Yorkshire Water is one of the UK’s leading utility companies. By adopting VMware vRealize® Suite the business is maximising the utilisation of its IT resources, simplifying the management of its private cloud environment and improving IT agility. The business is now in a stronger position to drive digital transformation.

Yorkshire Water is a UK utilities business. It manages over 62,000 miles of pipework connecting water systems across England’s largest county, providing 1.24 billion litres of drinking water each day.

**Challenge**

Efficiency, end-user cost and sustainability are major drivers of the UK’s water industry. Yorkshire Water, one of the industry’s big players, is working to embed sustainable accounting across the business: quantifying the natural, social and human impacts of projects and decisions alongside financial assessments. The company’s 2015-2020 Strategic Plan makes this clear:

“We need to ensure we deliver the services you value the most, protect the environment and meet our legal requirements, and we need to do all this while keeping bills as low as possible.”

Technology will play an increasingly important role in delivering this promise. Yorkshire Water aims to be the industry leader in customer service, and will use new, digital formats to engage with customers. It plans to deploy network sensors and IoT solutions to monitor and manage water systems. Robots are being used to carry out repairs and drones conduct aerial surveys. It is imperative Yorkshire Water creates a more efficient, dynamic IT infrastructure, capable of supporting such innovation.

The broader technology and business goals are to use technologies ‘as a service’, increase automation, and increase use of cloud infrastructure. The business is a long-term VMware customer, using VMware vSphere® as its server virtualisation platform. The next phase was to be more effective in the management of its private cloud environment. The business wants to be faster to provision new servers, faster to spot and resolve issues, and fully utilise its IT resources.

“We've got multiple technology stacks that were disjointed in places. We needed to bring everything together to help us move forward in a more agile way,” says Paul Bayley, Senior Infrastructure Engineer, Yorkshire Water. “By being better able to understand our virtual estate, we can start to be smarter and more efficient.”

Specifically, he continues, the infrastructure team wanted to see the relationship between different workloads – and how this impacted performance.
“By leveraging the in-depth capacity management capabilities of vRealize Operations we’re able to assess virtual workloads and look to consolidate where practicable. This leads to a lower physical footprint in turn reducing the power consumption, cooling demand and lower operational management of rack space.”

PAUL BAYLEY
SENIOR INFRASTRUCTURE ENGINEER
YORKSHIRE WATER

VMWARE FOOTPRINT
• VMware vRealize Suite
• VMware Skyline
• VMware vSphere

Impact
The result is a cloud infrastructure that is more efficient, more responsive and better able to accommodate the needs of the business. Bayley says server provisioning times have come down from seven days to two hours.

VMware vRealize Operations™ enables the infrastructure team to self-drive operations from applications to infrastructure, using AI/machine learning (ML) based performance and capacity optimisation. vRealize Operations, Bayley says, provides deeper insight into the workloads that run within the virtual platform. This allows asset management teams to accurately plan for capacity needs, forecasting and assessing with greater certainty the impact of adding or removing demand on the platform. For example, Bayley’s team spotted an issue where a number of servers were running at 100 per cent CPU and exhausting one particular VM.

“We were able to spot an unrelated issue that was cascading down, perform the fix and monitor,” he explains. “By integrating existing monitoring and alerting platforms we’re better able to respond to anomalies in the estate with proactive support. Skyline means we’re able to spot issues before they escalate and helps us adopt best practices.”

These are business critical fixes, he adds. “These systems are directly linked to our operations and our ability to communicate with our customers. If anything, it helps remind the business of the critical role of IT.”

VMware vRealize Lifecycle Manager™ automates the installation, configuration, upgrade, patch, drift remediation, health, and content management of vRealize products which has ensured the environment is patched at the right level. “It simplifies the way in which we scale out certain deployments,” Bayley adds.

VMware vRealize Automation™ automates the delivery of personalised infrastructure, applications and custom IT services. Automation supports greater productivity throughout the IT function. Virtual assets are easier to manage, standardisation has simplified deployments, resources are focused on higher-value tasks. Bayley says Yorkshire Water continues to build on the vRealize Automation platform, “not only for the standardised deployment of blueprinted servers and desktops but also to link to other orchestration engines to empower our end-users and development teams.”
“These systems are directly linked to our operations and our ability to communicate with our customers. If anything, it helps remind the business of the critical role of IT.”

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The VMware solution is also in line with Yorkshire Water’s broader sustainable strategy. “By leveraging the in-depth capacity management capabilities of vRealize Operations we’re able to assess virtual workloads and look to consolidate where practicable,” says Bayley. “This leads to a lower physical footprint in turn reducing the power consumption, cooling demand and lower operational management of rack space. We’re more intelligent in our choice of hardware.”

Looking Ahead
Yorkshire Water has now been able to consolidate a number of hosts and reduce its wasted compute resources by 38 per cent, a reduction of 10 hosts in the non-production and development clusters. This has been achieved by making full use of vRealize Operations and by enforcing standardisation of deployments with vRealize Automation.

“It’s now very easy for us to have these conversations with management,” he says. “By having a narrower footprint, we can focus IT resource on the things that matter to the business.

“This engagement is an example of how we plan and build long-term, value-added partnerships with IT specialists, to help Yorkshire Water innovate through technology and deliver the IT foundations which underpin our customers’ needs.”