

Curriculum vitae of Michael Rausch

Personal

Michael Rausch
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year of birth: 1970
nationality: german
languages:
english (fluent),
french (basic knowledge),
german (native speaker)

Education

1991 to 1996 **Universität Koblenz-Landau, Koblenz**

- Computer science, specializing in business information systems

until 1990 **Dreikönigsgymnasium, Köln**

- Abitur, majors in mathematics and physics

Focus

Competencies

- Trading applications, financial markets, front-to-back office
- Infrastructure for mission-critical applications
- Campus and enterprise networks, storage area networks

Orientation

- Business analysis, Technical analysis, Consulting, Implementation
- Application support and development
- Technical project lead / sub project lead

Sectors

- Banking: investment banking, trading, commercial&retail banking
- IT and telcos: IT service providers, ISPs, carriers

Knowledge

Murex

- Cross functional analysis (FO, risk/middle office, BO)
- Optimization
- Reporting (Mreport and Datamart), Risk matrices
- Data model
- MDCS, RTI, MDRS, market data import/export in general
- Simulation, P&L analysis, simulation viewer
- e-Tradepad (notepads and strategies)

- Structured Trade Builder STB / patterns / layouts / typologies, STB indexation
- OLK servers and import sessions
- MxML (import/export interfaces and workflows, data dictionary, templates, post-trade workflows)
- Confirmations (via MxML and tickets in the dealing sheet decision tree)
- STP, validation templates
- UDFs; consistency, shell, fee rules
- Payments
- Accounting
- Auditing (esp. those not covered by standard audit means)
- Housekeeping (netting, purges)
- Master data (audit, maintenance, interfaces) for instruments, generators, counterparts, SI
- System architecture, environment management (MxG2000, MX.3)
- EoD control (processing scripts, report batches, scheduling)
- Automation of the system
- Performance tuning for reports/datamart feeders, database server and tables/indices, OS
- Migrations and releases (2.9 to 2.10, 2.10 to 2.11, 3.1.x)
- Merger of Murex installations
- LiveBook (Simulation server)
- VaR Value-at-risk module
- Basic knowledge:
 - Murex limit controller MLC
 - Pretrade workflows, STP rights templates, One stop processing OSP
 - RTBS
 - Custom MACS/Python payoffs

Financial products

- Money market: repo, lending, call money, interest rate futures/options, loan/deposit, risky loans
- FX: spot/forward, outright, currency swaps
- FXO: options up to 1st generation exotic options
- Capital market: bonds, SSD, ABS, CDOs and CLNs, structured bonds, bond futures and options
- Interest rate derivatives: swaps (plain vanilla and exotic), asset swaps, CMS, spreads, FRAs, cap/floors, structures
- Credit derivatives: default swaps, first/nth default baskets, total return swaps
- Equities: shares, indices, convertibles, futures, options (listed and OTC)
- Basic knowledge: 2nd generation exotics, commodities (base metals, PM and energy), commodity derivatives (PMO, energy futures/options/swaps), inflation swaps/bonds

Exchange connectivity/trading systems/market data systems

- Murex MxG2000 and MX.3
- Xetra, Eurex, Xontro Order
- RTD, Front Arena, Swiskey
- Reuters (Triarch), Bloomberg, FAME
- Markitwire
- Proprietary trading systems (in-house developments)

Databases/middleware/web servers/grid/misc.

- Sybase ASE, Sybase Replication Server, Oracle, MS SQL-Server, proprietary DBMS
- MQ Series, Connect Direct
- Websphere (Advanced Server), JBoss, ColdFusion
- Apache
- Tivoli Workload Scheduler/Maestro
- UC4
- Platform Symphony

Programming/scripting languages

- Perl
- SQL (ANSI, T-SQL, PL/SQL)
- Shell (sh,csh,bash,ksh)
- XSLT, XPath
- C/C++
- Java
- Javascript (incl. DOM/DHTML/CSS)
- Lisp, Pascal, misc. assembly languages

Operating systems/OS add-ons

- Solaris (up to Solaris 10, SunOS since 4.0.2 :), Linux, AIX, other Unix flavors
- Windows NT 4.0, 2000, XP, 2003, 7
- Netware, Veritas Cluster Server, Veritas Volume Manager, Veritas Filesystem

Storage

- SAN/DAS/NAS; Fibre Channel, SCSI, ESCON, iSCSI, NFS, CIFS, SRDF, PPRC
- EMC, IBM, Sun, Brocade, Qlogic, Gadzoox, Cisco, Auspex, Storagetek, Veritas

Network

- Routers, Switches, Firewalls, WDM, Frame Relay, ATM, Load balancers
- Cisco (across full product family), Checkpoint, Netscreen, Watchguard, Newbridge, HP

Server hardware

- Sun, Compaq, HP, Fujitsu-Siemens, misc. others

Projects

January 2014 to September 2014 Cooperative bank, Frankfurt

- Project: Participation in and advisory to the architecture board for the migration to Mx.3
- Scope:
 - Advisory role in the workshops comprising client, vendor, system integrator
 - Participation and quality assurance of the high level business concept and IT system architecture for the new Mx.3 system
 - Participation and quality assurance of the design specifications for the implementation of EoD, datamart/reporting framework, pre-trade and post-trade work flows and MLC
 - Know-how transfer to permanent staff of Mx.3 functionality and best practises
 - Participation in the proof-of-concept for the implementation of datamart and pre/post trade workflows
 - Quality assurance of the concepts to reduce/aggregate/migrate the positions and cleanup of static data
- Systems: Applications: Murex MxG2000 (2.11.43), Mx.3 (3.1.x) across all modules
Database: Sybase ASE 15.7

October 2013 to March 2014 (p/t) State bank, Frankfurt/Offenbach

- Project: Performance optimization for the EMIR implementation
- Scope:
 - Analysis of the developments for creation of transaction register notifications
 - Optimization of the relevant MxML workflows, speed-up by a factor of 75
 - Misc further tasks in the field of market data
- Systems: Applications: Murex MxG2000 (2.11.43))
Database: Sybase ASE 15.0

June 2013 (p/t) Investment bank, Munich

- Project: Performance analysis and optimization recommendations
- Scope:
 - Analysis of performance problems in the eod-of-day processing from technical, functional and organisational viewpoints
 - Recommendations for optimizations in the process control of the EoD as well as particular optimizations in the database server and the Murex environment
- Systems: Applications: Murex MX.3 (3.1.28)
Database: Sybase ASE 15.0

April 2012 to October 2012 (p/t) Cooperative bank, Vienna

- Project: Advisor on MX.3 greenfield implementation
- Scope:
 - Technical audit of the implemented Murex infrastructure
 - Comprehensive advisory on the efficient handling of manual deal migration from Kondor resp. Summit to Murex for exotics products, QA for the automated mass migration of plain vanilla deals
 - Recommendations for P&L regression testing and functional QA of the migration
- Systems: Applications: Murex MX.3 (3.1.25)

November 2011 to December 2013 Cooperative bank, Frankfurt

- Project: Use cases for the Murex LiveBook; support of credit model development and introduction of multi-curve capabilities; negative interest rate scenarios
- Scope:
 - Concept and implementation of further use cases for the LiveBook service from the bond/repo trading, cash management/treasury and financial engineering business lines
 - Extension of the LiveBook service infrastructure
 - Support of the development of credit models (single/multi callable risky loans, credit options), pricing/revaluation of credit structures
 - Implementation of automatic model validation for multi curve capabilities on interest rate derivatives
 - Extension of proprietary Flex libraries
 - Automatic stress scenario analysis for the financial engineering desk
 - Design, implementation and further development of a mass test trade input facility across all asset classes
 - Analysis and implementation of measure to cope with strikes ≤ 0.0 and negative interest rates markets; market data supply and conversion of normal distributed volatilities (cf/swop) and further integration of (Black Normal) models
 - input helpers in STB/epad for rates/fx structures, TARFs, bond allocations
 - Preparation and implementation guidance of performance optimization based on SLA measurements
 - Curve maintenance and revaluation changes in multi-curve setup (CSA, OIS discounting), enhanced Murex curve models and curve interpolations
 - Further development of the transparent arbitrary setting layer on MX session level
 - Development of an automated (mass) test deal capture and documentation tool across all products
 - misc. further tasks
- Systems: Applications: Murex MxG2000 (2.11.43; e-Tradepad/STB, LiveBook, VaR)

October 2010 to October 2011 Cooperative bank, Frankfurt

- Project: Introduction of new Murex release 2.11.43, Structuring of FX/FXO/IRD hybrid products, Introduction of Markov functional models
- Scope:
 - Introduction of Markov functional models for IRD (via Flex API)
 - Front office regression tests and analysis (P&L, sensitivities) for the introduction of MxG2000 2.11.43; focus on FX/FXO, MM, CRD, structured bonds and foreign branches (all asset classes)
 - New implementation of total return swap on ABS
 - Building of credit and holding structures using STB indexation
 - Building of structured FX products using STB (strategies, patterns)
 - Support of the new product process NPP (implementation and models)
 - Support with the development and integration of FX flex models
 - Customization of new functionality „light simulation“
 - Planning and implementation of LiveBook (simulation server), customizing and implementation of use cases; development and integration of GUI via API
 - Unification and cleanup of used simulation views (delta ladders, etc.)
 - Misc. reporting tasks
 - Performance tuning for LCH Swapclear DMP firedrill (7h total runtime) and MarkitWire interface
- Systems: Applications: Murex MxG2000 (2.11.43; E-Tradepad/STB, Simulation server)

January 2010 to September 2010 Cooperative bank, Vienna

- Project: Introduction of Murex as front-to-back system for complex derivatives
- Scope:
 - Products: FXO, IRD, structured bonds, CRD, EQD, COM, commodity derivatives, cross asset structures; plain vanilla, exotics, 2nd generation exotics
 - Bridging the gap between infrastructure/technical and business

- Introduction MACS models and Python in MxGrid
- Support of the introduction of CPPI models (via Flex API) in the grid
- Market data maintenance/housekeeping
- Migrations (3.1.18, 3.1.19, 3.1.20)
- Environment management
- Optimizing database performance and import/export
- Build up and transfer know-how in the engineering/solutions and technical application management team
- Architecture and QA for infrastructure and engineering
- Systems:
 - Applikations: Murex MX.3 (3.1.18 - 3.1.20), MLC (1.5.4)
 - MACS/Python, MxGrid, Platform Symphony
 - Database: Oracle 10g
 - Others: UC4, Webmethods, DataStage TX

January 2010 to December 2010 (p/t) Cooperative bank, Frankfurt/New York/Singapore

- Project: Introduction of Murex as the backoffice system for the bank's foreign branches
- Scope:
 - Continuation of the below mentioned project
 - Accounting interfaces to SAP FI and SAP BCA, local regulatory reporting (Abacus, Lombard Risk STB)
 - German HBG amendments (BilMoG)
 - On-site support during go-live in New York and Singapore
- Systems:
 - Applikations: Murex MxG2000 (Accounting module, MxML exchange, Mreport, Datamart)

December 2009 to March 2010 (p/t) Cooperative bank, Frankfurt

- Project: Amendments in regulatory reporting for interest and balance statistics of (structured) bearer bonds and CBOs
- Scope:
 - Amendment of Abacus delivery from Murex
 - Products: Structured bearer bonds (multi callable, range accruals, memo/ratchets, zero coupon, SPV/CBO)
- Systems:
 - Application: Murex MxG2000 (Mreport)

July 2008 to December 2009 Cooperative bank, Frankfurt/London/Hong Kong

- Project: Introduction of Murex as the backoffice system for foreign branches
- Scope:
 - Sub-project: Accounting and financial/legal reporting
 - Products: Bonds, CD/CP, FX/MM, FXO, IR futures, swaps, swaptions, caps/floors/collars, credit derivatives, repo/lending, SSD
 - Assistance with the preparation for business specification and data processing concepts for the Murex accounting module
 - Account mapping and implementation of accounting rules in Murex
 - Functional and integration tests of the accounting module and the implemented rules
 - Support during the testing and go-live phase
 - Assistance with the preparation for business specification and dp concepts for interfaces to downstream systems (SAP FI, SAP BCA, ADD, Abacus, STB)
 - Revaluation reports, balance sheet annotations, general ledger/sub ledger reconciliation
 - Amendment/creation of interfaces
 - Functional and integration tests for these interfaces
 - Other assistance in the representation of the deal lifecycle in Murex
 - End user trainings
 - On-site support during go-live phase in London and Hong Kong
- Systems:
 - Applications: Murex MxG2000 (accounting module, MxML exchange, Mreport, Datamart)
 - Others: Jira, Clearcase

February 2008 to July 2008 Bank, Berlin

- Project: Murex housekeeping
- Scope:
 - Products: EQ/EQD, FX/MM, IR/IRD
 - Concept, test and implementation of the first deal purge in the system
 - Market data purge
 - Further performance optimizations
 - Preparations for the introduction of the VaR module
- Systems: Applications: Murex MxG2000 (2.11.30)

January 2008 to July 2008 (p/t) Cooperative bank, Frankfurt

- Project: Migration to MxG2000 2.11.35
- Scope:
 - Regression tests for interfaces
 - Amendments in reports for new release
 - Misc. changes in reports
- Systems: Applications: Murex MxG2000 (2.11.32, 2.11.35), Mreport

December 2006 to December 2007 Cooperative bank, Frankfurt

- Project: Migration to MxG2000 2.11.32
- Scope:
 - Products: IRD, FX/MM, Credit derivatives
 - Focus: new repo module and SSD netting at settlement date
 - Regression tests for interfaces
 - Amendments for data model changes and new repo module
 - Technical and functional unit tests
 - Case tracking with software vendor
 - Report stabilization and optimization
 - Automation of integration and patch tests
 - Training for the accounting module
 - etc.
- Systems: Applications: Murex MxG2000 (2.11.21, 2.11.32), Mreport, Datamart
Others: Clearcase

August 2004 to December 2006 State bank, Offenbach

- Project: Application support Murex, Technical analyst
- Scope:
 - Products: IRD, FX/MM, Equities, Credit derivatives
 - Modules: FO, BO (Accounting, Payments), MxML exchange, Reporting
 - Operation and maintenance of all Murex environments (production, test/development, integration)
 - 2nd & 3rd level support of FO, BO, risk control and accounting users
 - Support, extension and documentation of the end-of-day processes
 - Amendments and development of reports (Mreport) and dynamic creations
 - Performance optimization and load-balancing
 - Restructuring and creation of new interfaces to and from Murex, report writing
 - Cleanups & purges (OLK, trades, accounting entries), housekeeping in general
 - Migration from MxG2000 2.10 to 2.11 (technical project lead, responsible for the development of the migration procedure)
 - Merger of two Murex installations (trades/positions, stored P&L, market data, reports/batches/filters)
 - Special tasks in projects:
 - Detailed static data auditing
 - Interface for AVP based bookings to Midas
 - Addition of other real time data sources (Sonaris)
 - Static data maintenance (counterparties, portfolios, bond instruments)
 - Automated documentation of Mreport extractions und reports, preparations for Actuate, Datamart feeders

- Restructuring and optimizing of report batches for the EoD
- Creation of deal confirmations via MxML
- Interfaces to Murex (OLK and MxML trade import)
- etc.
- Systems: SunFire 6800, V880, Storedge 6320, A5200
Databases: Sybase ASE 12.0 & 12.5, 64 bit
Application: Murex MxG2000 (2.10 and 2.11), MxML, OLK
Others: Veritas Cluster Server, Tivoli Workload Scheduler

November 2003 to August 2004 State bank and local savings bank, Frankfurt

- Project: Unix/Sybase operations, technical support for the application support
- Scope:
 - Build-up of a new production environment for Murex MxG2000 (hardware: 2*SF6800, 2*SE6320, Veritas cluster server) with separated data centers 10km apart
 - Migration of an existing environment from London to Frankfurt
 - Build-up of development, test and integration/UAT environments (4*V880, 3*E3000)
 - Migration of Murex G2000 2.2.9 to 2.2.10
 - Database reorgs and purges
 - Cleanup of a steadily grown Murex environment (scripte, interfaces, reports)
 - Optimizing of database servers (caches, pools, device layout, general performance tuning)
 - Planning and implementing of an operation platform for Murex
 - Planning and implementing of an documentation platform based on Twiki
 - Planning and implementing of an system management platform based on Nagios
 - Securing the Murex environment (hardening, logging/auditing)
 - Planning and implementing of a system for ensuring data integrity (automatic version control and historization as well as policy enforcement and change management)
 - Automation and monitoring of interfaces and EoD by controlling it via TWS
 - Daily business Unix: operations of servers (Solaris 8 und VCS) and storage
 - Daily business Sybase DBA: support of several databases (9 data server, >60 databases)
 - Daily business Murex: Maintenance of the environments, support with the interfaces, operations of the realtime feeds
 - Backup support role with a second Murex environment
- Systems: SunFire 6800, V880, Storedge 6320, A5200
Databases: Sybase ASE 12.0 & 12.5, 64 bit
Application: Murex G2000 (2.2.10), interfaces via MxML, OLK, ODBC and extracts/reports
Others: Veritas Cluster Server, Tivoli Workload Scheduler

March 2003 to November 2003 IT service provider bank/insurance, Frankfurt

- Project: network documentation and knowledge management

October 2000 bis December 2002 Bank (Commercial Banking), Frankfurt

- Project: Support of a Unix infrastructure team, misc. projects within the line organisation:
- Scope:
 - Setup and support of a Xetra/Xontro-Order order routing system
 - Production support for Eurex order routing
 - Planning, setup and support of RTD and Front Arena
 - Market data/master data maintenance
 - Design of a Websphere operations architecture
 - Process definition for central storage management
 - Implementation and support of a campus-wide SAN
 - Planning and implementation of a SAN extension

- Migration of storage systems
- Planning, implementation and support of a tape backup solution
- later consolidation of the backup environment
- Planning and realisations of moves for server and data center consolidations
- Evaluation of monitoring and management systems
- Consulting, setup and support of systems and applications
- Planning and extension of Veritas clusters
- Operations (daily business)

April 2001 **Business consulting/bank, Frankfurt**

- Project: testbed for a private banking portal

June 2000 to September 2000 **Carrier/telco, Frankfurt**

- Project: network support (3rd level), system engineering

Februar 1998 to April 2000 **Investment bank, Frankfurt**

- Project: Consulting to the infrastructure planning team, production support (network planning and operations), network as the key integration factor

Januar 1998 **Industry association, Frankfurt**

- Project: Planning and reference implementation of a VPN

Dezember 1997 to Januar 1998 **Retail bank, Frankfurt**

- Project: Network support

July 1997 to August 1997 **Advertising agency, Düsseldorf**

- Project: Migration and expansion of the existing network and server infrastructure

June 1997 to July 1997 **Advertising agency, Düsseldorf**

- Project: IT support

February 1997 to April 1997 **Service provider/computer manufacturer, Bonn**

- Project: rollout of 67 "Schulen ans Netz" systems in northern germany

October 1996 to February 1998 **several clients in the Mittelrhein and Rhein/Main area**

- Project: networks (LAN, internet)

February 1996 to October 1996 **Publishing house, Weilburg (permanent)**

- Project: planning, installation and support of an internet service and content provider

1991 to 1995 **University of Koblenz, plastics industry, consulting engineers**

- Project: misc. jobs during the university studies

until 1991

- Programming and development lead of a computer game
- Program development and porting of software for boat propeller modelling
- Initial spark for the start of a software department within a manufacturing company
- Meta programming of four- and six-axis CNC carving machines