Mattias **Giese**

Solution Architect · Systems Engineer · Teacher

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Summary

Current Solution Architect at B1 Systems GmbH, a company focusing on consulting, training and software development based on Linux and Free/Open Source Software with countless projects in middle-sized to large Enterprises and a multitude of industries like Automobile manufacturers, media agencies, banks, insurance, financial service providers and also software companies. Enthusiastic nerd that loves Linux and all the freedom that comes with it, is obsessed with automation and enjoys working with config management systems and APIs in order to glue systems together in order to create awesome infrastructure and processes that people can rely on. Loves to learn about new technologies and tools and likes to spread the knowledge about them.

Skills

Work Experience

Key projects

Implementation of a streamlined automatic deployment solution for RHEL/CentOS 7 and Windows Server 2012 R2/2016

Retail chain

- Creation of a completely new deployment platform based on the autoinstallation frameworks of Windows Server 2012 R2/2016 (unattend.xml/Windows PE) and RedHat Enterprise Linux/CentOS (Kickstart) based on Katello/Foreman for completely unattend provisioning.
- Windows Deployment was done using a custom Windows PE image, bypassing the regular installation mechanism to better automate the deployment process and for tighter integration into Foreman and its feature set.
- Development of a Foreman smart-proxy plugin (Ruby) in order to orchestrate DHCP/DNS infrastructure (Bluecat DHCP/DNS Server/IPAM)
- Seemless installation of new bare metal as well as virtual machines hosted on VMWare vSphere.
- Automatic configuration of both platforms with the help of Puppet 4.x/5.x, including automatic Active Directory Joins and basic application deployment (chocolatey on Windows). Automatic integration with patch management systems (Katello for RHEL/CentOS) and WSUS for Windows Server platforms.
- Infrastructure landscape: several hundred to thousand machines with a multitude of different networks and DMZs
- Technologies used: Puppet 4.x/5.x, Foreman 1.13-1.15, Katello 3.x, Ruby 2.1, Kickstart, Windows PE scripting, Windows MDT, chocolatey, RHEL/CentOS 7.x, Windows Server 2012 R2/2016, Bluecat IPAM,DHCP/DNS Server, bash

Implementation of an automated patch process for RHEL 5-7 machines with complete audit/backlog

Financial services provider

- Being bound to security standards like PCI-DSS my company was approached by a german fincial service provider to help automate their patch procedures.
- Several tools had to be integrated/orchestrated: RedHat Satellite 5.x (Patch management tool), Atlassian Jira (ticketing system/audit), National Vulnerability Database (nvd.nist.gov).
- Creation of a bridge to nvd.nist.gov in order to better classify security patches from RedHat against the CVSS base score of the NVD because of PCI-DSS requirements
- Development of a bridge from Satellite into the ticketing system. The bridge automatically opens new tickets with specified subtasks (as demanded by the customer). The bridge automatically keeps track of the patching process, updates tickets as systems are getting patched and automatically closes each specific ticket as soon as patching a specific vulnerability is completed.
- Additionally an easy to use text-mode frontend had to be created for the systems engineer to initiate the patching itself.
- Upon conpletion of this project the overall time needed to manage the monthly patching process was reduced from roughly 2-3 days to around 5 minutes.
- Technologies used: RedHat Satellite 5.x and its APIs, Python 2.7, Atlassian Jira APIs, nvd.nist.gov XML-dumps, bash

Implementation of an automatic deployment system for Windows 7 and technical training resources based on Linux/Bittorrent

Provider of technical trainings

- The training provider i worked at needed a better process to deploy the training materials/virtual machines and configuration needed for new courses. As there are different courses with their own requirements each week, every workstation needed to be deployed at least once a week.
- To work around the limitations of Windows and its deployment process a new (at the time) feature of Windows was used: Direct booting of WMI-Files
- With the help of a custom Linux live system booted via PXE, a new Windows Image will deployed to the machine
- The live system obtains a list of needed resources for the next course from a central application (developed in PHP)
- Then the relevant courseware (with peer2peer download via bittorrent) is copied to the local machine. The usage of bittorrent is critical here because several Microsoft technical courses are huge in terms of filesize (VM Images, Setups, ISO Files)
- After the first boot, several VBScript and Powershell based scripts configure the machine in order to support the next weeks course. Group policies handle the generic configuration of the machines.
- Technologies used: Debian preseed/liveiso tools, bash, aria2c/bittorrent, Windows WMI Image format, VBS, Powershell, Active Directory Group Policies, PHP

Work history

B1 Systems GmbH

Vohburg, Germany

Solution Architect

May 2011 - PRESENT

- Delivering solutions for infrastructure automation and ease of administration in a variety of companies ranging from banks/insurance companies to automobile manufacturers and digital media agencies
- Conducting trainings in the field of configuration management and systems management technologies
- Giving talks about those topics at various conferences as well as writing articles in highly respected german subject literature
- Typical technologies used for projects include RedHat Enterprise Linux 5-7 (including Kickstart), SUSE Linux Enterprise 11+ (with AutoYaST), Debian/Ubuntu Linux (with preseed), Puppet (with PuppetDB, hiera, r10k, rspec-puppet, beaker/testkitchen), Ansible (with ansible-vault, dynamic inventories), Chef, Salt, bash, Docker (Machine, Compose, Swarm), Python 2/3, Ruby, RedHat Satellite/Spacewalk/SUSE Manager, vagrant, packer, libvirt/KVM/Xen/VMWare

signet GmbH

Kassel, Germany

System Administrator & Teacher

Oct. 2005 - Apr. 2011

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Honors & Awards

International

2017	**Finalist,** DEFCON 25th CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2014	**Finalist,** DEFCON 22nd CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2013	**Finalist,** DEFCON 21st CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2011	**Finalist,** DEFCON 19th CTF Hacking Competition World Final	*Las Vegas, U.S.A*
2012	**6th Place,** SECUINSIDE Hacking Competition World Final	*Seoul, S.Korea*

Domestic

2015	**3rd Place,** WITHCON Hacking Competition Final	*Seoul, S.Korea*
2013	**Silver Prize,** KISA HDCON Hacking Competition Final	*Seoul, S.Korea*

Presentation

6th CodeEngn (Reverse Engineering Conference)

Seoul, S.Korea

Presenter for <DEFCON 20th : The way to go to Las Vegas>

Jul. 2012

- Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

Writing

A Guide for Developers in Start-up

Facebook Page

Founder & Writer

Jan. 2015 - PRESENT

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

AhnLab

S.Korea

Undergraduate Student Reporter

Oct. 2012 - Jul. 2013

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

Program Committees

2016 **Problem Writer**, 2016 CODEGATE Hacking Competition World Final *S.Korea*
2013 **Organizer & Co-director**, 1st POSTECH Hackathon *S.Korea*

Education

Industrie und Handelskammer *Kassel, Germany*
Apprenticeship: Information Technology Systems Engineer/Systems integration *2009*

Max-Eyth-Schule *Kassel, Germany*
General university entrance qualification (information technology) *2005*