ESA
Private cloud flexibility and security is transforming space exploration

"esacloud will allow our scientists to do rocket science, rather than IT, and our business to jump ahead in time more than five years. We put a high value in close partnership with suppliers in IT, and since being selected in 2000, Orange Business Services has helped ESA innovate and be a pioneer in many areas, such as the first European converged MPLS IP VPN. esacloud marks a new milestone in our joint path."

Filippo Angelucci
CIO and Head of the Information
Technology Department
ESA

Highlights

- The European Space Agency is dedicated to providing and promoting, for peaceful purposes, European cooperation in space research

- The agency has huge data volumes that cannot be managed effectively by traditional technologies and was interested in moving to the cloud – a flexible model with lower costs – while meeting high security governance requirements

- We implemented a highly secure Orange Flexible Computing IaaS private cloud solution that is robust, flexible and scalable for fast self-provisioning and is integrated into the ESA IT environment

- The on-premise private cloud solution is based in two mirrored ESA data centers that deliver complete redundancy for applications and services and predictable pay-as-you-go costs

- ESA now has enhanced scientific collaboration abilities and has improved efficiency, productivity and results

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esa

Issues and challenges

The European Space Agency (ESA) is an intergovernmental organization with 20 member states, 2,200 employees and an annual budget of around €4B. It is Europe's gateway to space and develops programs involving observation of Earth, telecommunications, navigation and other endeavors that bring more knowledge to humanity and help improve life on Earth.

The volume of data generated is enormous and has to be carefully managed in terms of high availability, storage and security. Traditional technology was increasingly unable to meet the scientific and operational simulation and testing needs of the ESA, both the data volumes and the speed of change. Taking weeks to set up computing resources for a new team was no longer acceptable. The organization needed to provide scientists with rapid access to a greater data computing resource in a way that was easy and secure and at a lower cost.

The objective

Enable ESA to focus on the data and not the infrastructure.

The Orange Business Services solution

- Cloud solution utilizing the Orange Flexible Computing infrastructure-as-a-service platform
- Best-in-class virtualization, networking, computing and storage
- On-premise, cloud-based at two mirrored ESA data centers (Italy and Germany) – full redundancy and active-active data replication
- High security with rigorous role-based access control and security design customized to specific requirements of the various ESA user communities
- Private cloud integrated into the ESA IT environment
- Program and partner management – Cisco, EMC, VMware

The benefits

Orange delivered a private cloud solution that is supporting the ESA on its strategic journey to digital transformation.

Greater productivity

- Enhanced communications and collaboration
- Improved efficiency across its geographically distributed community

Enhanced capability

- Robust, reliable, flexible and scalable platform
- Rapid self-provisioning access to major computing power in minutes rather than months

Increased security

- Compliance with complex business continuity and disaster recovery requirements
- Stronger data protection capability

IT innovation

- esacloud, moving business forward five years vs. legacy technology
- Reduced costs with resources available on a pay-as-you-go basis
- IT moved from supplier to leadership role

The results

- Predictable costs
- Easy end-user access to computing resources
- Management of greater data volumes
- Compliance with high security governance
- Fail-safe data BC/DR systems
- Seamless integration into the ESA IT infrastructure

> " Orange has helped us to focus on the data, instead of on the infrastructure. Now we can offer solutions that can be released and shared in minutes and not months, and this makes a real difference to our very demanding technical and scientific user community. The private cloud solution has all the benefits of the public cloud, but with the control and security of private infrastructure.
>
> This digital transformation is enabling IT within ESA to move from a supplier to a leadership role. "

For more information about Orange Business Services, visit www.orange-business.com
For more information about ESA, visit www.esa.int

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