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**Dr Gerald Loeffler (Löffler), MBA**  
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Gerald Loeffler leads and works with technical teams and organisations creating software-intensive systems, particularly in the enterprise integration space. In doing so he draws on his copious project and industry experience, doing whatever it takes to consistently deliver successful projects and products. Depending on organisational context and needs, Gerald enjoys filling the role of **software development manager, project manager, Scrum master, team lead, mentor, trainer, architect** or **data scientist**. The technology domain he is intimately familiar with is object-oriented and functional software development on the JVM, often in Scala, for application development as well as system integration, using SOA, microservices, ESB-style and message-based integration and related enterprise software technologies and software engineering practices.

## Professional Experience

**from 4/2017: Senior Curriculum Developer and Technical Instructor** EMEA, MuleSoft (full-time contractor)

Creation of training material and courses in the area of enterprise and integration solution architecture and occasional delivery of courses of this kind to MuleSoft customers in EMEA.

- Proposal, design and development of a new training course that teaches experienced Enterprise and Solution Architects how to architect and design API-centric cloud-native applications for Anypoint Platform, MuleSoft's multi-cloud API and enterprise integration development and deployment platform. See <https://training.mulesoft.com/instructor-led-training/aparch-application-networks>.
- Enablement of selected instructors from MuleSoft's training team to teach this course
- Design and development of the accompanying certification (MuleSoft-Certified Platform Architect)
- Lead the re-development of a course targeting Technical Architects for applications on Mule 4, MuleSoft's reactive integration runtime
- Consulting for the development of a new training course covering the operation of MuleSoft's Kubernetes-based deployment environment
- *Java, Maven, Mule runtime, Docker, Kubernetes, AWS, RAML*

**11/2015 – 2/2017: Head of Development**, Cortical.io, Vienna (permanent employment)

Growing and professionalising the software development organisation of a start-up in the NLP and semantic text processing space, with slightly less than a dozen data scientists and software engineers, engaged in professional services and pre-sales customer projects as well as internal software product development.

- Creation of *recruitment and people management processes* and *management of the technical team* accordingly.

- Establishment of a project-centric *organisational structure and processes* for customer projects and product development.
- Steering of long-term *product direction* and short-term *scope* of activities within this structure.
- Refinement and standardisation of *software engineering practices*.
- Contribution to day-to-day technical activities as *project manager/Scrum master, architect* and *developer*.
- *Scala, Java, Spring Boot, Apache Spark, AWS, natural language processing, machine learning*.

**3/2014 – 10/2015: Principal Solutions Architect** EMEA, Professional Services, MuleSoft (permanent employment through German subsidiary; initially: Senior Solutions Architect)

Consultant in integration architecture and implementation for MuleSoft's clients.

- *Insurance company, London, 16 weeks*: technical guidance to large offshore Mule ESB development team; performance investigations and analysis of complex service-oriented system. Mule ESB, Guidewire Insurance Suite, Spring Framework, Spark/Scala.
- *Retailer, London, 17 weeks*: project management and technical leadership, formulation of microservices-based integration software development meta-architecture, framework and continuous delivery pipeline and its exemplary realisation through a few production services. Mule ESB, Spring Framework, RESTful APIs.
- *Energy utility company, Nottingham, 2 weeks*: architecture and project proposal for phased realisation of complex system replacement initiative.
- *Supermarket chain, Germany, 7 weeks*: enterprise integration architecture and phased legacy modernisation concept for this international German-owned retailer, addressing both HQ and distributed store systems.
- *Media venture, Sweden, 4 weeks*: performance-focused architecture proposal, prototyping and evaluation thereof for greenfield AWS/EC2-hosted video streaming platform. CloudHub, Amazon VPC, AWS, RESTful APIs, Spark/Scala.
- *Insurance company, London, 10 weeks*: development for a new cloud-hosted Salesforce-to-legacy data replication solution; designed and implemented the legacy-facing component exposing web services and encapsulating complex data consolidation and transformation. Salesforce, AWS-hosted iPaaS CloudHub, Spring Framework.

**1/2008 – 2/2014: Senior Integration Architect** EMEA, Professional Services, Guidewire Software (permanent employment through German subsidiary; initially: Integration Architect)

Customer-facing, project-centred delivery management, architecture, design, development and training for integrating next-generation core insurance systems into an organisations enterprise IT systems.

- Guidewire's *Technical Lead* and *integration team project manager* for the inception, pre-development and early development phases of a large-scale core insurance systems replacement project at an insurance carrier in London, UK.
- *Integration Architect*, Guidewire's *Technical Lead* and *integration team project manager* for the inception and development phases of a project replacing two claims systems of an insurance carrier in Milan, Italy.
- *Integration Architect*, Guidewire's *Technical Lead* and *integration team project manager* for a project implementing a billing system at an insurance company in Warwickshire, UK.
- Delivery of in-depth hands-on technical workshops and presentation of various technical aspects of Guidewire software products to a wide range of audiences in a *pre-sales* context.

- Development and delivery of *training courses* targeting developers and architects integrating with Guidewire software products.

**3/2007 – 12/2007: Senior Architect/Developer**, ObjectLab Financial Ltd, London (permanent)

**9/2006 – 2/2007: Enterprise Architect and Team Lead Architecture and Java Software Development**, ING Direct (ING-DiBa) Austria, Vienna (permanent)

**6/2005 – 5/2006: Enterprise Software Architect**, ShipServ Ltd, London (permanent)

**4/2005 – 5/2005: Technical Architect**, Enterprise Java Solution Centre, Capgemini UK, London (permanent)

**2/2001 – 2/2005: Consulting Java Architect**, Professional Services, Sun Microsystems Austria, Vienna (permanent)

**3/2000 – 1/2001: Software Architect**, Research Institute of Molecular Pathology, Vienna (fixed-term)

**7/1989 – 1/2001: Contractor, Software Developer, Software Architect, Bioinformatics Scientist, Post-doctoral Research Scientist, UNIX system and network administrator, Tutorial leader**

## Education and Certification

Please note that most professional certifications expire: given below is the date of the original certification; no claim is made that these certifications are still valid.

**Technology-neutral:** *TOGAF 9 Foundation* (10/2018)

*Certified ScrumMaster* (10/2008)

*PRINCE2 Foundation* project management certification (4/2003)

*Principles of Managing Iterative Development* (i.e., the Rational Unified Software Development Process), Rational University (11/2001)

**Integration:** *Associate Mule Developer* (3/2014), *Certified MuleSoft Developer* (7/2014), *Associate MuleSoft Connector Developer* for Mule ESB 3.5 (12/2014), *Integration and API Associate* (5/2017)

*MuleSoft Certified Platform Architect Level 1* (7/2018)

*Associate API Designer with RAML* (12/2014)

*MuleSoft Certified Trainer* (2/2015)

**Java EE:** *Oracle Certified Master Java EE 6 Enterprise Architect* (4/2013)

*Oracle Certified Expert Java EE 6 EJB Developer* (3/2013)

*Sun Certified Enterprise Architect (SCEA) for Java EE 5* (12/2007)

**Java and Software Development:** *Certified Kubernetes Application Developer (CKAD)* (5/2018)

*Certified Developer on Apache Spark* (7/2015)

*Guidewire Integration Certification* (1/2008), *Guidewire ClaimCenter 6.0 Technical (Integration) Certification* (3/2011)

*Sun Certified Java Programmer 1.1* (11/1998)

*Training and Research on Advanced Computing Systems at Edinburgh Parallel Computing Centre* (5/1995 – 7/1995)

**Languages:** *Cambridge Certificate of Proficiency in English (CPE)* (grade A: C2) (6/2004)

*CELI 3* upper intermediate (B2) Italian language certificate, University for Foreigners Perugia (6/2013)

**Academic:** Master of Science (MSc) in *Psychology* (Distinction), The Open University (2/2009 – 6/2012)

Master of Business Administration (*MBA*) (accredited by AMBA, AACSB and EFMD/EQUIS), The Open University Business School (5/2003 – 10/2006)  
Doctor rerum naturalium (*PhD*) *Bioinformatics*, University of Vienna (5/1994 – 1/1997)  
Magister rerum naturalium (equivalent to *BSc* plus *MSc*) *Biochemistry*, University of Vienna (10/1987 – 5/1994)

## Skills

**Languages:** German (native), English (mastery, C2), Italian (upper intermediate, B2)

**Knowledge domains:** biochemistry, bioinformatics, computational biophysics, applied statistics, data science, machine learning, natural language processing, mathematics, software engineering, general (P&C) insurance, project management

**Software development:** system integration, system and software architecture, service-oriented architecture (SOA) and design incl. microservices and RESTful design, design patterns for distributed and concurrent software, distributed and parallel computing, object-oriented analysis and design (OOA&D), relational database design

object-oriented programming (OOP), functional programming (FP), object-relational mapping (ORM)

test-driven development (TDD), continuous integration (CI), continuous delivery

Scrum, Agile, Rational Unified Process (RUP)

Anypoint Platform,, AWS (EC2, VPC, ELB), Kubernetes, Docker

Java EE, Akka, Apache Spark, Spring Boot, Spring, Mule ESB/runtime, Guidewire

JBoss, Tomcat, GlassFish, WebSphere, WebLogic

Oracle, MySQL, MSSQL Server, IBM DB2

Scala, Java, Gosu, Python, R, Matlab/Octave, C++, C, Fortran, Unix Shell

networking concepts

## Publications and Public Presentations

**most recently:** *Advanced Security Implementation on Mule 4 and Anypoint Platform*, presentation at MuleSoft Summits in Amsterdam and London on 22 and 23 May 2018.

<http://www.gerald-loeffler.net/download/advanced-security-impl-2018-05-23.pdf>

**32 others, with various co-authors:** “Fault-tolerant REST API Invocations in an Application Network”, “Big Data Semantic Fingerprinting”, “High-Level Concurrency: Akka Actors and Java EE 7 EJBs”, “Contemporary Concurrency Comparison”, “Selected Topics in Java Web Application Development”, “Contemporary Application Integration: ESBs and SCA”, “Mule and Message-Based Integration - Using an ESB”, “Mule as an ESB-like Integration Frontend to Java EE Applications”, “Enterprise Java: central concepts in Java EE 5”, “Developing Java EE 5.0 applications with EJB 3.0 and JSF”, “J2EE: Introduction, Practice and Software Architecture”, “An Evaluation of Popular Java Object/Relational Mapping Tools”, “J2EE: Introduction and Practice”, “Java in Space - JavaSpaces”, “Building Web Applications in Java - Foundation and Best Practices”, “Enterprise Messaging Architectures with JMS and XML”, “Java Message Service”, “Using Message Driven Beans”, “JMIMS - the Java Microarray Information Management System”, “Automated annotation of GPI anchor sites: case study *C. elegans*”, “CDNA microarray gene expression analysis of B-cell chronic lymphocytic leukemia proposes potential new prognostic markers involved in lymphocyte trafficking”, “BioSymphony Beans: Software Components and Data Models for Bioinformatics”, “Poisson-Boltzmann Calculations vs. Molec-

ular Dynamics Simulations for Calculating the Electrostatic Potential of a Solvated Peptide”, “A Multithreaded Java Framework for Solving Linear Elliptic Partial Differential Equations in 3D”, “Calculation of the Dielectric Properties of a Protein and its Solvent: Theorie and a Case Study”, “The Frequency-Dependent Conductivity of a Saturated Solution of ZnBr<sub>2</sub> in Water: A Molecular Dynamics Simulation”, “Parallel Biomolecular Simulation: Theory, Algorithms and Implementation”, “Parallel Biomolecular Simulation: An Overview and Analysis of Important Algorithms”, “Static and Dynamic Structural Analysis of a Saturated Solution of ZnBr<sub>2</sub> in Water: Anomalous X-Ray Diffraction and Molecular Dynamics Simulations”, “Molecular Dynamics of Solvated Proteins on the Cray T3D: Algorithms, Implementation, Benchmarks and Results”, “Computer Simulation as a Tool to Analyze Neutron Scattering Experiments: Water at Supercritical Temperatures”, “Automatic Analysis of <sup>13</sup>C-NMR-Spektra of Mixtures”