

Karim Ben Ali

Solutions Engineer — KBA IT srl

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FR • EN

PERSONAL PRESENTATION

Solutions Engineer with 7+ years of experience across federal government, healthcare, and EU institutions. Specialized in infrastructure operations, system integration, and biometric platforms, with a strong foundation in Linux administration, monitoring, and automation. Currently operating as a freelance consultant through KBA IT srl, delivering end-to-end solutions from environment design to full-stack application development. Eager to leverage my skills in future integration and infrastructure projects, with a commitment to detail, efficiency, and high-quality results.

EDUCATION

Bachelor IT – System & Network (2018)

EXPERIENCE

Company	KBA IT srl — www.kbait.be
Period	22 December 2022 – Present
Role & function	Founder & Managing Director
Duty & tasks	<p>Founded KBA IT srl, an IT consulting and development company based in Brussels. The company serves as the legal entity through which all freelance missions are conducted (Federal Police, European Commission, Saint-Luc University Hospital).</p> <p>Designed, developed and deployed the company website www.kbait.be as a fully custom, multilingual (FR/NL/EN) web application. The site serves as a portfolio and showcase for services, projects, and professional expertise. It features a 3D interactive carousel, scroll-reveal animations, responsive design, a contact form with server-side email delivery, and SEO optimization with Open Graph metadata.</p> <p>The entire project follows modern web development best practices: component-based architecture, server-side rendering, static generation, progressive web app (PWA) capabilities, and containerized deployment.</p>
Technology, tools & methodology	<p><i>Frontend:</i> React 19, Next.js 16 (App Router), TypeScript 5, Tailwind CSS v4, Framer Motion.</p> <p><i>Backend:</i> Next.js API Routes, Nodemailer, Server Components, server-only modules.</p> <p><i>Internationalization:</i> Custom i18n with JSON dictionaries (FR, NL, EN), locale-based routing.</p> <p><i>DevOps & Deployment:</i> Docker (multi-stage build, standalone output), Docker Compose, Git, GitHub.</p> <p><i>SEO & Performance:</i> Static site generation (SSG), Open Graph, Twitter Cards, PWA manifest, Sharp (image optimization), security headers (HSTS, CSP, X-Frame-Options).</p> <p><i>Tools:</i> VS Code, ESLint, pnpm, Turbopack.</p>

EXPERIENCE (CONTINUED)

Company	Federal Police
Period	24 August 2024 – Present
Role & function	Specialist Systems & Integration – BIS (Freelance via KBA IT srl)
Duty & tasks	<p>project: APFIS/ABIS</p> <p>I am working within the “Biometric Identification Service (BIS)”, where my primary role is to ensure the operation, maintenance and evolution of the existing biometric identification system (APFIS), while contributing to the progressive transition towards the new biometric system (ABIS).</p> <p>In this context, I ensure the stability, operational continuity and proper evolution of biometric systems used at federal level, while supporting the technical changes related to their modernization.</p> <p>During my assignment, one of the key projects entrusted to me was the implementation of a “virtualized test environment replicating the production environment”. This environment was fully designed, installed and configured from scratch (Linux systems, Oracle and MySQL databases, large-scale data migrations), in order to support the development, testing and preparation of internal applications prior to their deployment into production. It now serves as a core platform to guarantee consistency, stability and continuity between test and production environments.</p> <p>I also contribute to the development, maintenance and evolution of internal applications, addressing operational needs through full-stack development (front-end and back-end), while ensuring modularity and scalability of the implemented solutions.</p> <p>My role further includes technical integration activities, database management and migration tasks, as well as participation in technical analyses related to ongoing and upcoming biometric modernization projects.</p>
Technology, tools & methodology	<p><i>Operating Systems:</i> Linux (OpenSUSE, Oracle Linux, Red Hat, CentOS), Windows</p> <p><i>Virtualization:</i> VirtualBox, VMware Workstation</p> <p><i>Databases:</i> MySQL, Oracle</p> <p><i>Programming & Scripting:</i> PHP, JavaScript, JSON, Python (basic scripting), SQL</p> <p><i>Frameworks & Libraries:</i> CodeIgniter 3, Bootstrap</p> <p><i>Development & Database Tools:</i> phpMyAdmin, MySQL client tools</p> <p><i>Infrastructure & Administration Tools:</i> WinSCP, SSH clients (Termius), Linux CLI</p> <p><i>Data Handling:</i> Advanced Excel data manipulation and transformation</p> <p><i>Biometric Systems:</i> Interaction with LiveScan devices and biometric capture systems (operational context)</p> <p><i>Process & Analysis:</i> BPMN (process understanding and technical support)</p> <p><i>Collaboration & Microsoft Ecosystem:</i> SharePoint, Power Apps, Microsoft Office Suite</p> <p><i>Methodology:</i> ITIL</p>

EXPERIENCE (CONTINUED)

Company	Saint-Luc University Hospital
Period	13 November 2023 – 16 February 2024
Role & function	CMDB Engineer (Freelance via KBA IT srl)
Duty & tasks	<p>project: CMDB Integration</p> <p>Phase 1 - Study and Data Collection</p> <p>I analyzed Lansweeper, studied its database and developed SQL reports to extract data in a suitable format. I also managed relationships between Configuration Items (CIs).</p> <p>Phase 2 – Interconnection and Integration</p> <p>I configured ODBC connections to interconnect databases. Then, I created views and variables, defined integration rules, and automated data injection into Omnitacker, enhancing overall system and resource management.</p>
Technology, tools & methodology	<p><i>Technologies:</i> SQL, CMDB, ODBC.</p> <p><i>Tools:</i> Lansweeper, Omnitacker, Windows, Putty, Outlook.</p> <p><i>Methodology:</i> IPMM (Integration Project Management Methodology)</p>

Company	European Commission
Period	February 2023 – November 2023
Role & function	Windows System Administrator (Freelance via KBA IT srl)
Duty & tasks	<p>I developed a Custom Monitoring tool in PowerShell. The tool monitors a platform that is split into two networks. I had to create a dashboard that would represent the resources of the servers and a report provided by WinAudit. I created some scripts to make it easy to access a group of information.</p> <p>Operational tasks:</p> <p>I managed the support of a platform that shares restricted European Commission files. This involved managing user requests and accounts towards an Active Directory and MySQL database. I also studied the infrastructure of the network (including making the inventory report), the management of Stormshield firewall and VMs in Hyper-V.</p>
Technology, tools & methodology	<p><i>Technologies:</i> Windows administration, PowerShell, MySQL.</p> <p><i>Tools:</i> Windows, RTOP, PowerShell, Hyper-V, Putty, Active Directory, RDP, Outlook, Stormshield, BooleBox, RUE-X, VMware.</p> <p><i>Methodology:</i> ITIL</p>

EXPERIENCE (CONTINUED)

Company	SMALS
Period	July 2022 – February 2023
Role & function	Linux System Engineer
Duty & tasks	<p>I participated in two projects:</p> <p>The migration of old DNS servers in a new network called VMAAS 2 (network fully provided by CloudForms and managed by Ansible). I provisioned new DNS servers via CloudForms, managed the network flows and ran Ansible scripts to make the integration into the new network.</p> <p>The migration of customer's servers in VMAAS 2 (Onboarding). Still using CloudForms for the provisioning of the servers, the procedure is similar to the migration of the DNS servers. The final objective of those projects was to migrate all servers from a legacy network known as OpenStack to VMAAS 2.</p> <p>Operational tasks:</p> <p>We processed tickets from ServiceNow in accordance with the SLA: Incidents, Problems, Changes (all infrastructure changes) and Tasks. The operational side included maintenance, verifying activity on servers and resources. Server management was done at the OS level (100%). Depending on the needs, we had to add RAM or make a new partition, extend disk space, check processes, manage users (create, delete, update, grant access if needed). The usage of Active Directory was sometimes required. We accessed servers from a jump station via SSH connection or RDP for Windows (most rarely). We also managed VMs through Hyper-V as HYPaaS. Provisioning (creation, deletion or any modification of the VM) was performed with CloudForms.</p> <p>We also managed the backup of the servers with Commvault and the monitoring with Zabbix. The patching of Red Hat servers was done with Red Hat Satellite. A good comprehension of the logs was mandatory. For Ansible troubleshooting, we used Kibana and AWX (for the jobs).</p>
Technology, tools & methodology	<p><i>Technologies:</i> Red Hat, Ansible, Shell.</p> <p><i>Tools:</i> CloudForms, OpenStack platform, Bash, ServiceNow, HYPaaS, Commvault, MobaXterm, Putty, Active Directory, Kibana, AWX, Zabbix, Red Hat Satellite, Git, Trello, Confluence, RDP, VMware.</p> <p><i>Methodology:</i> ITIL</p>

EXPERIENCE (CONTINUED)

Company	SMALS
Period	January 2019 – July 2022
Role & function	Monitoring Engineer
Duty & tasks	<p>Monitored the entire federal infrastructure provided by Smals for clients such as Defence, eHealth, Famiwal and more. Our main product was Foglight; we upgraded some functionality to make it compatible with our custom product. I implemented and maintained the evolution of the product (Ansible usage). We monitored databases, hosts (Windows and Linux), FTR, Soap and Selenium applications. Other products were learned and used like Alerta, Wireshark or Nagios. On the operational side, a lot of tasks like troubleshooting, disk cleaning, scripting, logs reading, failover, flow (network) management and comprehension of the issues on the network and others. Guard duty was also a part of our function.</p> <p>On the project side, I developed a web interface (web form) running on Flask to display the availability and all the detailed metrics of the hosts. The engine (script) was built with Python and using Ansible-cmdb.</p> <p>Another project was the implementation of Nagios with Alerta and script development about stress tests, diagnostics, troubleshooting and capacity to configure all the details in alerts.</p>
Technology, tools & methodology	<p><i>Technologies:</i> Red Hat, Windows, Ansible, Python, Shell, Groovy, SQL.</p> <p><i>Tools:</i> Foglight, Rundeck, OpenStack platform, Windirstat, Wireshark, Tightvnc, Bash, ServiceNow, Alerta, Nagios, Putty, RDP, Jira, Foglight Transaction Recorder, WinSCP, Flask, Ansible-CMDB.</p> <p><i>Methodology:</i> ITIL</p>

Company	European Commission – Consultancy via Brayton Global
Period	September 2018 – January 2019
Role & function	IAM Engineer
Duty & tasks	<p>Managed the authentication portal of the European Commission, EU Login (OpenID & SAML), including maintenance and evolution of the infrastructure. I updated, monitored servers and provided a support service. I had frequent interaction with internal and external stakeholders. Troubleshooting was also required: I read logs in Linux servers, searched issues in web servers, managed LDAP servers, used databases (SQL queries). ITIL was also learned and applied there.</p>
Technology, tools & methodology	<p><i>Technologies:</i> Java, XML, SQL, LDAP, Administration: (RFC, SOP, SLA, SACI).</p> <p><i>Tools:</i> Multiputty, SQL Developer, SMT, Certificate signature (ESSISservice), WinSCP, Excel, Word.</p> <p><i>Methodology:</i> ITIL</p>