IBM

Major broadcaster reduces resource contention and improves performance

How BBC Studios implements automation to manage its IT environment

by Elizabeth Sheehan

4-minute read

Whenhe joined BBC Studios in 2014, Server and Storage Manager Porsche Waddell inherited a lean team and an environment that was running at over 95% capacity and was marred by frequent application performance issues.

While this frugal approach met budget requirements, it failed to adequately support the BBC's business and mission to consistently deliver high quality content that informs, educates and inspires viewers across the globe.
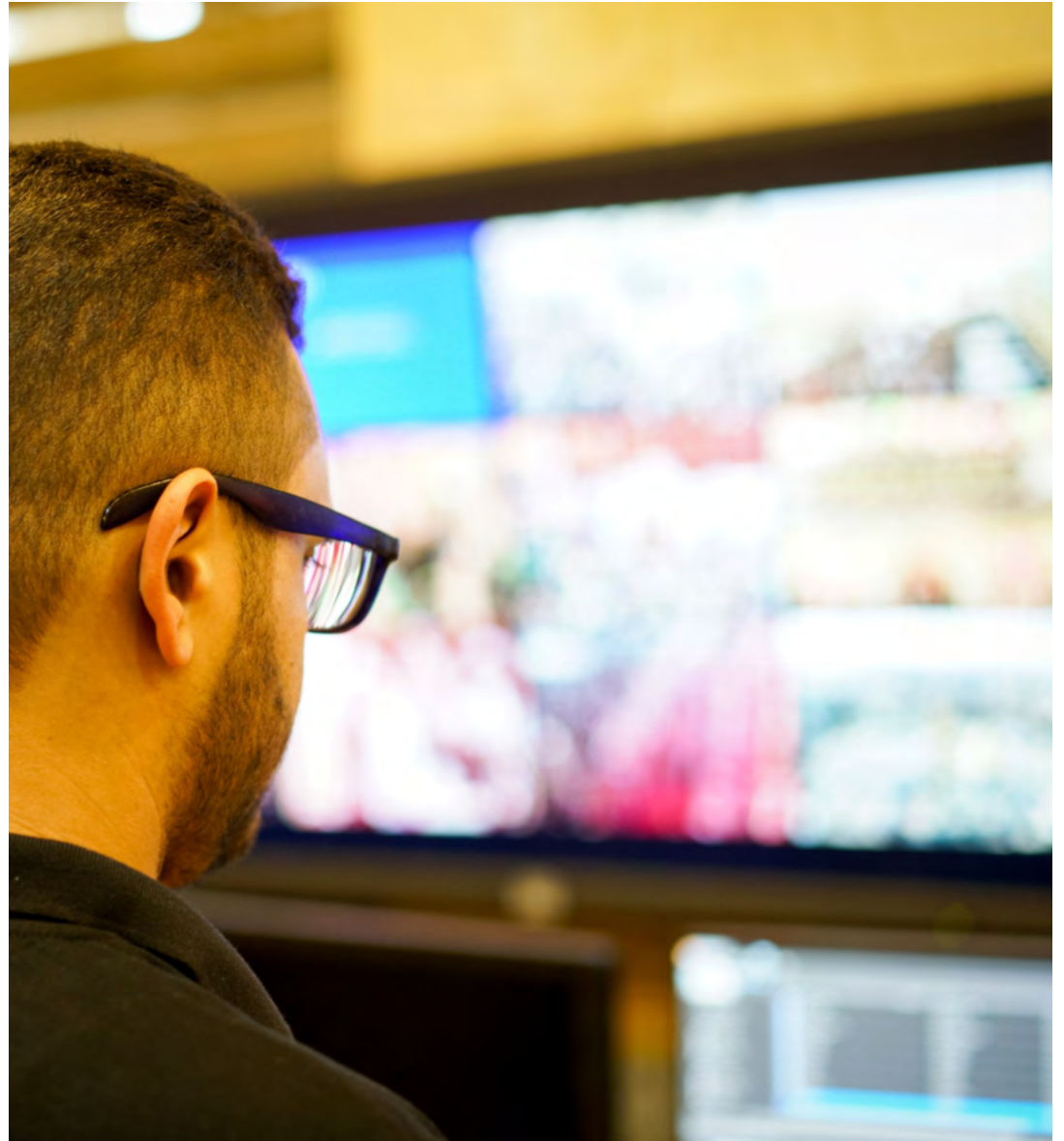
Before Waddell joined, the team routinely received complaints from end users. Since their existing tools could not adequately identify root cause, Waddell and his team were stuck in a cycle of constantly fighting fires. They could not proactively prevent performance issues in their on-premises environment of 1,000 virtual machines (VMs) and they had limited time to focus on strategic initiatives. They needed to find a way to simultaneously minimize cost and assure application performance. This was when they turned to the IBM® Turbonomic® Application Resource Management (ARM) solution.

BBC Studios relies on IBM Turbonomic to assure the performance of

1,000

VMs

In 1 month alone, the BBC Studios team reclaimed

228 GB

of memory

Relying on full-stack visibility and automation to allocate resources

Upon implementing Turbonomic, the BBC Studios team quickly rectified what proved to be a storage caching issue at the root of most prevailing performance issues. Applying Turbonomic automation, the team enabled VMs to migrate freely to the server and storage nodes that would best meet performance requirements.

For the first time since Porsche's arrival, the team had a full-stack view of their environment. This allowed them to better understand what was causing performance problems and identify where they could execute resizing or placement actions to bring their environment back into a maximally

efficient and performant state. Not only did Turbonomic provide specific actions to take, but it also predicted the impact each action would have before being executed.

The team began by manually executing Turbonomic's resizing recommendations, significantly reducing end-user complaints and eliminating downtime in the process. Once they saw the results of manual resizing, the team automated scheduled resizing on a select set of mission-critical applications, proactively and holistically assuring application performance.

"Deploying IBM Turbonomic was a turning point for us in understanding what the issue was and working through it. It helped us out a lot."

Porsche Waddell, Server and Storage Manager, BBC Studios

Assuring performance during the COVID-19 pandemic and beyond

In the years that followed, the BBC Studios team continued to rely on Turbonomic to optimize their environment, but an unintentional shift occurred once the COVID-19 pandemic began. When the lockdowns started in 2020, and the team went from working collaboratively onsite to working from home, a tendency to overprovision new machines emerged. When deploying new services, the team granted application owners whatever resources they requested in the spirit of expedience and risk mitigation. Unfortunately, as pandemic challenges mounted, the team did not always have time to reassess overprovisioned allocations. While their process pleased

application owners, it led to high CPU ready values and an over-provisioned environment.

When the pandemic slowed, it provided an opportunity to streamline, and the team established a monthly maintenance window during which the Turbonomic solution automatically resized these workloads. This shift enabled the team to reclaim 228 GB of memory and 22 virtual CPUs (vCPUs) in one month alone. Because of Turbonomic, the team can now be confident they are using their existing resources as effectively as possible, and they can free themselves up to focus on strategic initiatives rather than fighting fires or searching for resizing opportunities.

In a new effort to streamline, the BBC is now in the process of migrating BBC Studios onto its infrastructure as a service (IaaS) platforms. Though they will no longer be managing their own data centers and will instead be migrated onto the broader organization's data centers, the BBC Studios team will be bringing Turbonomic with them to support their mission to minimize cost while maintaining compliance and assuring performance 24x7.

"Because we are able to rely on IBM Turbonomic's AI-powered automation to assure application performance 24x7, our team can now focus their efforts on pursuing strategic initiatives rather than fighting fires."

Porsche Waddell, Server and Storage Manager, BBC Studios

BBC STUDIOS

About BBC Studios

Since its founding in 1922, the BBC has aimed to "to act in the public interest, serving all audiences through the provision of impartial, high-quality and distinctive output and services which inform, educate and entertain." Today, the BBC provides a range of television services, digital services and radio networks that serve over 300M consumers across the world. Their programming includes BBC World Service and BBC World News, as well as a range of commercial services including but not limited to BBC Studios (external link). This story focuses on BBC Studios, which is the principal commercial arm of the BBC. The organization crafts over 2,500 hours of premium quality award-winning programs and content every year, and it reports annual revenues of approximately GBP 200 million.

Solution components

- IBM® Turbonomic® Application Resource Management