# Roman Gafiyatullin

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 24 years old, married.



# Education

2004–2008 Minsk State Higher Radiotechnical College, Software and IT.

2011-present Belarusian State University of Informatics and Radioelectronics,  $Informatics/Computer\ science\ (Distance\ education).$ 

# Technologies (actively used)

POSIX	Linux, OS X				since 2005
$Erlang \; + \;$	Network	daemons,	distributed	and	since 2009

OTP highly available systems

C Binding missing functionality to Erlang since 2004

OCaml Candidate to replace C in my toolkit since 2011 SQL MySQL (Galera/XtraDBCluster), Post-

greSQL
NoSQL Mongo, Kyoto cabinet, Riak

# Languages

Russian Native

English Intermediate

# Open source

## 2012-present **Durden: SOAP server for Erlang**.

Durden is an Erlang/OTP library for making SOAP API's with Cowboy webserver easier. It's difference between for example yaws\_soap\_lib is that you do not have to write WSDL yourself. Durden generates it for you: you just need to point which functions you are going to export and specify the types of their arguments and return values.

https://github.com/RGafiyatullin/durden

### 2011–2012 Kyte: Erlang binding for Kyoto Cabinet embeddable key-value storage.

Kyte is an Erlang/OTP library enabling Erlang to use Kyoto Cabinet storages. It's key-feature is that it uses a separate thread-pool for dispatching long playing requests to the storage so it does not interrupt Erlang virtual machine's scheduler work.

Other bindings are not that good and can freeze the application for unpredictable period.

https://github.com/RGafiyatullin/kyte

### Career

### 2007-present Work at PowerMe Mobile.

The company delivers carrier-grade solutions for SMS and MMS traffic charging and routing. Among the customers are the largest Gulf Countries' cellular operators:

- Etisalat (UAE).
- Batelco (Bahrain),
- Viva (Bahrain),
- QTel (Qatar),
- Zain (Kuwait),
- and many others.

# 2011-present System architect, team leader, PowerMe Mobile, Minsk,

OpenAlley SMPP Gateway.

Tools:

- Linux
- Erlang + OTP
- C++

PMM decides to go open source. May the 1st, 2012 - release under GPLv2.

The main goals:

- be extensible
- o be realtime
- be scalable
- handle up to 10M of unique messages per node daily

# 2011-present **System architect, team leader**, *PowerMe Mobile*, Minsk,

PMM BMS v6. Billing and rating subsystem.

Tools:

- Linux
- Erlang + OTP
- C
- OCaml

BMS v6 brings a new type of inbound interface - SMPP.

The special thing about it is that the customers using SMPP usually send a vast amount of unique messages: e.g. Banks are reporting most of credit/debit-card transactions' details via short

The previous rating and billing subsystem was designed to handle big amounts of non- unique messages. Also the old rating has a big latency which is unacceptable for working with prepaid customers.

### 2010 **Software developer**, *PowerMe Mobile*, Minsk,

PMM BMS v6. High availability.

Tools:

- Linux
- C
- Bash
- Erlang

The system is installed to a Linux-HA cluster coordinated by corosync/pacemaker stack. Variety of new OCF resource agents needed to be implemented.

As a result the system could stay fully-functional having only three nodes running (we have three types of nodes: thus we need at least one node of each type to stay alive).

### 2009–2010 **Software developer**, *PowerMe Mobile*, Minsk,

PMM BMS v6. Porting to Linux.

Tools:

- Linux
- C# + Mono
- C

Some operators do not want to have any Windows in their data-centres.

The platform has to be ported to some Unix.

Since the system we already had by that moment was implemented using .Net - we chose Mono. Later most of the PMM's old customers requested an upgrade to the Unix-hosted system.

# 2007-2009 Software developer, PowerMe Mobile, Minsk,

PMM BMS v5.

Tools:

- Windows
- C# + .Net

BMS - Bulk Messaging System.

A multi-interface gateway for sending short text messages (SMS) and multimedia messages (MMS) into cellular operator's network (using SMPP and MM7 protocols).

# 2006-2007 Junior developer at Oxford ArchDigital, Minsk,

Web projects based on a proprietary CMS.

Tools:

- Linux
- PHP

That was my first commercial development experience.

The customers were chiefly british governmental institutions.

Most notable of them is Ordnance Survey - british national mapping agency.

# **Publications**

2009-10-02 Rus: Using native code from Erlang.

2011-12-15 Rus: Writing a binding to Kyoto Cabinet.

Implementation explained.

2012-09-05 Rus: Today? We make SOAP...

A quick review of Durden library.