The Scottish Government ARE Directorate was wasting valuable development time as its existing storage struggled to cope with an expanding Virtual Desktop Infrastructure (VDI) environment. After successfully streamlining its VDI by deploying Pure Storage, ARE moved one of its FlashArrays to their Virtual Server Infrastructure (VSI) in order to support data replication and recovery. Since implementing Pure Storage all-flash arrays, developer build times have been halved, disaster recovery simplified and upgrade costs significantly reduced.

BUSINESS TRANSFORMATION

The simplified data replication and seamless upgrade process provided by Pure Storage has created a high-performing, resilient infrastructure, freeing up management time and allowing the Scottish Government's ARE Directorate to focus on the applications that support Scotland's rural economy.

GEO

United Kingdom

INDUSTRY

Government

"We play an important role in the rural economy and supporting Scottish farmers. We can't have any delay in processing claims and getting money to the farmers."

Neill Smith, *Head of IT infrastructure*

MANAGING THE SUBSIDIES THAT KEEP SCOTLAND'S RURAL ECONOMY THRIVING

The Agriculture and Rural Economy (ARE) Directorate, headquartered in Edinburgh, Scotland, operates within the Scottish Government and plays a key role in Scotland's rural economy. As well as interpreting EU regulations and assessing the validity of farmers' subsidy claims, it is also responsible for paying subsidies directly to farmers. With over 20,000 farmers claiming through ARE each year, the directorate pays out £750m in subsidies annually.

As a government body, ARE is regularly audited and can face significant fines if the correct procedures are not followed. This makes the ability to store and process data without any downtime a high priority for its IT team.

"We play an important role in the rural economy and supporting Scottish farmers. We can't have any delay in processing claims and getting money to the farmers," explained Neill Smith, Head of IT infrastructure for the Scottish Government Agricultural and Rural Economy Directorate.

The directorate is supported by a large number of IT staff, who work across numerous environments including development, system testing, user testing and production. All of these need to be underpinned by a storage environment that allows the team to process and share data instantly.

LEGACY STORAGE STRUGGLED TO COPE WITH VDI AND DATA REPLICATION DEMANDS

ARE's IT team began to notice performance and latency issues with its hybrid storage solution as its VDI environment grew. As a result, developer build times increased to thirty minutes per build, which had a significant impact on the directorate's resources.

Smith and his colleagues needed to find a way to reduce management time and quickly realised that an all-flash array was the only solution.

"Imagine a developer does four builds a day and each takes thirty minutes," elaborated Smith. "But swap your old storage solution for an all-flash array and it only takes fifteen. That's a time saving of at least an hour per day per developer. Multiply that by one hundred developers and you can see how significant that time saving becomes."

COMPANY:

The Scottish Government's Agricultural and Rural Economy (ARE) Directorate
www.ruralpayments.org

USE CASE:

- VDI – VMware® Horizon
- VSI – VMware vSphere®

CHALLENGES:

- Existing storage struggled to cope as VDI environment grew to encompass over 400 named users.
- Increasing build times meant developers were wasting valuable time.
- Replication to fail oversight had become complicated and difficult to manage.
- Alternative enterprise-grade storage solutions were overcomplicated and expensive, especially when it came to upgrades.

IT TRANSFORMATION:

- Pure Storage deployment has halved build times, saving each developer more than twenty hours per month.
- Pure Storage FlashArray provides greater than 4:1 data reduction.
- Evergreen business model delivers long-term cost savings, amplifying the arrays' ROI.
- Upgrades are delivered seamlessly with no downtime, disruption or performance issues.

"Many vendors promise no downtime, but it is very rare when that is delivered. Through the Pure Evergreen™ Storage model we upgraded our FA405 to the M20 and were told there would be no outage."

Neill Smith, *Head of IT infrastructure*

The directorate ran a POC in its primary data centre to see if its requirements could be met using an all-flash array. Impressed with the initial results, Smith and his team proceeded with an open tendering project, which saw several major vendors compete side by side. Pure Storage stood out on both technical performance and price.

ARE BECOMES THE FIRST PURE STORAGE CUSTOMER IN SCOTLAND

"Pure Storage more than exceeded the requirements we had when we ran the initial POC, but we also had to consider our long-term strategy for flexibility and sustainability. This was something we knew Pure could support. We were actually the first customer in Scotland back in 2015," highlighted Smith.

Pure Storage FlashArray™ proved to be an extremely effective solution for ARE's VDI environment. As well as fulfilling performance requirements, its competitive pricing also added considerable value to the product's expected ROI.

Since ARE's initial deployment in 2015, the directorate has tested Pure Storage for other applications, such as snapshot cloning, and has upgraded its FA405 arrays to the M20 models. After an overwhelmingly positive experience with Pure in VDI, the team decided to use one of its arrays to meet another of its major challenges.

BUILDING A RESILIENT DR STRATEGY WITH PURE STORAGE

In addition to improving internal build times, the performance of ARE's external website is also a high priority for Smith and his colleagues.

Smith explained that while there is a three month window for farmers to submit subsidies through the ARE site, it's not uncommon for traffic to spike just before the deadline. This means high performance storage that can support a resilient disaster recovery strategy is key.

Previously, when data was replicated over from ARE's primary site to its failover site, the storage infrastructure couldn't deliver on the required IOPS. However, the team knew that they already had the perfect solution with FlashArray, and so decided to take one their arrays out of VDI and move it to the server side of the business.

SIMPLE, FAST AND RELIABLE STORAGE SIGNIFICANTLY REDUCES MANAGEMENT TIME

The directorate now has a Pure Storage array in each of its two datacentres. By implementing Pure's all-flash array to support the directorate's VSI, Smith and his colleagues got a storage solution that not only delivered the IOPS they needed but also significantly simplified the replication process.

Having the capability to fail over and replicate simply has been a major win for the team. "The way our external website functions is important from a reputation perspective. The fact that we don't have to worry about data recovery now is extremely reassuring," confirmed Smith.

The support from Pure Storage also makes the solution incredibly easy to maintain. If something happens, Pure Storage is immediately aware and is able to alert the team to fix any issues, significantly reducing administrative overheads. This frees up time for the team to concentrate on supporting the wider business.

"Pure Storage really does deliver on everything it says it will."

Neill Smith, *Head of IT infrastructure*

PURE EVERGREEN STORAGE MODEL DELIVERS SEAMLESS UPGRADES AND LONG-TERM COST SAVINGS

"An ongoing challenge for us is that our infrastructure is constantly evolving. With our previous storage we were becoming more reactive than proactive, but Pure Storage has allowed us to turn this around," said Smith.

The Pure Evergreen Storage model has played a major role in helping the directorate address its growing storage needs and was one of the main reasons that ARE chose Pure Storage. Smith explained that with many vendors, customers are encouraged to buy a brand new solution every time licensing expires. If they don't, the cost of upkeep and support can be high.

Being able to update its arrays, rather than buying a new piece of kit, has meant that ARE can upgrade its storage capacity as needed without the same associated cost. All upgrades are made without any downtime, performance impact or data migrations, and forklift upgrades have been eliminated.

"Many vendors promise no downtime, but it is very rare when that is delivered. Through the Evergreen model we upgraded our FA405 to the M20 and were told there would be no outage," explained Smith.

While Smith and some of his colleagues were sceptical that the upgrade process would require no downtime at all, in the end it was absolutely seamless. This has given the team complete confidence in the arrays, and the ability for Pure Storage to meet the directorate's future storage needs.

"Pure Storage really does deliver on everything it says it will," concluded Smith.

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