



IDC ExpertROI® SPOTLIGHT

EMIS Health Leverages HPE ConvergedSystem 700x with HPE OneView to Increase the Scalability and Speed of Its Business

Sponsored by: Hewlett Packard Enterprise

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December 2015

Overview

EMIS Health is the leader in the United Kingdom by market share in connected healthcare software and services. Through innovative IT, the company gives healthcare professionals access to the information they need to provide better, faster, and cheaper patient care.

EMIS Health's national reach includes clinical software used in every major healthcare setting by 10,000 organizations – from general practitioner surgeries to high street pharmacies, communities, hospitals, and specialist services. By providing innovative, integrated solutions, the company is able to provide systems integration and interoperability to the National Health Service (NHS).

Given the scope of EMIS Health's services, DevOps capabilities are central to the company's success. Until last year, the company relied on traditional three-tier datacenter infrastructure and heavily bespoke-designed solutions to support its DevOps team. According to Iain Akhurst, Hosted Services Director at EMIS Health, this infrastructure and bespoke design limited the scalability, agility, and time to market for the services EMIS Health provides.

To address these challenges, EMIS Health decided to migrate development and testing workloads – and eventually other workloads – to converged infrastructure solutions. It chose to deploy two Hewlett Packard Enterprise (HPE) ConvergedSystem 700x systems supported by HPE OneView infrastructure management software. After deploying these HPE ConvergedSystem 700x systems in December 2014, EMIS Health migrated its extensive internal DevOps and much of its other development and testing-related operations to this platform and also began using it to host new customer-facing services.

Business Value Highlights

Organization: EMIS Health

Location: Leeds, United Kingdom

Challenge: Centralize EMIS Health services such as DevOps and testing while improving scalability and agility of IT services and reducing reliance on bespoke systems

Solution: Two HPE ConvergedSystem 700x systems and HPE OneView

Five-Year Cumulative Benefits:

- £4.51 million in business benefits
- ROI of 174%
- Payback in 13 months

Other Benefits:

- 83% faster deployment of virtual machines
- 60% average time savings on deployment per DevOps project
- £365,000 additional revenue per year

Akhurst cited the impact on scalability and time to market of services as the most significant benefit his company is achieving thus far with its HPE ConvergedSystem 700x systems. He explained that DevOps team members and other employees requiring servers and storage for development and testing can now access those resources in near real time, which enables them to respond to business demands faster and substantially increases their productivity. In addition, the reduction in time needed to provision these resources means that development cycles for EMIS Health's services have also been reduced, resulting in an infrastructure that is more efficient in supporting the company's business activities.

EMIS Health is also leveraging its use of HPE ConvergedSystem 700x systems to achieve higher revenue because it now has the infrastructure capacity to host new customer-facing services. Meanwhile, thanks to HPE OneView, EMIS Health's IT staff spends less time on general maintenance workloads and can take on more projects. In addition, EMIS Health is in the process of decommissioning servers and other hardware as it migrates workloads to the HPE ConvergedSystem 700x systems, which will reduce costs associated with these servers and other hardware.

Based on interviews with Akhurst, IDC projects that EMIS Health will achieve business benefits in the form of reduced costs, increased employee productivity, and higher revenue worth a discounted value of £4.51 million over five years. This translates to a projected five-year return on investment (ROI) of 174% and a payback period of 13 months.

Implementation

Akhurst explained that EMIS Health's move to converged infrastructure with HPE ConvergedSystem 700x systems was the logical culmination of the company's IT team gradually building what was already a more converged-like infrastructure environment over a number of years. According to Akhurst: "It was becoming similar to converged, but we were still missing the last steps of hooking everything together to take advantage of the benefits of a heavily automated build and deployment operation."

EMIS Health began looking at converged systems in 2014 with the intent of moving its DevOps workloads to a converged environment. The three-tier infrastructure supporting its DevOps workloads was nearing the end of its useful life and was becoming more costly to maintain. In addition, EMIS Health had become aware of potential benefits with converged infrastructure in terms of scalability and time to market, and it saw improvements in these areas as important to its success. It chose HPE ConvergedSystem 700x systems in part because the company was already using HPE hardware and because its IT staff was already familiar with HPE servers and hardware.

In fall 2014, EMIS Health deployed two ConvergedSystem 700x systems, one in each of its datacenters. EMIS Health worked with HPE to link up these datacenters so that it could replicate the ConvergedSystem 700x systems, allowing it to offer automated disaster recovery operations. According to Akhurst, his company split the ConvergedSystem 700x systems in two, using them for its DevOps workloads to support its ISV operations and for third-party customers that wanted to host their solutions on EMIS Health's infrastructure. EMIS Health is already using HPE OneView for its ConvergedSystem 700x systems, and Akhurst explained that the company is starting to use the software for controlling its bespoke environments.

"The main driver that sent us down this route to HPE ConvergedSystem infrastructure was the time to market on getting infrastructure up and running and in the position where we could add our own customization to it."

Akhurst said that EMIS Health continues to evaluate new use cases for its HPE converged infrastructure. According to Akhurst, this has occurred as the business has realized the power of the HPE ConvergedSystem 700x in terms of making IT operations more scalable and responsive to business demand. As a result, EMIS Health continues to evaluate other use cases for converged infrastructure analyzing projects of all sizes.

Benefits

Akhurst explained that the most significant benefit EMIS Health is realizing with its HPE ConvergedSystem 700x systems is how the reduction in time to deploy compute resources has improved its scalability, agility, and time to market. He explained: "The main driver that sent us down this route to HPE ConvergedSystem infrastructure was the time to market on getting infrastructure up and running and in the position where we could add our own customization to it." With thousands of customers, EMIS Health is constantly developing, testing, and deploying new services as well as making changes to existing services. Since deploying HPE ConvergedSystem 700x systems with HPE OneView, the company has substantially reduced the time needed to provide the compute and storage resources that its DevOps and development/testing teams require. As a result, these teams are more productive, helping EMIS Health provide more services while also reducing their time to market.

These benefits for EMIS Health stem from needing far less time to provision virtual machines (VMs) with the two HPE ConvergedSystem 700x systems. According to Akhurst, improved performance and capacity enable EMIS Health to deploy a six-VM environment in an average of 15-20 minutes with up to five deployments in parallel, compared with needing one hour on average to deploy a single VM with its previous traditional three-tier infrastructure, with up to three deployments in parallel. Likewise, EMIS Health can now deploy storage resources in considerably less time, needing only several minutes compared with 30 minutes with its previous three-tier infrastructure. EMIS Health has also been able to enable self-service capabilities with HPE ConvergedSystem 700x systems for provisioning VM resources for many employees who engage in development and testing activities, which improves their productivity and agility.

"The HPE converged infrastructure has allowed us to have instant performance and efficiency gains, particularly for the DevOps team as the first big internal customer."

The most significant impact of this scalability has been on EMIS Health's four-person DevOps team. Akhurst said: "The HPE converged infrastructure has allowed us to have instant performance and efficiency gains, particularly for the DevOps team as the first big internal customer." Akhurst estimated that this team has reduced the time for the deployment phases of its activities by 60% on average, time that team members can reinvest in supporting additional services or transferring to other activities associated with their jobs. In addition, other teams that rely on the ability to quickly provision compute resources for testing, including the development and testing staff and the call center staff, are also benefiting from being able to self-service VM resources in a matter of minutes rather than enduring drawn-out deployment and even procurement processes.

EMIS Health's deployment of HPE ConvergedSystem has also given the company the capacity needed to support additional revenue-generating services, especially by enabling EMIS Health to host partner services. Akhurst explained: "With the HPE ConvergedSystem 700x systems, we are now able to host partner services and provide services to other third-party customers that we probably could not have done in a cost-effective way." In addition to this incremental revenue from hosting, according to Akhurst: "The HPE ConvergedSystem 700x systems have allowed us to introduce new customer-facing services that previously may not have been financially beneficial due to the build and maintenance overheads."

The HPE ConvergedSystem 700x systems have further provided the resilient and secure infrastructure environment EMIS Health requires, with no unplanned downtime occurring in the first 10 months since deployment. Akhurst noted that cross-site failover between the two HPE ConvergedSystem 700x systems will enable EMIS Health "to carry out a major rollout of firmware with no downtime or outages." Further, EMIS Health's ability to now economically provide loss-less hosting services with HPE ConvergedSystem 700x systems, increasing the security of the company's data and enabling reconstruction from compressed data, makes it easier for its third-party customers to meet NHS health requirements, a key consideration given regulatory requirements.

EMIS Health is also creating efficiencies for its IT staff with HPE ConvergedSystem 700x systems and HPE OneView by reducing the time needed to perform everyday tasks, centralizing management through HPE OneView, and minimizing the time staffs need to interact with the underlying hardware. While EMIS Health is still in the process of rolling out HPE OneView for infrastructure management, Akhurst explained that he expects substantial efficiencies for his company's core infrastructure management team as the burden of "keeping the lights on"-type activities is reduced. In addition, the IT staff team will benefit from efficiencies in automated life-cycle management features built into HPE OneView when making configuration changes to the HPE ConvergedSystem 700x systems' FlexFabric interconnects and server profiles.

Quantifying the Benefits

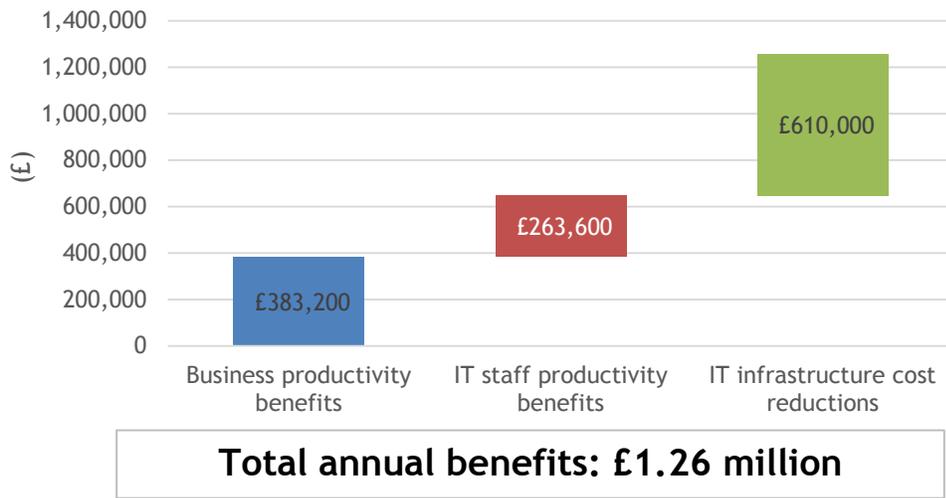
Based on interviews with Akhurst, IDC has quantified the business benefits that EMIS Health is expected to achieve through its deployment and use of HPE ConvergedSystem 700x systems and HPE OneView. IDC has quantified the business value EMIS Health is realizing with HPE ConvergedSystem in three areas:

- **Business productivity benefits**, including higher productivity of staff who benefit from faster deployment of server and other datacenter resources as well as additional revenue from being able to support additional lines of business
- **IT staff productivity benefits**, including time savings and efficiencies that its datacenter build and operations team is realizing with HPE ConvergedSystem 700x and HPE OneView
- **IT infrastructure cost reductions**, including cost savings and avoidances from retiring datacenter infrastructure and reducing spending on licensing and cloud services

IDC puts the value of these benefits at an average of £1.26 million per year over five years (see Figure 1).

FIGURE 1

Average Annual Benefits



Source: IDC, 2015

Business Productivity Benefits

EMIS Health is already achieving substantial time savings and efficiencies for key groups of employees and has been able to grow its revenue as a result of deploying HPE ConvergedSystem 700x systems and HPE OneView. IDC projects that higher productivity for employees who rely on fast availability of compute resources and increased revenue will be worth an average of £383,200 per year for EMIS Health over five years.

Several groups of EMIS Health employees are realizing productivity gains and time savings with HPE ConvergedSystem 700x systems because much less time is needed to spin up a new VM:

- EMIS Health's four-person core DevOps team is now substantially more productive because it spends far less time provisioning and waiting on VMs. Akhurst estimated that the team is achieving up to 60% time savings on the deployment phase of its operations, which represents a 38% productivity gain in aggregate.
- EMIS Health's development and testing staff team of 250 employees is more efficient now that it spends less time waiting on VMs to carry out its work as a result of a more scalable infrastructure and self-service deployment. As a result, the team saves time that was previously spent waiting for VMs to be provisioned.

EMIS Health has also been able to take advantage of new business opportunities with HPE ConvergedSystem 700x systems. Akhurst noted that now the company can host third-party services that it previously could not host because of capacity restraints while also more easily providing the levels of data integrity and security its customers demand, which will bring in hundreds of thousands of pounds per year in new revenue streams. Further, EMIS Health will benefit from being able to introduce additional new customer-facing services thanks to the cost and operational efficiencies of HPE ConvergedSystem 700x systems that it previously struggled to justify because of build and maintenance overheads.

IT Staff Productivity Benefits

EMIS Health is also making its IT staff operations more efficient with HPE ConvergedSystem 700x systems and HPE OneView. The team most affected is its roughly 60-person build and operations team, which will benefit from spending less time on day-to-day maintenance and operations, because of HPE OneView's template-driven software-defined policies that will enable greater reliance on automation and more efficient identification of problem areas. In addition, centralized management through HPE OneView will reduce the burden associated with managing and maintaining the more distributed infrastructure environment, which will be replaced. IDC projects that the 60-person build and operations team will achieve an average productivity gain of 19% over five years. IDC calculates that in total, these productivity benefits for EMIS Health's IT build and operations team will be worth an average of £263,600 per year over five years.

IT Infrastructure Cost Reductions

EMIS Health is also benefiting from reducing IT infrastructure-related costs by consolidating its datacenter environment with HPE ConvergedSystem. IDC calculates that it will reduce and avoid datacenter-related costs worth an average of £610,000 per year over five years with HPE ConvergedSystem. These savings include:

- Decommissioning a total of 79 physical servers supporting around 600 VMs, which will enable EMIS Health to avoid networking, maintenance, power, and datacenter space costs associated with these servers
- Replacing substantially more expensive enterprise licensing with standard licensing
- Reducing spending on cloud services by having more capacity to host services on HPE ConvergedSystem 700x systems

Return on Investment

IDC projects that EMIS Health will achieve discounted benefits worth £4.51 million over five years by moving workloads and services to HPE ConvergedSystem 700x systems supported by HPE OneView software, compared with a total discounted investment of £1.65 million. For EMIS Health, this results in a projected five-year return on investment of 174% and a breakeven time on its investment of 13 months (see Table 1).

TABLE 1

Five-Year ROI Analysis

Benefit (discounted)	£4.51 million
Investment (discounted)	£1.65 million
Net present value (NPV)	£2.86 million
Return on investment (ROI)	174%
Payback period	13 months
Discount rate	12%

Source: IDC, 2015

IDC conducted several interviews with Akhurst to discuss EMIS Health's investment in and use of HPE ConvergedSystem 700x systems and HPE OneView. IDC used these interviews to gather the information needed to quantify the benefits and investment associated with the company's use of these HPE products and created an ROI analysis from the results.

IDC calculates the ROI and payback period in a three-step process:

1. Measure the financial benefits directly resulting from the solution, including decreased IT infrastructure costs, increased IT staff and user productivity, revenue enhancements, and operations cost reductions since deployment.
2. Ascertain the total investment.
3. Project the investment and benefit over five years and calculate the ROI and payback period. The ROI is the five-year net present value (NPV) divided by the investment. Payback period (expressed in months) is the time required to pay back the initial investment and establish a positive cash flow. To account for the time value of money, IDC bases the ROI and payback period calculations on a 12% discounted cash flow.

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