwide. My task was the development of a web-based dashboard and central-control system, that connected to internal APIs of the HP-Aruba Cloud Tools for reading-writing the status and configuration of all components.

`jul-21 > dec-23`	Freelance **Fullstack Software Developer** at **TokenMe BV**

Tags: Linux, Node.js, React.js, MongoDB, PostgreSQL, MQTT, LoraWAN, Docker

I designed and developed a cloud-based backend data server (called TokenMe Cloud Server or TCS) using Node.js code on a Linux-Debian VPS cloud-server, using a dual database storage strategy (PostgreSQL for large data, and MongoDB for flexible data), and a REST-API.
I also developed a related project: an "engineering dashboard" which is a Web-UI frontend using React.js. I used a TDD (Test Driven Development) approach, CI/CD pipelines, and Git code management on GitHub.

`jun-21 > sep-21`	Freelance **Embedded SW Developer** at **Applied Nanomaterials BV**

Tags: C-language

I developed a microcontroller (Intel MCS-51/8051) program (in C language) for robot control.

`nov-20 > jun-21`	Freelance **Network Specialist** at **Eindhoven Fiber Exchange** (**EFX**)

Tags: Ruby-on-Rails, PostgreSQL, Vue.js

I designed and supported the sourcing of a new FTTB (Fiber to the Business) network.
I also developed a CMDB tool using modern web technologies.

`jul-20 > oct-20`	Freelance **Specialist API Standards** at **Logius** (government)

Tags: OAuth protocol stack, Github Actions/Webhooks, ReSpec W3C

A short project where I supported two new standards that are widely used within the Dutch government (and presumably outside as well): "API Design Rules" and "OAuth-NL-profile".

`jun-20 > oct-20`	**Product development** in **Anti Virus Sound Bubble (*)**

Tags: Product development, Hardware Embedded & Electronics development, C / C++, DSP

The goal was to develop a small wearable appliance with sonic (sonar-like) sensors to detect other appliances, the distance to them, and the duration of proximity. The idea originated from the call for solutions during the COVID-19 pandemic. I am also the writer and inventor of a multi-region patent for a core part of this technology. This project received a government grant for innovation.

`aug-19 > mar-20`	Freelance **Senior Architect Connectivity** at **Logius** (government)

Tags: Networking protocols (MPLS, BGP), Doc-mgt: SharePoint, Jira, Confluence.

I worked in a group called "Diginetwerk" which supported a range of Data Network and Interconnection facilities for the national government and ministries in The Hague.
The main topics were:
- **Haagse Ring** – Data connections between ministry buildings in The Hague.
- **KPS** – "Koppelpunt Publieke Sector" (English: Network cross-connect for Public Sector).
- **Central DNS-NTP facilities**

Certification in SAFe (Scaled Agile Framework), the Agile / Scrum method used at Logius.

`jan-19 > jul-20`	**Product development** in **MURAPI BV (*)**

Tags: Hardware Server development, Product development

The goal was to develop a "Combined Hardware-Software Appliance Platform" for industrial computer servers, focusing on remote-site deployment with central management.

`sep-18 > dec-18`	**Product development** in **Tridentity BV (*)**

Tags: Cyber Security, Encryption

The goal was to develop an authentication and authorization system based on pseudonymity, where the identity of a person during an authentication or authorization process, need not be revealed.

`jun-18 > jan-19`	Freelance **Corporate Security Manager** at **Kadant** in Weesp, NLD

Tags: Cyber Security, IT-Architecture

I developed a corporate cybersecurity policy and implemented parts thereof in a Firewall migration and Office WiFi migration projects.

`mar-17 > may-18`	Freelance **Senior Network Architect** at Air Traffic Control (**ATC)**

Tags: Data Networking, IT Architecture

I have developed an architecture for the network modernization project called "Network 2.0".
This was a multi-layered, multiple resilience (High Availability, HA) network design using the MPLS transport stack in both LAN, MAN, and WAN.

`apr-15 > feb-17`	**Product development** in **FairFlow Technologies BV (*)**

Tags: Linux, C, Python, Swift (Apple iOS / Mac)

After TWS I wanted to **create my own new technology** !!
I found a way to provide real transport quality with actual guarantees, which goal is called **Quality of Service (QoS)** in the industry. This project also received a government grant for innovation.
To discover the latest QoS developments in the TCP/IP protocol stack, I attended the **IETF-94 standardization meeting** in nov-2015 in Yokohama, Japan. We filed a worldwide (multi-region) **patent** (patent nr = WO2017186720A1) and we developed an (early) **prototype** using a custom Linux kernel module (written in C) to simulate low-level queuing decisions and a Python background daemon on embedded Linux, and a MacOS program written in Swift for UI and demo control.

`sep-07 > mar-15`	**Netwerk Architect & Engineer** in **TWS (*)**

Tags: Data Networking (TCP/IP, OSPF, BGP), IT Security, Perl, SQL, Linux, X.509

I was the **co-founder** and (sole) **architect** and **senior engineer** for this IT company:
we delivered and maintained Company Data Networks (LAN, MAN, and WAN), and later we delivered Internet Access Services (IAS) as a registered Internet Service Provider.
Next to a company director, architect, and engineer, I was also a software developer for some internal projects, mainly for **Network Maintenance** and **Network Automation**:
- **RMV** (Remote Monitoring over VPN, continuation of earlier development) totaling 150+ units
- **FlexVPN**: a hub-spoke VPN system for central management and support of field engineers
- **NetAdmin**: a CMDB management system also providing RADIUS+DHCP services.

`jan-04 > aug-07`	**Product development** in **SmallBizConcepts BV (*)**

Tags: Technical Instructor, Data Networking, Perl, PHP, SQL, Linux, X.509 SSL certificates

My activities in my previous enterprise (2001-2003) continued here, including trainings worldwide.
I also took on projects as a Software Developer, with some notable projects:
- development of the **RMV** (Remote Management over VPN) which was an embedded Linux-based SBC appliance with an OpenVPN connection to a shared VPN-Hub, and a local Perl script to continuously monitor local devices (Ping uptime and latency, SNMP network bandwidth), and a Perl-based Web-UI to view the status graphically.
- development of the **Ingosur** web application for providing **automated car insurances** to dealers, including the generation of a PDF document as an official car insurance card (printed locally at the car dealer). The code was written in PHP, using a MySQL database, and had a separate admin interface, and XML-RPC API interface for third-party access.

aug-01 > dec-03	**Freelance Trainer-Specialist** in **NetworkConcepts (*)**

Tags: Technical Instructor, Data Networking, IT Security, Perl, Linux

I became a (sole proprietor) **entrepreneur** !!
Next to small (data networking and security related) projects, I was trained to become a trainer for the design and installation of the **SYSTIMAX products** that Lucent sold (by now a split-off called Avaya), and I started to give 3 or 4-day **training sessions** first in the Netherlands, then Europe-wide, and later when the then head-trainer quit, I gave this 4-day training **worldwide**.
I also was a freelance software programmer, with some notable projects:
- development of a **Private Search Engine** for Rijkswaterstaat (Dutch infrastructure authority)

apr-98 > aug-01	**Technical Sales Consultant** bij **Lucent Technologies**

Tags: Sales Consultancy

I found within Lucent a position as **Technical Sales Consultant** for the **SYSTIMAX products**.
I appeared to be very good at **understanding the real issues** of customers, and at communicating technical or abstract topics to people of various backgrounds, and soon I was writing and delivering **technical (keynote) presentations**. I was also charged to be the **European Lucent representative** for the standardization of the LC fiber connector.

sep-97 > mar-98	**Junior Systems Engineer** at **Lucent Technologies Bell Labs**

Tags: Systems Engineering

I was involved in the international standardization of the **SDH** transport protocol family, and the formal verification of some internal protocols (protection switching). I attended many standardization meetings throughout Europe.

dec-96 > jan-97	**Software developer** at **TNO (TNO-FEL lab)**

Tags: Delphi

A (short) IT student position to create a Delphi program which was an early geo-positioning UI for simulation of helicopter tactics for the Dutch Armed Forces.

mar-95 > aug-96	**Software developer** at **MTO BV** (side project next to study)

Tags: C, Delphi

A side hustle job next to my MSc. study that grew to be my first real SW programming experience:
- a C-program for an 8051 microcontroller providing device driver functionality for a trackerball pointer device with an RS-232 serial interface to a Windows 3.x computer to be used on a sales/demo system for trade shows.
- a Delphi (Object Pascal) program for Windows 3.x which was a product catalog using an internal SQL database and packaged on a CD-ROM to be handed out to 1000+ people at the yearly Machevo industrial trade shows.