

Mirko Gatto

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About Me

I'm a software architect with more than 20 years of experience, specialized in cloud computing. I'm a promoter of operational excellence, security and automation. I love to work in diverse and globally distributed teams. I wake in the morning because there are problems to be solved.

Relevant Experience

May 2021 **Principal Software Engineer**, *Remote, France*, Trimble Solutions Corporation.

Current I worked in a distributed team building cloud solutions for the Tekla customers. My roles were DevOps engineer, solutions architect and developer.

- Created an interoperability layer between the Trimble identity OAuth service and the legacy Tekla desktop applications, built with AWS, Lambda, .NET Core and C#.
- Created the <https://www.tekla.com> service infrastructure, built with AWS, CDK, ECS, CloudFront, TypeScript and Docker.
- Created the common search service embedded in <https://www.tekla.com> and <https://support.tekla.com>, used daily by thousands of Tekla customers to search support articles and marketing material, built with AWS, Lambda, .NET Core, C#, TypeScript, React and Elasticsearch.
- Created a generic cross cloud file synchronization solutions, built with AWS, API Gateway, CDK, Lambda, Azure, CDK Terraform, Functions and TypeScript.
- Worked as solutions architect, designing cloud based solutions for the Structures divisions teams, using AWS and Azure.
- I was part of the site reliability team rotation, responding to operational and security incidents using PagerDuty.
- Developed the security scan pipeline for my teams codebase, using WhiteSource, SonarQube, OWASP ZAP, RESTler and SecurityCodeScan.
- Developed a CI/CD pipeline with AWS CodeBuild, TypeScript, NodeJs and React.

May 2018 **Cloud Software Architect**, *Remote, France*, Trimble Solutions Corporation.

May 2021 I worked in a distributed team building cloud solutions for Tekla customers. My roles were DevOps team leader, solutions architect, cybersecurity specialist and developer.

- Led the Tekla online DevOps team, worked on the roadmap, technology stack definition and KPIs.
- Created the Tekla online CI/CD, built with AWS, TeamCity, ECS and Docker.
- Created the <https://support.tekla.com> service infrastructure, built with AWS, CloudFormation, CloudFront, WAF, ECS and Docker.
- Created a multi-region interoperability layer between the Tekla desktop applications and the license and identity services, built with AWS, Lambda, .NET Core and C#.
- Created the Tekla license SDK used by the Tekla desktop applications, built with .NET Framework, SQLite and C#.
- Created the common infrastructure for the Tekla online services, built with AWS, CloudFormation, CloudFront, WAF, S3, Slack, Ansible, Python and Lambda.
- Created a common cookie banner supporting GDPR or CCPA based on the client geo location, built with AWS, CloudFormation, CloudFront, TypeScript and React.
- Worked as solutions architect, designing AWS based solutions for the Tekla teams.
- Worked as cybersecurity champion representative for the Structures division and implemented a set of security controls in Tekla online services.

- January 2018 **Cloud System Developer**, *Zurich, Switzerland*, Cloudreach.
- March 2018 I worked in the cloud enablement team, helping customers implementing solutions based on AWS.
- Developed the <https://blick.ch> service infrastructure built with AWS, ECS, CloudFormation and Docker.
- April 2015 **Software Architect**, *Espoo, Finland*, Trimble Solutions Corporation.
- January 2018 I worked in a distributed team building cloud solutions for Tekla customers. My roles were DevOps engineer, solutions architect and developer.
- Created the Tekla online services AWS infrastructure using CloudFormation, ElasticBeanstalk, Sumologic, DataDog and PowerShell.
 - Designed the migration of 12 Tekla online services to AWS. The services were based on .NET, Java, NodeJs and Drupal.
 - Created a web client application embedded in the Tekla desktop products, built with TypeScript, React, CefSharp, C# and WPF.
 - Created a tracking and notification service used to collect and process millions of events gathered daily from web, desktop and mobile applications, built with AWS, Lambda, DynamoDB, C#, .NET Core, TypeScript and React. Created an SDK for occasionally connected clients, built with C# and SQLite.
 - Created a Java application to perform the migration of hundreds of thousands of Tekla customers accounts to the Trimble common identity.
 - Developed new features in the interoperability layer between Tekla Structures and the Tekla online services, built with C++, C# .NET and WPF.
- January 2011 **Software Engineer**, *Espoo, Finland*, Tekla Corporation.
- April 2015 I worked in teams building Tekla desktop and web products. My roles were team leader and developer.
- Developed an SDK to build desktop and mobile applications, using WPF, Xamarin and C#. Created technical documentation and trained colleagues.
 - Developed BIM data platform, using ASP.NET, C#, MongoDB and ODATA. Led the team during the last phase of the project.
 - Developed Tekla BIMsight, a BIM collaboration application, using WPF and C#.
 - Led the team extending the Construction Management Add-Ons for Tekla Structures.
 - Developed the filtering API and parser for Tekla Structures Open API using C#.
- June 2006 **Software Engineer**, *Genoa, Italy*, Ansaldo Sistemi Industriali.
- Dec. 2010 I worked as a developer in the R&D team building the Ansaldo Micro System Environment (AMS), used as controller system in industrial automation.
- Created a web based diagnostic system built with ASP .NET Framework and C#.
 - Created a plug-in based application used to provide the infrastructure for configuration, development, deployment and diagnostic of the AMS, built with .NET Framework, Winforms, C# and MS SQLServer.
 - Trained technical support engineers and automation engineers (Italian/English).
 - Administered a VMWare ESX cluster.
- January 2002 **Software Engineer**, *Genoa, Italy*, Elsag S.p.A..
- June 2006 I worked as a developer in teams building a automatic fare collection systems and an electricity stock exchange platform.
- Created a GUI to control ticketing printers, built with Visual C++ and MFC.
 - Created the coding writer for magnetic tickets and cards, built with C++.
 - Developed a proof of concept version of the new electricity stock exchange platform using ASP.NET 2.0 and JavaScript.
 - Developed a centralized address book service used in the GME websites, built with ASP.NET 2.0 and JavaScript.
 - Developed a data warehouse service used to archive GME market results, built with .NET 1.1 and JavaScript.

- January 2000 **Junior Software Engineer**, *Genoa, Italy*, Telema S.r.l..
- January 2002 I worked as a junior developer in teams building industrial automation solutions.
- Created a web application to track employees hours, built with ASP and SQL Server.
 - Developed a desktop software used to control the plastic roll cut machines, built with Visual C++ and MFC.
 - Developed a communication module between remotely operated submarine and the tracking system, built with Visual C++ and MFC.

Education, Certifications and Courses

- Feb. 2022 **Course**, *Microsoft learning*, Azure/AI/DevOps/GitHub.
- Dec. 2021 **Course**, *MOOC*, DevOps with Kubernetes, <https://devopswithkubernetes.com>.
- Dec. 2020 **Course**, *MOOC*, Full Stack Open, <https://fullstackopen.com>.
- July 2020 **Certification**, *Azure Fundamentals*, Score 94%.
- Feb. 2018 **Certification**, *AWS Solution Architect Associate*, Score 100%.
- March 2017 **Course**, *MOOC*, Cybersecurity Base, <https://cybersecuritybase.mooc.fi>.
- Nov. 2013 **Certification**, *Scrum Alliance*, Espoo, Finland, Scrum Master.
- 1999 2000 **Diploma**, *Santi Institute*, Genoa, Italy, C++ Programmer.
- 1993 1998 **Diploma**, *ITC Einaudi*, Genoa, Italy, Accountant and Programmer.

Skills

Programming Languages: C#, TypeScript, Python, Bash, PowerShell.

Frameworks & Libraries: React, .NET Framework, AWS SDK, AWS CDK.

Document Languages: HTML, Markdown, OpenAPI (swagger), Latex.

Databases: SQLite, DynamoDB.

Deployment Environments: Docker, Kubernetes, k3s.

Cloud Environments: AWS, Azure, CloudFlare.

Operating Systems: Windows, Linux.

Cybersecurity: ZAP, Metasploit, WhiteSource, SonarQube, SecurityCodeScan.

Projects and Open Source

Personal Blog, <https://blog.xops.dev>

My personal blog delivered from my home network, built with Hugo, k3s and CloudFlare, running on a Raspberry Pi cluster.

Chip-8 Emulator, <https://github.com/nekoni/SharpOtto>

Created a chip-8 emulator using C#, .NET Core and WPF.

NekoDrive NFS Client, <https://github.com/nekoni/nekodrive>

Created an NFS client and libraries for Windows.

Ryujinx Nintendo Switch emulator, <https://github.com/Ryujinx/Ryujinx>

Contributed to the development of a Nintendo Switch emulator written in C#.

This Resume, <https://github.com/mlgatto/resume>

View the source of this resume in \LaTeX .