

Berk Ulsoy

Software Architect / Lead

20 years development, architecture, operations and support with Linux/Java/Open Source based critical solutions in ISP, Telco, and startup environments for all size of customers around the world. Coach, Mentor, Lead Agile/Lean/Kaizen/Kanban

Summary

I lead, design, produce and manage enterprise grade, stable, scalable, secure, performant solutions E2E by taking charge of different hats. I negotiate with stakeholders, design, review designs and code. I oversee build pipelines for CI/CD. I mentor teams via code reviews, provide guidance and lead improvements for quality software creation via lean, agile, kanban, scrum practices. I design effective workflows for issue management. I worked on-call rota +8 years for critical solutions deployed around the world. I am part of a team distributed to 3 continents.

Skills

Software Development

Programming: Java (Certified), Scala (bit rusted), Python, Javascript, Ruby for Puppet. In the past PHP, C, Perl. Hobbyist for Rust and Go

Keywords: Web Services, SOAP, REST, HTTP, Hibernate, AWS, Docker, Kubernetes, OpenStack, Ansible, Android, Linux kernel, JBoss, JEE, JMS, JSP, Redis, HAProxy, scaling, Subversion, Git, Maven, Atlassian tools, Artifactory, Jenkins, TDD, BDD, Gerrit, functional programming, design patterns, type safety

Platforms

Operating Systems: Linux (since 1997, Ubuntu, Debian, Red Hat Certified), Solaris (since 1997, v 2.5.1 to 10, Certified), Tru64, Windows (NT4/2000 (Certified)/2003)

Databases: MySQL/MariaDB, Galera, Oracle RAC, PostgreSQL (rusted), Microsoft SQL Server 2000 (Certified, not used since 2005)

Network: Extensive knowledge on network protocols and TCP/IP stack of Linux. Including HTTP, SIP, IPsec, BitTorrent, RADIUS, ARP/RARP, DHCP, BOOTP, DNS, SMTP

Virtualization: KVM, Docker, in the past linux-vserver, UML, QEMU

VOIP Systems: Alcatel-Lucent 5020 Carrier Grade Softswitches, ACME Packet Session Border Controller (basic)

RAID and volume systems: Solaris Volume Manager, Linux Logical Volume Manager (LVM), Linux dm-raid/MD, Microsoft Dynamic Disks, Sun Storedge, Veritas volume manager, Tru64 LSM

Routing and Switching: Alcatel-Lucent Service Routers and OmniSwitch, vlan, basic VPLS MPLS BGP

Clustering: Sun Cluster, TruCluster, Red Hat Cluster Services, Linux Virtual Server (LVS), IP and I/O multipathing (Past), GFS (Past), Heartbeat

Work Experience

- Jan, 2016-Now **Software Architect & Lead**, *Nokia*, Belgium.
Impact IoT Platform
- Continuation of the development efforts after the acquisition by Nokia and broadening of the solution
 - Added Kubernetes support with helm charts using quite a group of platform features. Streamlined K8S R&D deployments
 - Coaching scrum teams, leading quality improvement work streams, molding software development lifecycle, guiding agile development efforts
 - Mentoring junior developers for coding practices
 - Defining standards and procedures of development tasks
 - Transforming and migrating source code management, code review, build and analysis systems
- Jan, 2012-Jan, 2016 **Senior Software Engineer & Architect**, *Alcatel-Lucent Bell N.V*, Belgium.
Development and design of Motive Connected Device Platform
- World wide deployments managing hundreds of millions of devices
 - Development and architectural design of enterprise grade, extensible device management solution (Mobile, TR-069, IoT, RCS, Apple devices) using JVM technologies including Java, JBoss, Hibernate, and most features of JEE 6 spec.
 - Automated deployments on OpenStack, AWS using Puppet and Ansible
 - Development of mobile management client for Android devices to remotely manage software inventory, network and corporate email configurations, device security, diagnostics, hardware management
 - Mentoring for the programming practices
 - Guiding agile development efforts and quality improvements for a systematic, data driven way
- Jan, 2010-Jan 2012 **Software / Operations Engineer (DevOps)**, *Alcatel-Lucent Bell N.V, Bell Labs, Appglide Venture*, Belgium.
Software development and platform support for Appglide P2P network optimization suite and online video analytics solution
- P2P network optimization product emerged from Bell Labs research and it was a set of JVM based loosely coupled, highly available and horizontally scalable applications capable of transparently processing ISP bittorrent traffic with no tolerance to downtime or performance problems. (Processing 800Mbps live per deployment unit)
 - Centralized reporting, monitoring and configuration over web services hosted in AWS for all deployments
 - Operations and automation of deployment for virtual and physical systems, AWS
 - Database (MySQL) and Linux/Network performance tuning
 - Management of routers, switches and firewalls
 - Development of platform and central management portals for systems, concurrent scrapers, developing protocol analyzers, all kinds of automation tools including web based interfaces (eg: centralized and dynamic reconfiguration of all deployed routers and firewalls which will critically alter customer traffic)
- Jul, 2009-Jan, 2010 **Network Design Integration & Operation**, *Alcatel-Lucent Turkey*.
Providing hardware UNIX expertise, database tuning, network troubleshooting and development, architectural decisions to projects
- Worked on a project for AVEA (GSM operator) in order to optimize database (MySQL) to store +100 million rows monthly, 1.5TB estimated yearly rotating data.
 - Responsible for design of hardware/software/network, implementation and tuning of 20 TB PostgreSQL database, 100TB file storage, 30 servers for a telecom operator in Turkey
- Jan, 2007 - Jul, 2009 **NGN International L3 Engineer (R&D)**, *Alcatel-Lucent Turkey*.
Providing R&D level support as the product owner of carrier grade VOIP software. Responsibility for software, OS, database, network, interoperability issues, new network design and deployments. Worked for targeting 99.999% uptime
- Kernel and network stack level operating system tuning, troubleshooting and kernel crash debug analyses for Linux, Solaris, Tru64 based systems (More than 300 IPVS, Sun Cluster and TruCluster worldwide)
 - Volume management of clusters using Veritas VxVM, SVM, Advfs, LSM, LVM
 - Designed the platform with clusters and highly available MySQL environment for mobile number portability project that aims to process realtime mobile number migration events between operators.
 - Create and proposed customized Nagios + Cacti based monitoring solution for situations that need more than SNMP ever can
 - Troubleshooting and performance tuning for single and replicated MySQL 5.1 clusters (not NDB), Oracle 8i/9i/10g with RAC and multimaster replication
 - Network trace analyses, finding RFC compliancy and interoperability issues in SIP, HTTP, SOAP, MEGACO, RTP and RADIUS protocols
 - Development of ad-hoc tools for specific customer needs
 - Instruct internal courses for junior engineers (i.e introductory courses for TCP/IP, Linux)
 - 7/24 on-call weekly rotation for customers like British Telecom, Wind, Telenor, T-Sytems, Bezeq, Telstra, Telmex, Copaco, France Telecom, Orange, Vodafone

- Apr, 2006-Jan, 2007 **Support Grup Supervisor, Parkyeri A.S.**
 Worked as team leader
- o Leading support team, production planning. The rest is similar to the previous term, but with higher number of systems
- Jul, 2005-Apr, 2006 **IT Officer Lieutenant, Kuleli Military High School.**
 The compulsory service completed
- o Central management of over 500 desktop pc, 12 Windows 2000/2003 Servers with 4 domains, 160 printers
 - o Development of an online education portal using PHP
 - o Commanding an armed squad
- Jan, 2004-Apr, 2005 **Software Engineer (DevOps), Parkyeri A.S.**
 Parkyeri is a software development company that focuses on developing mobile services. Supporting the Free Software is in the core. Worked as system engineer and software developer
- o Support and software development for products, installation, management, automation and performance tuning of over 100 Linux/Solaris servers spread over 2 offices, 3 ISP, 2 GSM operators (Turkcell (Over 30 million subscribers), Life-Ukraine), and Genpa(Mobile phone seller giant in Turkey). Single configuration point for all services in order avoid manual configurations.
 - o Worked on unified messaging portal for Turkcell
 - o Implemented special authentication module for courier-imap
 - o Implemented automated monitoring and performance visualization system checking 280 nodex using Nagios and Cacti automated software
 - o Manage and develop services that include highly utilized sms servers (sending and receiving millions of SMS per day), e-commerce services, mail servers supporting user customizable server side spam filters by modifying existing solutions (Exim, Postfix, Horde), web (Apache-PHP, Squid, Pound), dns (BIND), development and application servers (Subversion, Tomcat, JBoss), commercial caching solutions
 - o Worked on VAS provided for mobile operators
 - o Management of Linux based diskless client network (25 clients and 4 terminal servers), multimaster corporate file system replication (unison)
 - o Security auditing of products via Nessus, nmap and snort
 - o Iptables and shorewall configurations of firewalls
- Sept, 2003 **Freelance Instructor, Executrain Education Services.**
 Instructing Windows 2000 Server and Active Directory course for a media group's system administrators
- Mar, 2003-Aug, 2003 **System Engineer, BNET (now Borusan Telekom).**
 BNET was one of the largest ISPs in Turkey. Worked mainly as system and security engineer with some minor network administration
- o Support for ISP services (apache, IIS, bind, sendmail, Mailsite), management installation and performance tuning of both ISP and customer servers
 - o Development of automation software
 - o DBA of MySQL, MSSQL, Oracle systems
 - o Firewall management (iptables, Checkpoint)
- Nov, 2001-Mar, 2003 **Software Engineer, Freelance.**
- o Installation and troubleshooting of various services, mainly LAMP and e-mail.
 - o Development of PHP/MySQL based small sites
- Sep, 2000-Oct, 2001 **Unix System Administrator, Koc.net.**
 Koc.net was a large ISP that targeted commercial customers, owned by Koc Group (Fortune 500). Acquired by Vodafone
- o Support for ISP services (apache, qmail, bind, irc), installation, management, performance tuning for over 70 Solaris/Linux servers
 - o Development of management tools with Perl to automate configuration of ISP services
 - o DBA for some Oracle and MySQL servers
- 2001 **Freelance Writer, IDG.**
- o Freelance technical writer for several issues of PCWorld and ComputerWorld magazines.
- Nov, 1996-Jun, 2000 **Teaching Assistant, Marmara U. Dept. of CSE.**
 Instructing core CSE courses (including operating systems, networks, system programming with C, object oriented programming with Java) since 2nd grade, management of faculty network, 10 servers (Solaris 2.4/2.5.1, Linux (1.3), Windows NT4/2000 domain, faculty e-mail (sendmail/iPlanet) and web servers (apache/iPlanet)) and computer labs consisting 150 pc.

Certification

- o Oracle Java SE 8 Certified Professional
- o Red Hat Certified Engineer (7)

- Oracle Database 10g Administrator Certified Associate
- Oracle Database SQL Certified Expert
- Sun Certified System Administrator
- Sun Certified Network Administrator
- Microsoft Certified System Engineer
- Microsoft Certified System Administrator
- Microsoft Certified Database Administrator

Education

- B.Sc. Computer Engineering - Marmara University June, 1999
- Thesis: Distributed Collaborated Project Management Tool with JAVA-RMI

Courses

KocSistem SA-400 Solaris Performance Tuning

Seminars

- Licenses, Patents, Free Software and Commerce: Marmara U. CSE, Nov. 2006
- Licenses, Patents, Free Software and Commerce: Bilgi U. CS, Dec. 2006
- Licenses, Patents, Free Software and Commerce: Bogazici U. CSE, Dec. 2006
- World of VOIP: Marmara U. Computer Engineering, Apr. 2009
- Linux in Enterprise: Marmara U. Computer Engineering, May. 2009

Personal

- Nationality: Belgian, Turkish
- Languages: English, Turkish, Dutch (Limited)

Prepared with L^AT_EX