Hewlett Packard Enterprise

Case Study

GameStop
POWER TO THE PLAYERS

GameStop leverages HPE Service Virtualization to speed time to market

Objective
Speed time to market on critical projects

Approach
Deploy HPE Service Virtualization to enable IT teams to test software with virtual services simulating real service behavior

IT Matters
- Achieves approximately 50% time savings over traditional development approach (pre-order service project)
- Create virtual service in 4.5 minutes vs. at least a week (credit card application project)
- Improves continuous integration and delivery

Business Matters
- Speed time to market of critical sales channel services
- Enable "shift left" approach to quality improvements
- Reduces testing dependence on third-parties and query data enables expansion into mobile

GameStop is a global multichannel video game, consumer electronics and wireless services retailer with more than 6,600 stores worldwide. To meet the business goal of "faster time to market," GameStop's IT organization adopted a "shift left" quality approach to find and fix defects as they surface. A key enabling tool for testing software against virtual services is HPE Service Virtualization (SV).

Faster time to market for GameStop means rapid creation, development, testing and deployment of applications serving internal customers such as the company's HR department and external customers via the GameStop website and store point of sale systems. To these ends, the company's IT organization aimed to improve its testing quality and its continuous delivery and integration capabilities. One way to accomplish this was to virtualize third party and internal services, testing software against virtual services that simulate real world behavior without constraints related to the interdependency of functional components.

"The IT world has adopted the concept of 'shift left,'" says Larry Henderson, GameStop's Senior Manager of Quality Assurance. "What it means at GameStop is moving quality management closer to the beginning of projects, to better leverage continuous integration in our Dev/Test cycles. Our strategy is to virtualize all of our service layers of integration, so individual development teams can focus on their code

"We use HPE SV to virtualize out third parties and to free development teams from waiting for the enterprise services group. We use it in so many ways, it's like our Swiss Army Knife."

– Larry Henderson, Senior Manager of Quality Assurance, GameStop

and make sure it works exactly the way it should." For example, if GameStop wants to make changes to its website catalog search functionality, he explains, it doesn't need every website component to test the search; it can virtualize outbound calls to third parties and internal services. "By scaling down our environments, we add stability and testing velocity. The approach is designed to get us to the point where we can handle smaller feature sets faster, rather than doing bigger-bang releases. It's moving us towards a DevOps approach."

HPE SV stands out for robust features, ease of use

As a hands-on IT expert, Henderson downloaded and tested a variety of service virtualization solutions. HPE SV stood out for its cost efficiency, robust features, and ease of use, he says. HPE SV simulates a service's behavior in lower level environments, letting development and testing teams keep to their schedules regardless of access to required internal and external systems. By capturing and simulating the behavior, data, and performance characteristics of dependent systems, HPE SV removes development and test wait times that otherwise slow delivery of composite applications.

"The ease of use sold us on HPE Service Virtualization."

- Larry Henderson, Senior Manager of Quality Assurance, GameStop

The solution also integrates easily with GameStop's HPE LoadRunner load testing software. "The ease of use and integration sold us on HPE SV," Henderson says. GameStop partnered with iDeliver, an HPE Elite Partner headquartered in Dallas, Texas, to acquire and support both HPE LoadRunner and HPE Service Virtualization "Working with iDeliver is another value-add for us," Henderson says. "They provide us with 24 x 7 global Level-1 support and advanced mentoring in the best practice use of these HPE tools."

Bypassing third-party service constraints

A common application testing roadblock is unavailable, unstable, or costly access to

third-party services. Henderson didn't want access issues to third-party services dictating GameStop's testing workload and schedule, especially when ramping up for holiday sales. GameStop used HPE SV to virtualize the third party out of the equation. "One of my personal driving factors for getting HPE SV was third-party integrations," he says. "It's a key part of our business, and we're calling external systems from our website and point of sale system all the way through the business workflows. We didn't want to be tied to our third party's performance testing schedule. So we just virtualized them out so we could focus on our own code."

Another project in which GameStop used HPE SV was testing the application process for the company's private-label credit card. GameStop needed to rapidly implement new verbiage for the process, but it didn't allow for enough lead time for the test accounts to be provided by the third-party service. "Our third party would not be able to accommodate that testing for us," Henderson says. "To get through testing and demo, we sat together with the developer, the Quality Assurance analyst, and the business analyst. It took me less than five minutes to stand up a new service, get the data in there, modify the configuration file for the application, and test it. It was that fast. Otherwise we would have waited at least a week to coordinate the test data requirement."

Accelerating software development cycles

As GameStop "shifts left," its software development methods are moving from a sequential waterfall design toward a time-saving more agile DevOps approach. One of GameStop's customer services is the ability to pre-order games. GameStop wanted to make application changes improving the customer's pre-ordering experience. In the traditional software development cycle, GameStop's enterprise services group would have worked with the different client systems, negotiated contracts, developed and tested code, and then turned the endpoint over to development teams. That would have taken six to eight weeks. Instead, GameStop used HPE SV to stand up a virtualized endpoint, which Henderson provided to the client system so the development team could start its development and test cycle immediately. "That project stands out in my mind," Henderson says. "In the traditional cycle, developers would have had to wait at least six weeks for the enterprise services group to be complete before they could even start on their components," Henderson says. "But with the virtualized endpoint, they didn't have to wait. They completed their part in four weeks and were ready to do the final integration testing as soon as the enterprise services team finished their part. It eliminated four weeks of delay; just that alone has been a huge value-add."

> "One of the big pushes at GameStop right now is to get better continuous integration and continuous delivery. We can accomplish that through virtualizing out our various third parties and internal services, or clients, like point-of-sale websites."
>
> - Larry Henderson, Senior Manager of Quality Assurance, GameStop

Looking to the future: expanding use of HPE SV

By virtualizing third party and internal services, GameStop centralizes development and testing efforts in functional arenas independent of highly integrated systems. Development teams can work with agility in their own channels without waiting for the enterprise services group.

Case study
GameStop

Industry
Retail

Customer at a glance

Application
Services for sales channels (store point-of-sale system, web services including native mobile apps) and internal corporate systems

Software
- HPE Service Virtualization
- HPE LoadRunner

Services
- HPE Elite Partner iDeliver Level 1 support and onsite mentoring

About iDeliver
iDeliver Technologies LLC, founded in 2009 in Dallas, is a full service Performance and Quality Assurance HPE Elite partner. iDeliver provides expert consulting and high quality customer support from its USA, Costa Rica and India operations, 24 x 7.

GameStop also uses the solution in performance testing by removing the dependency of third-party integrations. HPE SV already has delivered significant cost savings, Henderson says. Pay-per-transaction access to third-party services can raise costs. Testing on third-party schedules incurs the expense of having IT staff working at night. By performance testing early, and significantly more often now due to HPE SV, in lower environments, GameStop's teams were able to increase the stability and scalability of various new and existing applications. Henderson minimized required production environment performance testing therefore greatly reducing the impact to the sales channel even in the slow sales period. Magnifying these savings, Henderson says, even greater ROI will manifest when GameStop leverages HPE SV in every test environment, not just on a project-by-project basis. The company plans to expand its use of HPE SV beyond SOAP protocols and REST architecture for building web services. Next steps include virtualizing credit authorization and further leveraging HPE SV for GameStop's SnapLogic integrated platform-as-a-service. "We're looking to sandwich the SnapLogic pipeline," Henderson says. "One end will be

> HPE Service Virtualization supports our whole 'shift left' mentality of continuous integration, improving environment stability and testing quality."
>
> - Larry Henderson, Senior Manager of Quality Assurance, GameStop

HPE Service Virtualization, and the other end will be HPE LoadRunner, so we can load test the pipeline."

The business side of the equation is getting to market faster. On the IT side, delivering the means to reach that business goal, GameStop will leverage virtualization to identify whether the company can successfully use purchased utilities, and to enable its "shift left" approach to IT environments. "We're aiming for better integration and ultimately, continuous delivery," Henderson says. "To these ends, we can use HPE SV in so many ways that it's becoming our Swiss Army Knife."

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