

The French Digital Agency for Civil Protection (ANSC) modernizes and secures the national system for fire-fighters with Nutanix.

The NexSIS 18-112 project of ANSC, the future unified information and command system for the French fire and rescue services, relies on Nutanix to provide the Departmental Fire and Rescue Services (SDIS) with its “pivot infrastructures” (micro-datacenters based on the EDGE computing architecture model), which ensure interoperability between certain systems deployed in the SDIS and the core system.

A public administrative body under the authority of the French Ministry of the Interior, ANSC was founded in 2018. Since its creation, the agency has been responsible for developing and monitoring the effective operation of the AML (Advanced Mobile Location) service. The AML system, which enables the precise geolocation of a caller during an emergency call via smartphone, is part of the implementation of a European directive and has already saved many lives.

As a service provider for the French government, fire and rescue services, and any public or private body with a public service remit in the field of civil security, ANSC is also responsible for the NexSIS 18-112 project, a unified information system for firefighters throughout France.

Challenge

“NexSIS arose from the need to offer a single system to all the Departmental Fire and Rescue Services, to go beyond modern applications, interoperability with other public forces (Health, Security, etc.), and a very high level of availability, to provide all the added value of data pooling, such as, for example, facilitating the services required for multi-departmental crisis management or the creation of operational steering indicators at a departmental or national level. In this context, NexSIS operates as a service platform.

Our goal is to offer a shared, centralized system, capable of interacting with the existing systems deployed in each department and facilitating interconnection with the entire civil protection IT ecosystem,” Yann Pascal explains. In the case of a major incident in a region of France, such as a train crash, the local call center can quickly become overwhelmed. One of the strengths of the NexSIS Program is that it encourages the rapid implementation of a mutual assistance mechanism by routing calls to another call center. In addition, It forwards data relating to alerts and operations via various technical components (messaging block, APIs, etc.).

Industry

Civil service

Location

Paris, France

Website

<https://ansc.interieur.gouv.fr>

Benefits

- **Time-saving administration:** over a hundred infrastructures updated with a single click, cluster management from a centralized console
- **Ease of operation:** infrastructure driven by software (Infra as Code) and/or via web-based administration interfaces
- **Resilience:** reliable and highly available architecture
- **Scalability:** hyperconverged architecture that facilitates scaling up of resources without service downtime
- **Innovation and responsiveness** thanks to the platform's rich functionality (NKE, Object, AHV-integrated functions)

NexSIS is built and made available through a digital factory that uses cloud services, among other things. As a mission-critical system comprising a host of services operating 24/7, NexSIS has to meet stringent performance and resilience requirements. To ensure that critical applications work and that the system is powered, data flows pass through a private network and a “pivot infrastructure,” a sort of “EDGE Computing”-based micro-datacenter that hosts the gateways essential for communication between local applications (hosted by the SDIS IT departments) and NexSIS, as well as the unified communications components. To design these infrastructures, ANSC has chosen to rely on the Nutanix platform.

Solution

“Our choice was guided by three main criteria: service offering, resilience and ease of administration”, says Yann Pascal. “Deployment is still under way, but it’s important to understand that we will eventually have around a hundred pivot infrastructures to manage. By offering a console that enables all infrastructures to be updated at the click of a button, Nutanix considerably simplifies our approach, many of the processes being automated. In addition, the platform is highly secure and resilient, two essential criteria for NexSIS.”

From the outset, ANSC opted for an “Infrastructure as Code” approach with a continuous delivery chain (CI/CD). Thanks to Nutanix APIs, the Agency can centrally manage its infrastructures via code. It can provision a VM, deploy a Kubernetes cluster, and update applications with minimum effort across all the micro-datacenters.

Next steps

To date, ANSC and the SDIS have built more than a dozen pivot infrastructures, with plans to accelerate the pace in 2024. To satisfy new needs, the Agency is considering the use of other services. “Nutanix’s rich functionality encourages innovation and greater responsiveness, because all the components are already there, which means we can deliver new components/functions very quickly. It should be mentioned that ANSC relies on highly responsive Nutanix support, and on the assistance of a technical account manager. We regularly discuss the roadmap and some of our specific needs are taken into account. Beyond the technical aspects of the platform, this relational aspect is unusual and very much appreciated,” concludes the ANSC Infrastructure Manager.

Products

- Nutanix Cloud Infrastructure
- AHV
- Prism Central
- NKE

Applications

Set of applications that makes up the Unified Information System for firefighters throughout France. In particular, unified communication building blocks, service gateways, data exchange services, etc.

“Over and above the constraints of the initial architecture, we didn’t want to get bogged down by opting for a solution that didn’t offer a range of services.

The ability to use several types of storage (CIFS, Object), to implement network micro-segmentation, to deploy Kubernetes clusters in IaS (Infrastructure as Code) with easy resource scaling, etc. Nutanix offers all these options and opens up the field of possibilities for the future development of NexSIS.

Yann Pascal,
Infrastructure Manager at the ANSC

NUTANIX

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MA-ANSCCustomerCaseStudy-ENTtranslation-FY24Q3-03142024

