

La Poste provides automated upgrades-as-a-service for users



France's postal service, La Poste, was running a mix of CentOS and Red Hat® Enterprise Linux® on its servers. With CentOS 7 and Red Hat Enterprise Linux 7 having reached end of support in June 2024, the company needed to migrate or upgrade its environment to Red Hat Enterprise Linux 8. With support from Red Hat Consulting and Red Hat Technical Account Management, it used Red Hat Ansible® Automation Platform to launch the upgrade-as-a-service from its internal IT services portal. The newly developed Migration Factory automates every step in the upgrade process, making it simple for business users to migrate to a reliable, supported operating system.

Question: Tell us about La Poste and how customer expectations are changing.

Hervé Lemoine, Product Manager, La Poste: La Poste is a public sector company that provides postal services to French citizens and businesses. It's considered one of the country's key service providers and is currently responding to rising demand for digital services.

Customers want to be able to access our services from the website and track their accounts and delivery statuses from an online portal. Our challenge is to modernize and expand our services while keeping the customer experience front of mind.

Question: Which Red Hat products are you using in your environment?

Lemoine: La Poste was an early adopter of Red Hat products, with the deployment of Red Hat Enterprise Linux and Red Hat OpenShift® in 2016. These solutions were foundational to the build, deployment, management, and scaling of applications. We also actively use Red Hat Satellite for patch management.

In 2018, we decided to build an internal private cloud—named XaaS, which stands for Everything as a Service—to deliver IT services, such as Infrastructure-as-a-Service (IaaS), Cloud-as-a-Service (CaaS), Platform-as-a-Service (PaaS), and networking for internal users and lines of business. We then used Red Hat Ansible Automation Platform to support all our automation use cases.

The XaaS portal uses Red Hat Single Sign-On (SSO) technology to authenticate users in the web console. More recently, we acquired Red Hat Service Interconnect; based on the open source Skupper project, Service Interconnect lets applications and services communicate with each other regardless of the environment or platform. Service Interconnect provides connectivity between XaaS components spread across 2 datacenters to allow end users access to their Active/Active services.

The XaaS private cloud reduces how long it takes to provision IT services, such as virtual machines from days to minutes by industrializing provisioning and configuration operations.

Question: Red Hat Enterprise Linux wasn't the only operating system La Poste was running on its servers and virtual machines. La Poste had instances of CentOS 7 and Red Hat Enterprise Linux 7. Why was it so important to standardize on one platform and make sure users were on the latest version?

Question: Tell us about the Red Hat and La Poste relationship. Why did La Poste partner with Red Hat Services to streamline the project?

Question: Together, La Poste I-Team and Red Hat designed and delivered the Red Hat Enterprise Linux Migration Factory, which is available as a service for La Poste users. Talk us through how it works, and how Red Hat was involved.

Lemoine: La Poste has 6 subsidiaries that rely on internal cloud services. Our environment includes 11,500 virtual machines and 790 bare-metal hypervisors, and we're hosting 710 applications. Most of those servers were running Red Hat Enterprise Linux 7, but 4000 were on CentOS 7. Both technologies reached end of support, so we needed to get everyone on Red Hat Enterprise Linux 8 before that happened.

Luc Pioro, Account Solutions Architect, Red Hat: From an IT perspective, it's easier to optimize infrastructure management in a standard environment and keep it secure, but business users can resist change. Business project managers typically do not prioritize upgrades of the underlying OS for their applications as they are concerned about budget, time constraints, and application availability. To make the transition as smooth as possible, we helped the La Poste I-Team (Direction des Services IT Groupe) to educate business owners about the risks of running business-critical applications on an end-of-support operating system and proposed a new approach—Migration Factory-as-a Service—to make it as painless and cost-effective as possible.

Lemoine: We have a great track record with Red Hat technologies and Red Hat Services, which have gone above and beyond to help us reach our project milestones. A dedicated Red Hat OpenShift Technical Account Manager (TAM) and consulting architect also provided daily assistance and recommendations.

Pioro: The Red Hat team was involved early during backlog prioritization, providing initial knowledge transfers related to new technologies and upcoming features and releases. We know that the La Poste I-Team needs to deliver IT Services with the best service-level agreement, as our Line-of-Business operation delivers critical services for the French population, so Red Hat ensures support when needed, 24x7. Whatever constraints there may be, we at Red Hat are actively helping La Poste with Red Hat Engineering support and TAM services.

Lemoine: La Poste's business users consume cloud services through the internal private cloud portal, XaaS, which provides IT services on demand. So, when our end users need Red Hat OpenShift resources to deploy their applications, for example, they submit requests through the portal that automatically configures the required resources through Red Hat Ansible Automation Platform. Adding the Red Hat Enterprise Linux Migration Factory as a new on-demand service was, therefore, key.

Pioro: Red Hat Consulting carried out assessments and testing in the La Poste environment, which was facilitated by using the existing management and automation platforms, Red Hat Satellite and Red Hat Ansible Automation Platform.

Red Hat Consulting helped to build 2 automation workflows to handle the end-to-end migration from CentOS 7 to Red Hat Enterprise Linux 7 to Red Hat Enterprise Linux 8. The platform detects which operating system is in use and triggers either a conversion workflow or an upgrade. Convert2RHEL analyzes the system and converts CentOS to Red Hat Enterprise Linux automatically, so users don't need to redeploy their workloads, while Red Hat Enterprise Linux Leapp upgrade management tool handles Red Hat Enterprise Linux 7 to Red Hat Enterprise Linux 8 upgrades in the same automated way. It maintains all the existing customizations, configurations, and preferences during the upgrade.

Question: What's the user experience like and how has it helped with user adoption?

Lemoine: Business users log into the portal and select Migration Factory. With one click it guides them through every step of the process. We've automated as much as possible, so the user just has to run the update and possibly reinstall some apps.

If some prerequisites are not validated, the XaaS portal tells the end user the required modifications so they can rerun the workflow later—they're responsible for keeping their servers up to date. If for some reason in-place migration is not possible, we ask the end user to recreate the virtual machine using a master template.

Question: Have you measured the impact of automation?

Lemoine: XaaS private cloud platform delivers more than 36,000 IT operations each month. That scale would be totally unfeasible without Red Hat Ansible Automation Platform. Multiple IT services are offered in the private cloud service catalog, relying on Red Hat Ansible Automation Platform to execute the provisioning and configuration operations. The scope of IT services includes more than 60 PaaS items, from infrastructure to applications—including Day 1 and Day 2 operations—to the business lines of La Poste Courrier.

Our I-Team has also implemented everything through more than 350 APIs, documented with Swagger, so Line-of-Business can easily consume IT services; it furthermore eases adoption and generally makes the platform a success. As of now, more than 2,500 users consume services daily, whatever they may be, through APIs or consoles.

In the 3 months since deploying Migration Factory service on the XaaS portal in April 2024, the Migration Factory service API has been successfully called more than 900 times. Later this year, Red Hat Consulting will be engaged to help the La Poste I-Team add the migration from Red Hat Enterprise Linux 8 to Red Hat Enterprise Linux 9 to the Migration Factory service.

The XaaS platform is reliable and well supported, and we can enrich and optimize it without disrupting postal services for our customers.

Question: Talk us through the technology stack at La Poste that's now automated with Red Hat Ansible Automation Platform.

Pioro: Currently, everything from infrastructure (VMware, Nutanix, OpenShift, AWS, Pure Storage, and Rubrik) through to monitoring (Centreon, Kibana, and Grafana), systems (Linux, Windows, Active Directory, Red Hat Satellite, WSUS), and continuous integration and continuous delivery (CI/CD) (Gitlab, Nexus) to network (Efficient IP, Cisco, F5, Fortinet), security (PKI, Qualys, Vault, Cyberark), and finally databases (Oracle, Elastic Search, MySQL, Cassandra) is automated with Red Hat Ansible Automation Platform.

And throughout the Red Hat Ansible Tower to Red Hat Ansible Automation Platform migration, Ansible roles have been migrated to Red Hat Ansible Certified Content Collections.

Question: What's next for La Poste and Red Hat?

Pioro: In the short term, La Poste's I-Team is looking forward to the next release of Red Hat Ansible Automation Platform so it can use the new [Event-Driven Ansible](#) controller. It will generate notifications of any changes to the back-end infrastructure behind the portal so it can keep it working well in a proactive manner.

Lemoine: From a long-term perspective, La Poste's I-Team knows it can count on Red Hat to keep evolving our products and deliver more value to the business. Red Hat Services will always be there to support us.

About La Poste

La Poste Groupe is a French enterprise with subsidiaries providing mail and shipping services, mobile banking, digital services, telecoms, transport and logistics, business services, and marketing expertise. La Poste is the public body responsible for handling the country’s business and personal mail delivery.



About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments. A trusted adviser to the Fortune 500, Red Hat provides award-winning support, training, and consulting services that bring the benefits of open innovation to any industry. Red Hat is a connective hub in a global network of enterprises, partners, and communities, helping organizations grow, transform, and prepare for the digital future.

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