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Authors

Federico Chiarelli (federico.chiarelli@wavestone.com)

Vivien Devenyi (vivien.devenyi@wavestone.com)

Debora Di Giacomo (debora.digiacomio@wavestone.com)

Alessandro Zamboni (alessandro.zamboni@wavestone.com)

Eleonora Zoboli (eleonora.zoboli@wavestone.com)

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GERMANY

Executive summary

To date, Germany does not have an appointed central and federal entity for the development and supervision of open source software (OSS). The Federal Ministry of the Interior, Building and Community (BMI)¹ has, however, published a press release endorsing the use of OSS in 2019² promoting alternatives to specific software.

Discussions about OSS at date back already to 2012, marked by the publication of a Migration Guide by the Ministry of Internal Affairs. This publication detailed migration guidelines for the use of OSS in public administrations.³ However, Germany has not yet enacted legal provisions to ensure the use of OSS solutions at the federal government level.

Though the federal government is not actively promoting OSS initiatives, various local and regional administrations are taking steps towards installing OSS on workstations, databases, and server operators. When examining open source experiences at all territorial levels, it was found that several migrations to Linux had commenced in previous years, but they were halted in favour of using other non-OSS solutions. These migration halts were often attributed to software incompatibility, thus leading to an increase in operative costs. Two examples of this scenario are the Niedersachsen police force⁴ and the city of Freiburg⁵.

Actors

This section presents the policy makers who are active in digitalisation efforts and influence the status of open source in public sector, as well as the main strategic players that work together with the government at all levels to raise awareness on OSS. In Germany, there is no governmental body that is specifically responsible for OSS policies.

Policy makers

- Within the Federal Government, the Federal Ministry of the Interior, Building and Community (BMI)⁶ is responsible for modernising the state and government administrations. Open administration and open government fall under the domain of public services and administrative

¹ https://www.bmi.bund.de/EN/topics/administrative-reform/administrative-reform-node.html;jsessionid=5FEE6743F5A92B1599F08861242C58C1.1_cid287

² <https://www.bmi.bund.de/SharedDocs/pressemitteilungen/DE/2019/09/digitale-souveraenitaet-oeff-verwltg.html>

³ http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/migrationsleitfaden_4_0_rechtliche_aspekte_download.pdf?__blob=publicationFile

⁴ <https://www.heise.de/newsticker/meldung/Polizei-Niedersachsen-will-von-Linux-zurueck-zu-Microsoft-2440829.html>

⁵ <https://joinup.ec.europa.eu/news/lacking-support-other-ad>

⁶ https://www.bmi.bund.de/EN/topics/administrative-reform/administrative-reform-node.html;jsessionid=5FEE6743F5A92B1599F08861242C58C1.1_cid287

reform. The BMI published a press release endorsing the use of OSS in 2019.⁷ It promotes alternatives to specific software. However, it is not clearly stated whether the Ministry will be responsible for future OSS policies.

- The Federal Office for Information Security (BSI)⁸, the national cyber security authority, shapes information security in digitisation through prevention, detection, and reaction for government, business, and society. The BSI has published its strategic position on the use of OSS, highlighting the technical and strategic benefits.⁹
- The Competence Center Open Source Software (CC OSS)¹⁰ within the Information Technology Center Bund (*ITZBund*) aims to promote the use of OSS in the federal administration.

Strategic player

- Open Source Business Alliance e.V. (OSB Alliance)¹¹ is a not-for-profit community of public administrations, SMEs, and private companies that focuses on open source matters in Germany and Europe. The OSB Alliance regularly organises and promotes events such as conferences, webinars, and meetings. It also sends out a newsletter with the latest updates on the topic of OSS and technological news. There are nine working groups in the Alliance who initiate activities and act as a forum for further discussion. In 2017, it started the project 'Open Source as Drivers for Digitisation, Sovereignty and Innovation in the Public Sector,' running until 2020.

Policy and legal framework

This section summarises the main open source software related policies and legal acts of the last ten years, including the first known milestone in this domain. The list is presented in a chronological order, starting from the most recent milestone.

- A key goal set out in the *Digital Agenda 2014-2017*¹² strategy document is to eliminate practical obstacles to the procurement of OSS in order to promote equality of opportunity.
- In 2012, the Ministry of Interior published a federal guideline on migration to OSS¹³ titled "Legal aspects of the usage, dissemination and further development of open source software". The document is intended for any governmental agency planning to migrate from proprietary to OSS, with a focus on technical and economic criteria.
- Although it dates back almost two decades, a resolution titled "Overcoming the digital divide of society - Creating an information society for all" (*Digitale Spaltung der Gesellschaft überwinden*

⁷ <https://www.bmi.bund.de/SharedDocs/pressemitteilungen/DE/2019/09/digitale-souveraenitaet-oeff-verwiltg.html>

⁸ https://www.bsi.bund.de/DE/Home/home_node.html

⁹ https://www.bsi.bund.de/DE/Themen/DigitaleGesellschaft/FreieSoftware/freiesoftware_node.html

¹⁰ https://www.itzbund.de/DE/Leistungsangebot/Beratung/OSS/oss_node.html

¹¹ <http://www.osb-alliance.de/>

¹² <https://www.bmwi.de/Redaktion/EN/Artikel/Digital-World/digital-agenda.html>

¹³ http://www.cio.bund.de/SharedDocs/Publikationen/DE/Architekturen-und-Standards/migrationsleitfaden_4_0_rechtliche_aspekte_download.pdf?__blob=publicationFile

- *Eine Informationsgesellschaft für alle schaffen*)¹⁴ was published by the German Parliament in June 2001. The resolution called for the increased use of OSS in the federal administration and stated that “Open Source is an important instrument that can provide for secure and stable IT solutions”.

Open source software initiatives

This section presents an overview of the main open source software related initiatives in Germany. The list is presented in a chronological order, starting with the most recent initiative.

- Open Source testing tool for evidence records, 2019¹⁵: The Federal Office for Information Security (*Bundesamt für Sicherheit in der Informationstechnik, BSI*) launched a testing tool for evidence records in May 2019. The source code is publicly available, thus allowing for the reuse of the free test tool component. The test tool complies with various European guidelines and standards, as well as eIDAS Regulation.
- Nextcloud in the German government, 2018¹⁶: The government opted for an OSS solution with the cloud firm, Nextcloud¹⁷, in 2018. It is an open source file sync and online collaboration technology. Nextcloud provides the federal government with a cloud platform that protects data from any third parties and is compliant with the GDPR.
- Project *Warts-Ab*, 2018¹⁸: The Hessian Ministry of Social Affairs and Integration¹⁹ started funding a new eHealth smartphone application in 2018, based on OSS. The main idea is to let users avoid queues and minimise waiting time at their medical practitioner’s office.
- Dortmund city citizens’ initiative, 2018²⁰: A citizens’ initiative was created in 2018 to encourage the city to move to Free and Open Source Software (FOSS) on account of the clear benefits it offers over proprietary software.
- Ucloud4schools, 2017²¹: Schools and vocational colleges in Cologne, Aachen, Essen and other towns are using open source-based cloud eLearning and collaboration software. The cloud service, Ucloud4schools, is based on the NextCloud open source cloud services solution. In 2017, 3,000 users had migrated to the system.

¹⁴ <http://dip21.bundestag.de/dip21/btd/14/063/1406374.pdf>

¹⁵ https://www.bsi.bund.de/DE/Presse/Kurzmeldungen/Meldungen/Pruefwerkzeug-Evidence-Records-190510.html;jsessionid=1D20256E28D6716A46B8C96BD4F194BE.1_cid351

¹⁶ <https://www.techradar.com/news/german-government-goes-open-source-with-open-source-cloud-firm-nextcloud>

¹⁷ <https://nextcloud.com/>

¹⁸ <https://www.hessenschau.de/gesellschaft/app-soll-stundenlanges-warten-beim-arzt-ueberfluessig-machen,app-arzt-wartezeit-besser-nutzen-100.html>

¹⁹ <https://soziales.hessen.de/presse/pressestelle/hessisches-ministerium-fuer-soziales-und-integration>

²⁰ <http://blog.do-foss.de/beitrag/stadt-dortmund-untersucht-potenziale-einer-freien-software-strategie/>

²¹ <http://www.regioit.de/produkte-leistungen/it-service-fuer-schulen/cloud-loesung-fuer-schulen.html>

- *Schul Cloud* (School Cloud), 2016²²: Funded by the Ministry of Education and launched in late 2016, the *Schul Cloud* is a teaching and learning infrastructure that is made available as OSS. The Cloud provides the technical basis for teachers and students to use modern digital innovation in any class. It is actively updated on GitHub²³.
- German Federal Pension Insurance (*Deutsche Rentenversicherung Bund*) uses Linux, 2016²⁴: This body started using Linux servers and Apache solutions on its x86 and mainframe computers in 2016.
- France and Germany Joint Declaration on innovation and technology, 2016²⁵: The Joint Declaration reads: "Open source software is a powerful engine for innovation. Germany and France will ensure that their industries derive maximum benefit from open source software."²⁶ The strategic players (CNLL²⁷ and OSBA²⁸) in both countries continue to endorse and highlight the impact that this statement had on the development of OSS.
- Gummersbach town, 2014²⁹: The small town of approximately 50,000 people switched from Windows XP to Linux PCs in 2014.
- Leipzig, 2014³⁰: Close to 4,000 workstations migrated from Microsoft Office to Apache OpenOffice and LibreOffice in the German city of Leipzig in 2014.
- Federal Office for Radiation Protection uses OSS and proprietary software, 2013³¹: The Office started using open source products such as Linux (openSUSE) and MySQL for the operation of the ODL monitoring network in 2013. Windows and OSS are used to make up the rest of infrastructure.
- Munich city council, 2003³²: In 2003, the city authorities switched to an OSS application on the computers. The project came to be known as LiMux, running until 2013, and over 15,000 computers and laptops of public employees migrated to the Linux-based software solution. Nevertheless, in 2017, the city decided to fully revert to using Windows Microsoft Office by 2020.
- OSiP (*Online-Sicherheitsprüfung*), 2001³³: The German federal state of Thuringia, North Rhine Westphalia, Baden-Württemberg, Hamburg, and Hesse are using *OSiP* since 2001, a system for

²² <https://schul-cloud.org/>

²³ <https://github.com/schul-cloud/>

²⁴ <https://joinup.ec.europa.eu/news/open-source-largest-ger>

²⁵ <https://www.de.digital/DIGITAL/Redaktion/DE/Downloads/deutsch-franzoesische-digitalkonferenz-erklarung-fr.pdf>

²⁶ Authors' translation from: *Le logiciel libre est un moteur puissant en faveur de l'innovation. L'Allemagne et la France veilleront à ce que leurs industries tirent le plus grand bénéfice possible du logiciel libre.*

²⁷ <https://cnll.fr/>

²⁸ <http://osb-alliance.de/>

²⁹ <https://www.techrepublic.com/blog/european-technology/its-not-just-munich-open-source-gains-new-ground-in-germany/>

³⁰ <https://joinup.ec.europa.eu/news/leipzig-switching-open>

³¹ <https://www.cio.de/a/windows-und-open-source-fuer-mehr-strahlenschutz.2923230>

³² <https://www.techrepublic.com/article/end-of-an-open-source-era-linux-pioneer-munich-confirms-switch-to-windows-10/>

³³ <https://joinup.ec.europa.eu/solution/osip-online-sicherheitspruefung>

performing security checks for staff access to sensitive areas, such as airports, nuclear plants, and ports. The system, built on OSS components, is set to become the default security system for all 16 federal states.

- Schwäbisch Hall, 2001³⁴: In 2001, Schwäbisch Hall was the first town in Germany to switch to using a Linux-based IT infrastructure. The migration was done on both servers and desktops. The implementation was smooth due to the fact that Windows and Microsoft Office remained easy to access.

³⁴ <https://joinup.ec.europa.eu/sites/default/files/document/2012-02/city-of-schwabisch-hall.pdf>

