

## 1. Goal

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I'm interested in software development jobs for **Linux** either in the usual or in less mainstream languages.

## 2. Personal Information

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Name	Endródi, Ádám
Contact	+36XX XXXX XXX, XXX@XXXX.hu
Nationality	Hungarian
Education	master of engineering in information technology, graduated at the University of Pannonia, Hungary comprehensive background in mathematics
Specialization	Linux/Unix, networking, security, development tools
Language skills	advanced level English
LinkedIn profile	<a href="http://www.linkedin.com/pub/adam-endrodi/65/10/34">http://www.linkedin.com/pub/adam-endrodi/65/10/34</a>
Twitter feed	<a href="#">@NoSuchNetwork</a>
Code repository	<a href="http://github.com/enadam">http://github.com/enadam</a>



## 3. Strengths

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- life cycle- and process-wide understanding of software engineering
- >12 years of C, C++, Perl, and Linux/Unix up from the foundations
- experience in a broad variety of domains of information technology
- top priorities are quality, reliability and maintainability
- reviewing, testing, tracing, profiling, debugging
- strong emphasis on scripting and automation
- cooperative architecture and software design



## 4. In a Nutshell

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### Experience

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|-----------------------------------|---|---|
| • Unix systems programming        | • creating development tools                                | • distributed systems, virtual computing, high availability |
| • kernel programming              | • developing parsers/interpreters                           | • interprocess communication                                |
| • network programming             | • understanding of the C tool-chain and dynamic linking     | • concurrency and reentrancy                                |
| • information and web security    | • tracing, profiling, automated unit and functional testing | • portability and compatibility                             |
| • safe, secure & resilient coding | • constrained environments                                  | • writing accurate yet readable technical documentation     |
| • secure system administration    |   |   |
| • database administration         |   |   |

### Keywords

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|---|---|
| • C, C++, assembly, ELF, yacc, T <sub>E</sub> X | • scrum, git, Subversion, Bugzilla, Jenkins   |
| • Perl, Perl XS, Python, Python-C               | • SQL, PostgreSQL, MySQL, SQLite              |
| • regexps, advanced shell scripting             | • XML, RPC, REST, SSL, PKI, X.509             |
| • glib, STL, Qt, D-BUS, genetic algorithms      | • IPv4/IPv6, routing, firewalls, mailing, ssh |
| • gcc, gdb, autotools, Debian packaging         | • SCTP, DNS, LDAP, HTTP(S), FTP, SIP          |
| • X11, window and composition managers          | • LXC, Docker, IaaS, vCloud, OpenStack        |

### Employment History

- [Nokia Networks](#) (formally Nokia Solutions and Networks, formerly Nokia Siemens Networks)  
**2012/12–present:** *senior software engineer* in the Linux Team of the Mobile Broadband organization unit
- [BalaBit IT Security](#), the producer of [syslog-ng](#) and the [Zorp](#) firewall  
**2012/07–2012/12:** *3<sup>rd</sup> level support engineer*

- [Collabora Ltd.](#), the UK/Canada-based open source company  
**2010/09–2011/09**: *consultant software engineer* working on-site at Nokia’s [MeeGo Devices](#) (formerly Maemo Software) in Helsinki, Finland
- Blum Software Engineering LLC (defunct)  
**2007/09–2011/09**: *software developer* working on-site at Nokia’s [Maemo Software](#) in Helsinki, Finland

## Presently

I’m working in the telco industry at the Budapest Technology Center of Nokia Networks as a member of the Linux Team. My responsibilities are concentrated around the [Open TAS](#) product, a 4G mobile softswitch:

- developer and primary maintainer of the [Diameter](#) load balancer
- reviewer of specifications, feature implementations and patches
- written many pre- and post-deployment scripts and utilities
- created lots of development tools for my and my team’s benefit
- I’m also giving security advice on threat modelling, hardening, guidelines and on specific vulnerabilities like [Shellshock](#) and most recently, [GHOST](#)

Lately I’ve become involved with future development directions of the product, assisting the architects to make informed design decisions.

All my work revolves around Linux and increasingly around virtual computing (“cloudification” of existing offerings), but I’m also familiar with the “legacy” (DX200) platform and hardware.

## Previously

For four years I worked on-site at Nokia Devices’ R&D facilities on the middleware of the resource-constrained environment of the Linux-based Nokia [N900](#) and [N9](#) smartphones.

After that I joined BalaBit IT Security as 3<sup>rd</sup> level support engineer, where I responded to customer problems with the products of the company (application level proxies and system operators auditing software) and fixing tricky bugs in them. I also helped the support team migrating to the [Kayako](#) ticketing system by customizing and enhancing it to match and exceed the retired system’s capabilities.

## 5. Past Projects (selection)

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Project name: [mcompositor](#) [MeeGo Devices](#) 2010 Sept–2011 Sept

Description: Development of the composition and window manager of [N9](#) (Harmattan program). This software is responsible for the user-interaction of the top-level UI elements, and also coordinates between the different applications and background services. Its performance and reliability were critical in the device’s user experience. It was written in **C++** with the **Qt** toolkit and **OpenGL** backend, and the development was managed via **scrum**. Its **automated functional tests** were written in **Python**.

Duties: feature enhancements, user-interaction improvements, debugging internal problems, debugging software interaction problems, optimization, refactoring. For a while I was responsible for releasing the software for system integration, ensuring that outstanding issues are fixed in the release. I also worked with the **Toolkit** and **Graphical adaptation** teams when necessity arose.

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Project name: [hildon-desktop](#) [Maemo Software](#) 2008 Sept–2010 Aug

Description: This was the predecessor of [mcompositor](#), developed for the [N900](#) (Fremantle program). It used different technologies (written in **C** and **Clutter**, the high-level **OpenGL** library), and had more sub-components, many of which I was involved with (eg. [SDL](#)).

Duties: I wrote the **task switcher**, implemented the **portrait mode**, worked on the desktop notifications and on the visual transition effects of various GUI elements. I maintained a healthy and bidirectional contact with our UI designers. During both this and the [mcompositor](#) projects I wrote many **automated tests** for specific, hard to reproduce bugs, which helped their resolution. I also created many other **development tools**, which were useful in bug hunting. They are [public](#) now, and even today I make use some of them.

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Project name: [Media Application Framework \(MAFW\)](#)

[Maemo Software](#) 2007 Aug–2008 Aug

Description: Middleware for multimedia applications on the [N900](#). It provided an abstraction layer between the application and the various content and metadata sources (eg. local file system) and playback devices (eg. **UPnP** or **gststreamer**). It was written in **C** and was based on **GObject**. It was designed to be extensible by **plugins** and for testability it had **Python bindings**. This was the first team within Maemo Software to explore **scrum** as project management methodology.

Duties: **reviewed** the predecessor Multimedia Application's as well as MAFW's pilot implementation and **compiled a report** of questions and suggestions, conducted the **security threat analysis** of MAFW, worked on the **Python modules**, on the **D-BUS message passing** layer, and on the **SQLite** access functions. Also I introduced **continuous integration** into the project with a heavily tailored **buildbot** installation.

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Project name: MenuGene

[Univ. of Pannonia, Dept. of Information Systems](#) 2004–2009

Description: Computer aided nutrition counseling system for experts and for the laymen. The user entered his/her nutrition needs (the amount of protein, fat etc.), and the service computed an optimal daily or weekly dietetic menu with a **genetic algorithm**. This was a university research project, extending to other academic institutions.

Duties: As the main software developer I wrote the service program and the underlying libraries in **C++**. The service had a simple **PHP** web interface and a **Perl** GUI. Some **development tools** in **C** yielded as well. Initially the program was Linux-only, but later I **ported** it to Windows. I also redesigned the data store's **SQL** schema and migrated it from Oracle to **PostgreSQL**.

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Project name: qbot

[Univ. of Pannonia, Dept. of Information Systems](#) 2005–2007

Description: Automated testing and student performance evaluation service designed for a course on computer networking. The students uploaded their C programs which the service compiled and executed in a **qemu virtual machine**. Then they were placed under **stress-test** by feeding them **randomized, fuzzy** input sequences. The responses were validated against the specification set out in the assignment. The service also featured a web interface through which teachers could supervise everyone's activity, students could manage their uploads and watch the test execution in real-time.

Duties: I designed and implemented the system from the ground-up mostly in **Perl** and **Perl XS**, and prepared many assignments, each requiring a matching validator program.

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## 6. Personal Properties

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|--|--|
| • code readability and reliability are of highest concerns | • can-do attitude  |
| • tests <i>before</i> making a commit                      | • patient & emphatic                                       |
| • respects colleagues' code and decisions                  | • determined & disciplined                                 |
| • thinks ahead   | • independent & passionate                                 |
| • learns from mistakes                                     | • no compromise if possible, but ready for it if necessary |
| • willing to study and research                            | • motivated by fun   |

Besides continuous self-improvement I'm interested in language, interpersonal communication, experimental psychology, social issues and in the gender problem.

*February 16, 2015*