

# UKCLOUD SUPPORTS PUBLIC SECTOR CLOUD INNOVATION WITH RED HAT OPENSTACK PLATFORM



## SOFTWARE AND SERVICES

Red Hat® OpenStack® Platform

Red Hat Ceph Storage

Red Hat Technical Account Management

UKCloud provides cloud services to the UK public sector, including the HMRC (Her Majesty's Revenue and Customs), Ministry of Justice, Ministry of Defence, the Foreign & Commonwealth Office (FCO), and many others. Its services have helped expand the UK's digital economy by saving public sector customers billions of pounds with improved access to online services. As a Red Hat Certified Cloud and Service Provider, UKCloud sought to deliver a cloud platform engineered specifically for digital, cloud-native workloads while avoiding the risk of being tied to a single vendor. With assistance from a Red Hat Technical Account Manager (TAM), the company deployed Red Hat OpenStack Platform and Red Hat Ceph Storage as the foundation for a new Infrastructure-as-a-Service (IaaS) optimized for cloud-native applications. As a result, the company established an additional specialized platform for rapid iteration of services that meet its customers' evolving demands. In addition, working with Red Hat gave UKCloud access to expert guidance on deploying and maintaining open source OpenStack technology.



**PUBLIC SECTOR**

**155 EMPLOYEES**

## BENEFITS

- Created a more agile and flexible IaaS platform for its public sector cloud services
- Achieved government-level security by taking advantage of Security-Enhanced Linux® (SELinux) to protect critical data
- Gained access to expert knowledge during design and implementation
- Improved access to innovative cloud and open source technology to plan future innovation

*“RedHat clearly offers good technology, but what differentiates RedHat as a vendor is the quality of its people.”*

LEIGHTON JAMES  
DIRECTOR OF CLOUD STRATEGY AND PRODUCTS, UKCLOUD



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## TRANSFORMING PUBLIC SECTOR SERVICE DELIVERY

UKCloud provides cloud services to the UK public sector, including the HMRC (Her Majesty's Revenue and Customs), Ministry of Justice, Ministry of Defence, the Foreign & Commonwealth Office (FCO), and many others.

Its services have helped expand the UK's digital economy by helping public sector customers transform their public services to offer primarily online delivery. The resulting efficiency and cost improvements will help save the UK government billions of pounds on front-line services, such as law enforcement and healthcare. UKCloud experienced 96% business growth in 2015 and is now the UK's top Infrastructure-as-a-Service (IaaS) provider for public sector via the G-Cloud framework, achieving a leading 37% average G-Cloud IaaS market share in 2016.<sup>1</sup>

"Cloud offers the potential to transform the cost and delivery of public services," said Leighton James, director of cloud strategy and products at UKCloud. "The UK public sector has made huge strides in cloud adoption, but there is still work to do. The focus is very much on innovation, time to market, and time to value. In addition, our services are so important that we can't afford a moment's downtime. For instance, 95% of all Driver and Vehicle Licensing Agency (DVLA) enquiries are now handled online, and 900,000 people have personal tax accounts at HMRC—these services can't drop out."

As a Red Hat Certified Cloud and Service Provider, UKCloud sought to deliver a cloud platform engineered specifically for digital, cloud-native workloads without the inflexibility and potential cost of working with only one vendor. As a result, the company sought to create and deploy a solution based on OpenStack technology.

"We're starting to see a digital-first mindset with customers and a willingness to leverage cloud-native applications," said James. "We want cloud to be more dynamic, more elastic, but we can't use proprietary platforms due to the government's commitment to an open source, open standards policy. For those reasons, OpenStack becomes a very compelling platform."

## CHOOSING AN OPEN SOURCE CLOUD PLATFORM

After choosing to deploy OpenStack, UKCloud sought a platform solution that could be deployed quickly. As a public sector supplier, the company must sell via a government procurement framework. This framework must be in place by a set date, with all services checked, compliant, and fully operational.

"We see our customers using open source tools like Terraform, Docker, or Red Hat OpenShift. From the technical perspective, OpenStack ticked all the right boxes. It was then a question of how quickly we could get a production-grade platform to market," said James.

After evaluating several options, the company chose Red Hat OpenStack Platform as the foundation for its IaaS cloud platform.

"The deciding factor was the level of engagement Red Hat could provide. Red Hat brought the right people to the table and spoke with authority on other OpenStack deployments," said James.

UKCloud has now standardized on Red Hat OpenStack Platform supported by Red Hat Ceph Storage. Red Hat Ceph Storage is a robust, massively scalable block and object storage platform that helps control exponential data growth as the company deploys cloud services while also simplifying data management.

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<sup>1</sup> "G-Cloud data." GOV.UK Digital Marketplace. 20 Dec. 2016. <https://digitalmarketplace.blog.gov.uk/sales-accreditation-information/>

“Our move to Red Hat OpenStack Platform was a direct response to our customers’ need to deliver high scalability for their digital transformation strategies,” said Simon Hansford, CEO of UKCloud. “We were confident that Red Hat’s upstream-first development model would help us quickly deliver a more flexible and secure platform.”

To successfully deploy these Red Hat solutions within a tight three-month time frame, UKCloud engaged Red Hat Technical Account Management. This Red Hat team led workshops and a two-week proof of concept (POC) that included several rounds of modifications and fixes. As a result, UKCloud met the August 2016 deadline for G-Cloud.

*“Red Hat OpenStack Platform exemplifies and underscores our commitment to innovation as a solid foundation for supporting our customers’ digital transformations. The same customers that are interested in OpenStack are interested in technology trends like Database-as-a-Service, Platform-as-a-Service, and containers. Red Hat has a great suite of related solutions that we can absolutely see on our roadmap.”*

SIMON HANSFORD,  
CEO, UKCLOUD

## **SUPPORTING AN INNOVATIVE DIGITAL-FIRST MINDSET**

### **RAPID, FLEXIBLE DEPLOYMENT AND IMPROVEMENT OF CLOUD SERVICES**

With the flexibility of Red Hat OpenStack Platform, UKCloud can evolve its IaaS cloud platform and services as needed to meet the demands of its customers.

“This wasn’t a typical waterfall delivery with everything available from day one,” said James. “It’s a very iterative and agile process of adding new features incrementally. A close, ongoing working relationship with Red Hat is crucial to offering our new OpenStack-based solution to customers in a short timeframe. There are always issues with any implementation, but with Red Hat we can resolve issues in minutes rather than days.”

As a result, UKCloud can ensure high performance and availability for crucial services. “We’ve delivered a production-grade OpenStack platform that outperforms expectations in terms of API [application programming interface] requests per second,” said Hansford. “We’ve also been able to accelerate projects, getting them out of the door faster.”

### **ROBUST, ENTERPRISE-GRADE SECURITY**

OpenStack depends on the underlying Linux distribution for security, including isolation mechanisms for each virtual machine. Red Hat OpenStack Platform is co-engineered with Red Hat Enterprise Linux to offer the benefits of Security-Enhanced Linux (SELinux) and other capabilities to protect critical data within OpenStack deployments.

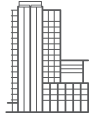
“These are government-level security policies to help maintain data security,” said James. “In addition, there are several key security mechanisms included in and being developed for the Red Hat security roadmap. These are unique security mechanisms that no other vendor offers.”

### **EXPERT GUIDANCE AND SUPPORT**

From the initial stages of the deployment, Red Hat offered guidance and support from its experienced technology staff. Red Hat product subscriptions include access to industry-leading support services. In addition, UKCloud gained ongoing support by engaging a Red Hat Technical Account Manager (TAM).

“Initially, we had a second vendor doing a POC, and their knowledge of OpenStack was in stark contrast to Red Hat. It didn’t inspire much confidence in their ability to deliver a multitenant service environment,” said James. “Red Hat had people who had contributed to the code. Red Hat clearly offers good technology, but what differentiates Red Hat as a vendor is the quality of its people.”

As a result, UKCloud’s IT teams not only gained support during the process of deploying the new platform, but also gained the knowledge to further evolve the platform through Red Hat’s hands-on mentoring approach.



### ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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"We have an appetite for understanding exactly what goes into any solution," said Hansford. "It's never about just plugging in a solution and the vendor leaving. We need to know where failures might occur and how they can be fixed. We can't abdicate that responsibility to the vendor. With Red Hat, we were able to ask the right questions and take advantage of our culture to act on the answers."

### ACCESS TO INNOVATIVE CLOUD TECHNOLOGY

With Red Hat technology and support, UKCloud can take advantage of the best in open source thinking and development.

"Over the years we've built a huge amount of expertise internally on open source solutions. But it's not simply about using the right technology," said James. "It's about integrating that technology to deliver an effective end-to-end customer experience."

Working with Red Hat, a Platinum member of the OpenStack Foundation, offers UKCloud access to an experienced vendor that performs certified compatibility tests for each OpenStack release, as well as Red Hat's broad ecosystem of OpenStack hardware, software, and service partners.

"This involvement provides us with the confidence that Red Hat will maintain a certified stack of applications and tools, today and in the future," said James.

### PREPARING A FOUNDATION FOR FUTURE CLOUD GROWTH

With its new IaaS cloud platform based on Red Hat technology, UKCloud is now better positioned to support public sector service innovation. Its flexible, open source-based platform achieved global community recognition by winning the 2017 OpenStack Superuser Award, recognizing the valuable innovation created through UKCloud's collaboration with Red Hat on deploying and maintaining an OpenStack cloud platform.

"Our work is changing the perception of cloud services and their possibilities for public sector," said Hansford. "Red Hat OpenStack Platform exemplifies and underscores our commitment to innovation as a solid foundation for supporting our customers' digital transformations. The same customers that are interested in OpenStack are interested in technology trends like Database-as-a-Service, Platform-as-a-Service, and containers. Red Hat has a great suite of related solutions that we can absolutely see on our roadmap."

### ABOUT UKCLOUD

UKCloud is the specialist provider of assured cloud services for the UK public sector. Customers include local and national government, the NHS, Policing, and partners such as Accenture, Capgemini, Adapt, and Datapipe. Since UKCloud was founded in 2011, specifically in response to the emerging public sector cloud requirement, UKCloud has created 155 jobs, just turned over £43m in the last financial year and is the #1 IaaS provider for the UK public sector as well as being winners of the 2016 Sunday Times Hiscox Fasttrack 100 award<sup>2</sup> and the 2017 Queen's Award for Enterprise for Innovation.

<sup>2</sup> [fasttrack.co.uk/company\\_profile/ukcloud/](http://fasttrack.co.uk/company_profile/ukcloud/)