Case Study

Health System Transforms Data Center Operations With New Automation Practice

The client

From primary to hospital care, rehabilitation services, pharmacies, labs, and more, this health system is one of the largest in the U.S., with more than 50,000 employees across several states.

The challenge: Shifting away from manual data center tasks without brute forcing change

A recent organizational change for the health system had ushered in a new CIO — along with a renewed focus on modernization through data center efficiencies. The client's existing methodology was significantly manual for the data center infrastructure team. This included provisioning, deploying, updating, and patching across three main platforms: Windows®, Linux®, and VMware. This large volume of manual processes and steps was becoming an impediment to progress.

Additionally, the application owners residing on these systems had different outage windows. This meant that applications had to continuously be up, or they needed to have disaster recovery or failover methodologies. What's more, there was uncertainty as to who on the team owned some of these applications, which had created silos and more inefficiencies.

The client had scripts that were manual and knew that automation was the solution — but didn't have the experience building out new methodologies and consistent processes for automation. A modernization initiative would improve not only process, but also people, who would now be able to focus less on manual tasks and more on organizational outcomes.

Project spotlight: A smarter way to deploy VDI

Leveraging Insight and Intel for strategic Virtual Desktop Infrastructure (VDI) deployment, the health system has upgraded its infrastructure even further. Insight ran deep diagnostics across more than 200 servers hosting 38,000 VDI users. Over the next 12–18 months, the client will upgrade infrastructure with a configuration of 2nd Gen Intel® Xeon® Scalable processors with Intel Optane™ Persistent memory, improving clone density for critical medical software, enhancing performance, and boosting data efficiency.

Industry:

Healthcare

Insight provided:

- In-depth assessments of current scripts and processes
- Consistent methodology for long-term success and efficiencies
- Hands-on lab demos through Insight's Research & Innovation Hubs
- Automation orchestration for advanced workflows
- Refreshed data storage and workload migration
- VDI implementation

Insight services:

- Consulting Services
- Professional Services

The solution: A best-practices methodology and execution plan for automated workflows

Insight's expertise around automation strategy could help the health system chart a strategic path forward. Since the client's data center team was new to applying fully automated workflows, a discovery phase was built into the statement of work to understand the team's current knowledge, capabilities, and processes. Insight's data center Infrastructure as Code (IaC) team was then brought in to review and define a new methodology to reach an ideal state.

Insight's Research & Innovation Hubs played a significant role during this project. According to one of our key solution architects on this project, "Performing hands-on demos in our centralized lab gave the client's leadership team confidence that Insight had a deep understanding around not only automation — but also around the orchestration that can be layered on top of automation to complete more advanced workflows."

With Insight's help, the client is now on track to implementing an all-new practice leveraging Windows patching automation through Microsoft® System Center Configuration Manager (SCCM). This includes Windows Cluster-Aware Updating (CAU) and layering on additional tools to monitor services. This ensures automated updates can be performed without impacting critical applications. Automation will also extend to the VMware® platform to simplify patching and updates. And for the client's Linux platform, Red Hat® Satellite will be leveraged for system patches and new deployments. Virtualized Linux deployments through Puppet, and IaC implementation, will round out this transformational project.

Project spotlight: Getting strategic with storage

The client is also now running production-based, fully migrated workloads in Pure Storage — the organization's standard storage platform for all applications. And with 1.3 petabytes of data to support, Insight is helping optimize and get more strategic with the client's existing Pure investment. Implementing SafeMode, a FlashBlade® feature, will give the organization located, automated snapshots of its data. This will augment the client's disaster recovery strategy in the event of a ransomware attack, providing immediate restore and recoverability.

"Migrations and forklift upgrades are a challenge — and especially for healthcare organizations, outages aren't an option," states an Insight solutions executive. "Pure is allowing this health system to run production workloads in its environment, and perform controller upgrades and in-place data migrations without downtime. This will help augment its automation efforts significantly, improve resource allocation, and change the way it delivers across the organization."

The benefits: Massive efficiency gains across the data center — from nearly 40 manual steps to zero

Armed with a new methodology for data center automation, the health system's data center team has improved service delivery, deepened its knowledge around automation tools and best practices, and optimized resource allocation.

Across three major platforms with nearly 40 manual tasks to manage historically, the team will no longer spend time manually patching, updating, provisioning, and deploying systems. Through a guided approach, the client has ensured long-term success through consistent automation processes as the team continues to orchestrate data center tasks.

"The manual repetitive tasks across every one of the workflows we have engaged on have been completely removed," adds our solution architect. "The client is committed to an end state where their operational tasks are fully automated. And Insight is here to support their goals, ensuring their teams are able to focus on architecture and oversight."

Benefits:

- Consistent process for automation across data center tasks
- End state of nearly **40 manual steps across platforms to zero**
- Stronger disaster recovery strategy
- Better visibility and understanding across application security and performance
- More time to focus on strategic IT initiatives
- Improved service delivery **across the health system**
- Decreased costs for application deployment

Insight