Matthew Byng-Maddick

Email : mbm+cvpdf@colondot.net

Date of Birth : 26th July 1977

Marital Status : Single

Nationality : British Citizen / Czech Citizen

Employment Experience

Mar 2017 -
Mar 2024

OLX
Lead Site Reliability Engineer

In 7 years at OLX, including nearly 5 with the Big Data team, I've worked on several different systems, large and small, including almost single-handedly building an enterprise-wide data scheduling platform on top of Apache Airflow, and our internal Gitlab setup, rewrites of several systems (database tailing, JSON to Parquet conversion) to make them more scalable, as well as Kubernetes and AWS native, in addition to various smaller tools to make the platform more compatible with our systems. I also worked on some user tools, and other management tooling, including to help manage things like Grafana dashboards.

Sep 2016 -
Feb 2017

Gaikai
Site Reliability Engineer

Attempted to upgrade internal monitoring platform, and trying to drive new ideas for managing and configuring systems. Ultimately not the right fit.

Jan 2016 -
Jun 2016

Brandwatch
Contract Senior Systems Engineer

Hired to upgrade the HDFS and HBase versions for Brandwatch's existing installation, I built a new platform allowing easy management of clusters, and migrated to the newest HDFS versions. Other priorities blocked the upgrade of HBase. Applied the management platform to Solr, and introduced code review to the systems team.

May 2014 -
Dec 2015

Apple (UK Ltd)
Senior Big Data Operations Engineer

Helped a new SRE team (Hadoop SRE) take over from vendor consultants, and supported MRv2 and Spark on YARN, as well as HDFS and scheduling from Azkaban. Built systems to get high-quality telemetry and visualisations from our clusters, and looked at designing and prototyping a scaled up monitoring system.

Oct 2012 -
Feb 2014

Facebook, Inc
Production Engineer (IC5)

I was part of the team managing the operational side of Facebook's production infrastructure for its 70+ HBase databases in 8500+ servers. These databases were the data storage for the 10bn+ messages a day in Facebook's messaging and chat application, and for much of the internal monitoring data. As well as ongoing maintenance, we built software to detect and remediate problems earlier and in more automated ways, and to better allow us to monitor and tune and configure the databases.

Apr 2008 -
Aug 2012

British Broadcasting Corporation
Systems Engineer/Technical Architect (Senior Software Engineer)

During 4 years at the BBC, I started on their post-broadcast VoD service (iPlayer), and then moved to consult on all areas of the BBC website. On iPlayer, I designed and implemented systems relating to content publishing, statistics and DRM licensing, and across the BBC I rolled out a refreshed implementation of the Zenoss monitoring, and consulted in systems design and operational supportability for product owners across the whole website.

Mar 2005 -
Apr 2008

Venda Ltd
Senior Developer / Senior Systems and Networks Administrator

I started off as a developer on the Venda codebase, and having worked extensively on optimisations and new features, was able to move, in October 2006 to their Systems team. There, I helped implement several network improvements, as well as leading operational maintenance tasks, and engineering several new systems.

Apr 2001 -
Mar 2005

The Bunker (previously A L Digital)
Software Developer and Network Manager

In nearly 4 years at The Bunker/ALD, I was involved with many projects, often related to security, but also in terms of building and managing networks. As a programmer, I was involved with security, both writing SSL libraries and doing security reviews (including OpenSSL), as well as web application work.

Jul 1999 -
Apr 2001

Codix.net
Software Developer and Systems Administrator

In July 1999, I helped Alex Nunes start up Codix.Net (since, a part of Venus Internet) by setting up the internal network, procedures and development environments. I wrote much of codix's infrastructure, including a small templating system, a cryptographic session-management system, and I co-wrote a small-scale fast search engine. I was also involved with much of the web application work done by codix.

Aug 1998 -
Oct 1998

Transaxion
Freelance Software Developer

Aug 1995 -
Oct 1996

STC Submarine Systems / Alcatel Submarine Networks
Trainee Engineer

Publications

Feb 2002

Keyman: Trust Networks for Software Distribution
(not peer-reviewed)

Presented to: Workshop on Open Source Software Development

Education

Oct 1996 - **Selwyn College, University of Cambridge**
Jun 1999 Natural Sciences (Physics) MA

Part Ia - (I), Part Ib - (II.2), Part II - (III).

Aug 1990 - **Westminster School**
Jul 1995 STEP / S-Levels (3 Is, 1 II), A-Levels (4 As), AS-Levels (1 A), AO-Levels (1 A), GCSEs (6 As, 4 Bs)

Computer Experience

Familiarity with:

- POSIX, and the UNIX Programming Environment (and ANSI C)
- The GNU C Compiler, linker and GNU and BSD make
- The Linux Environment (Debian, Ubuntu, Alpine) and the Docker container environment
- Amazon Web Services Cloud environment and core services, with Terraform to configure
- Languages (in most used order): Python, C, Bash, Java
- Kubernetes container scheduling and service clustering with helm and helmfile
- Techniques for building high-availability and scalable systems
- Monitoring, telemetry and the use of kernel, JMX and application metrics
- Prometheus, Alertmanager, and Grafana
- Load-balancing techniques (global (DNS), L3 (and L3 DSR) and L7)
- Various Apache services: Hadoop, YARN, HDFS, HBase, Airflow, Zookeeper
- SQL, high scalability, high availability, and some DBA (MySQL/PostgreSQL)
- Techniques for code management (eg. git) and code review

Exposure to:

- Languages (in most used order): Go, Scala, Ruby, C++
- Elasticsearch/Opensearch and Kibana
- Chef and Puppet configuration management
- Apache Spark
- IOS, Routing, IPv4, TCP, Firewalling on PIXes and ASAs, OSPF, BGP
- The Apache Webserver and some of its internals, the nginx webserver, varnish cache
- SMTP, IMAP, and mail configuration (and some Exim internals)
- Cryptosystems and the OpenSSL Cryptographic Library
- Several older systems no longer in as much use...

Published open source software:

- rubiks - a Kubernetes configuration manager

Languages

English (native); German (B2); French (a little, no certification); Czech (beginner, no certification)

Other

As well as the above, I have co-written and maintain a mail-based interface for registering domains using Tucows' OpenSRS system.

Referees

Please contact me for addresses of referees.