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Marton Mayer – Systems Engineer

## Summary

* Started his IT professional career as a traditional SysAdmin and transitioned to being a DevOps Engineer with Cloud Computing and PaaS specializations and fulfilled management roles as well
* Keen to move towards advanced DevOps topics and widen his expertise in Data Science Engineering
* Particularly interested in Deep Learning and generic AI

Skills and Awards:

* Agile: Kanban, Scrum, Scrumban, Continuous Integration (GitFlow)
* Application Servers and Middleware: Apache Tomcat, JBoss, WildFly
* Application Support Tools: Dynatrace, Dynatrace Application Monitoring, HP Service Manager, Logstash, Nagios, Prometheus, Zabbix; Ansible; Slack;
* AWS: AWS Glacier Cloud Storage, AWS Lambda, Amazon DynamoDB, Amazon EC2 Container Service, Amazon Elastic Compute Cloud (EC2), Amazon Elastic File System, Amazon Relational Database Service (RDS), Amazon Route 53, Amazon Simple Email Service (SES), Amazon Simple Notification Service (SNS), Amazon Simple Storage Service (S3), Amazon Virtual Private Cloud (VPC), Elastic Load Balancing
* Azure: Azure Cloud Services, Compute, SQL Azure, Virtual networks
* Google Cloud Platform: Cloud Virtual Network, Compute Engine, Container Engine, Google Cloud DNS, Google Cloud SQL, Google Cloud Storage
* Other Cloud: Cloud/Grid computing, Terraform, IaaS (OpenStack, VMware vCloud Director), PaaS (OpenShift), Citrix XenServer, Docker Compose, Docker Swarm, Google Cloud Platform, openVPN
* Virtualization Tools: Docker, Kubernetes, Linux Containers Technology (LXC), Vagrant
* Big Data Architecture and Domain Areas: Data Storage, Disaster Recovery, Integration, Operation, Presale Support, Security, Deep Learning, Reinforcement Learning, Unsupervised Learning, Supervised Learning (Regression)
* Big Data: Elasticsearch, Jupyter Notebooks, Grafana, Keras, TensorFlow, MongoDB, Redis
* Building Tools: Atlassian Bamboo, CMake, Jenkins
* Programming and SCripting: C (including Ansi C), Golang/Go Language, Java (Scala); AWK, Bash, Ruby; Python, pip, UNIX shell scripting
* Information Security: AppArmor, Linux Security Modules
* Installation Packages: Debian Packaging System, YUM
* Logging: Elastic Stack, Rsyslog
* Network technologies and services: ARP, RARP, ICMP, BOOTP, TCP, UDP, SCTP, DHCP, DNS (BIND), Iptables, NAT, PuTTY, Wireshark, tcpdump
* Operating Systems: CoreOS, Linux
* Project Management/Defect Tracking Systems: JIRA
* Software Construction Techniques: Continuous Delivery, Continuous Deployment, Continuous Integration
* Support: IT Operations Management, Software Maintenance, Systems Engineering, Information Technology Infrastructure Library (ITIL)
* Version Control Systems: Bitbucket, Git, GitLab, Stash.

## Work Experience

**Jul-2018 – Present** – Systems Engineer, EPAM Systems, <https://www.epam.com/>

**May-2017 – Jul-2018** - T-Systems International

**Project:** OpenShift@SHE - Build and operate OpenShift clusters in Daimler's Secure Hosted Environment.

**Customer:** Daimler AG

**Team Size:** DevOps: 3, Operations: 6, Management: 3, EFK: 2, Network: 5

**Project Role:** DevOps Engineer / Operations Manager

**Tasks performed:**

* Was promoted from the basic platform operations to be a delegated DevOps Engineer for the platform solution provided for Daimler. Coordinated the whole team as the Operations Manager. Set up all the related operational processes. Dealt with vendor and customer communication
* Built multitier OpenShift platforms on VMWare ESXi with separate load balancer tier with nginx reverse proxies, physical PostgreSQL cluster, separate ElasticSearch cluster and hybrid storage solutions in Daimler's Secure Hosted Environment for their development teams' testing, integration and production needs
* Managed operations duties while also onboarding the newcomer operations team members. Built an operations sandbox environment for internal testing purposes. Created a transition plan to migrate all affected customers data, processes, deployments and applications between clusters
* Helped the EFK Team with testing Elastic X-Pack's machine learning features
* Automated everyday operational tasks like creating Persistent Volumes for OpenShift on NFS, enabled user self-management for customers, set up an automated way to handle firewall requests sent to the network team by operations
* Improved internal monitoring solutions (Nagios, Foglight). Tested Dynatrace to give customers the ability to monitor their applications to their taste. Set up Prometheus + Grafana monitoring for customers and helped them configure application monitoring
* Set up a full CI/CD pipeline for customers with Jenkins to help them accelerate application deployments. Held OpenShift trainings for Daimler's developer teams to help them utilize the capabilities and features of the platform, especially after platform upgrades
* Created platform upgrade procedures for operations team

**Environment:** PostgreSQL, MySQL, HP Service Manager 9.50, SecuRemote, VMWare ESXi, JIRA, Confluence, PuTTY, Red Hat Enterprise Linux 7, Red Hat OpenShift 3.4 - 3.9, GlusterFS, NFS, CNS, F5 Load balancer, Bluecoat proxy, Nginx reverse proxies, named, Red Hat SSO, Ansible

**Project:** Data Analytics Squad

**Customer:** T-Systems International

**Team Size:** 10 members

**Project Role:** Application Administrator / Deep Learning Specialist

**Tasks performed:**

* Was responsible for the general documentation requirements to have the developed tools handed over to the operations team. Additionally developed use cases for customers with TensorFlow Deep Learning
* Got familiar with the Spotify Squad model and the organizational processes while working in that structure. Generated models with TensorFlow/Keras taught on customer data according to their needs. Provided consultancy and feedback sessions for customer
* Saved trained models as Docker images for reusability. Supported customer with the implementation of these models to their applications. Helped other squad members with the development and testing of a Hadoop stack for OpenShift. Developed Apache Kafka for OpenShift
* Provisioned overall squad documentation and created a template that had to be filled with each application developed. Managed and provisioned application handovers to the operations team

**Environment:** PostgreSQL, MySQL, JIRA, Confluence, GitLab, Jenkins, Python and Deep Learning libraries (NumPy, Keras, TensorFlow, matplotlib, Pandas), Git, Jenkins, Docker, Docker Registry

**Project:** AppAgile: T-Systems rebranded OpenShift with additional operations support

**Customer:** Various customers like BMW, Smart Voice Hub, Tchibo, Qivicon, BDK, Tel-IT

**Team Size:** Operations Team: 20, Engineering Team: 15, Developer Team: 30, Management Team: 30

**Project Role:** Application Administrator / Platform Operations / DevOps

**Tasks performed:**

* Worked in platform operations as a DevOps member helping out the core operations team. Used ITIL principles in our daily tasks and also worked in smaller teams that used Scrum methodology. Built and operated OpenShift clusters for customers. Worked according to ITIL guidelines
* Automated the daily operational tasks. Supported customers with application development. Solved platform side incidents and completed platform side changes. Enhanced Nagios platform monitoring with necessary health checks. Involved vendor in problem solving whenever necessary
* Worked closely with engineering and internal development teams on platform automatic scaling and incoming feature requests. Improved and reviewed the internal documentations regularly. Was a key initial member of the Managed Middleware team from the platform operations

**Environment:** PostgreSQL, MySQL, HP Service Manager 9.50, JIRA, Confluence, SecuRemote, PuTTY, VMWare vCloud, Azure, OTC, Red Hat Enterprise Linux 7, Red Hat OpenShift 3.4 - 3.6, GlusterFS, NFS, CNS, cloud-provided storage solutions, cloud-provided DNS, Firewalls, Gateways, VPN solutions, LDAP, Red Hat SSO, Ansible

**Aug-2016 - May-2017** - System Administrator, AENSys Informatics Ltd.

**Project:** AMSmart - Home automation and security using IoT relevant protocols and features

**Team Size:** Developer Team: 25, SysAdmin Team: 3, Management Team: 3

* Was responsible for all office software functionality, development and production servers.
* Created and managed AWS EC2 instance servers both for development and for production
* Created and managed XenServer VMs for the developers to test the applications on. Created Vagrantfiles for quick test deployment purposes for developers. Built a Docker Swarm capable test environment for application testing. Managed the weekly server maintenance window
* Set up Ansible automation for all servers to avoid manual server maintenances. Enhanced Zabbix monitoring. Enhanced alerting system. Reviewed and improved documentation for the SysAdmin team regularly
* Helped developers with their workflow, developed small scripts and solutions to let them view logs on the fly without the need of additional SysAdmin support. Designed and created the whole backup solution for all servers using AWS S3
* Designed and created infrastructure components in AWS. Provisioned Route53, IAM, SES and SNS in AWS. Created a simple webpage for internal SysAdmin use to check monitoring events, alerting, certification expiry dates and additional useful content
* Worked with the developers to migrate all the applications to a microservices-based setting. Debugged IoT equipment on the hardware level as well as on software level. Was accountable for all office equipment, including workstations, routers, network cabling, and security systems

**Environment:** PostgreSQL, MySQL, MongoDB, AWS DynamoDB, Physical servers and equipment like switches and routers, home automation and security equipment; Citrix XenServer, AWS, Full Atlassian stack, Ubuntu Server 14.04, CoreOS, Alpine Linux, Docker, Terraform, Rancher, Ansible, Vagrant, Apache HTTP Server, Tomcat, JBoss, Wildfly, Zentyal, Openfire server, Windows Server 2008 R2

**Jun-2014 - Present** - Freelancer Developer / DevOPs

**Project:** Personal projects - Stock exchange prediction using deep learning

**Team Size:** up to 5 members

* Was very interested in Deep Learning and in general AI and wanted to learn the overall principles of using such technologies
* Created a high frequency stock trading bot using LSTM models. Created a long term prediction producing RNN
* Experimented in tuning a reinforcement-learning model to have a higher precision prediction than plain RNN and also connecting it to a NLP-fueled Twitter/reddit bot to achieve the desired prediction success rate. Experimented with genetic algorithms for higher precision
* Automated dynamic Google Cloud deployment and scaling with Terraform and Ansible, deep learning with Keras/TensorFlow, model exporting and API usage with the help of TensorFlow serving

**Environment:** Mnesia, PostgreSQL, MongoDB, MySQL, JIRA, Bitbucket, GitLab, Google Cloud, Python and its deep learning related libraries (TensorFlow, Keras, NumPy, Pandas, matplotlib), Google Cloud Compute, Google Cloud ML Engine, Ansible, Terraform

## Education

**Bachelor’s Degree** in Computer Engineering, University of Szeged

* **Specialty:** UNIX/Linux Server Infrastructures and Cloud Computing

**Bachelor’s Degree** in Physics, University of Szeged

* **Specialty:** Theoretical Physics