



Case Study | Build-A-Bear



“AppLabs was the only source that we researched that had the knowledge and ability to push this project the way that we needed. AppLabs provided the required resources and were able to adjust quickly to changes and was the only company we found able to handle our requests and was very successful at doing so. The entire process from beginning to end was beyond our expectations; we are pleased to already have referred AppLabs and will continue to refer AppLabs in the future.”

Dave East, Director of IT Network Services, Build-A-Bear



The Company | The Build-A-Bear Workshop Inc. allows customers to design and build their own stuffed animals, complete with clothing and accessories. Their website, buildabearville.com, is an online virtual town which has facilities to build bears online, and where bears can be brought to life. It also includes features such as a performing arts center with dancing and songs, a library and online networking through chatrooms. The company operates 200+ stores in the US and Canada and has franchised stores overseas.

The Challenge | The website was not a typical retail site; it was designed to provide customers with a complete interactive experience - a virtual world was to be created with different areas hosting different functions. Dave East, Director of IT Network Services at Build-a-Bear, highlighted their requirements; they wanted to ensure multiple users would be able to use the site simultaneously without having an effect on performance. They wanted to be able to understand the customer experience of a real time user and ensure stress on the site would not hinder performance. The objective of the test was to simulate the user behavior of gaming users and ensure the Build-A-Bear servers could cope with a load of up to 5000 users.

The Solution | The project required coordination between 3 parties; Build-A-Bear, the developer and the testing organization. AppLabs was the preferred testing partner based on knowledge, resources and ability needed to push the project in the right direction.

AppLabs designed the test strategy based on a thorough Discovery & Test Planning Phase. AppLabs deployed two testing teams to separate out automation efforts in order to provide a timely solution for the various load testing required and managed the test process from project inception to final report.

The application under test was a flash gaming application, where different users play the online game of Building A Bear. Cipher values were used with MD5 encryption techniques while sending login requests to the game server. Flash Decompiler was used to get the required key value from the .swf file and later this key value was used to generate the cipher used for login request using MD5 encryption technique.

All the game server requests were simulated at TCP/IP level and all the web server requests were simulated using HTTP GET and POST requests. Finally, all the requests were customized in a proper workflow sequence to get the actual output. The load generators and console were located in one of the facilities in the US; the whole

load was generated from one location over the internet from the AppLabs Performance Center. AppLabs' capability meant testing was conducted when the customer wanted it - in the middle of the night.

Most of the simulation was done in TCP/IP level to meet the customer's expectations. During the load test (using Borland's SilkPerformer), the customer logged in as a 'dummy user' to see the ramping up of users and played games in different gaming rooms. All the servers were monitored during the load test as users were scaled up to 5000 during a stipulated time period of 2 hours. Further testing was conducted to ensure stability remained over an extended period of time.

The Results |

- ▶ Excellent relationship between AppLabs and developer enabled successful completion of the performance test to ensure the new launch of Buildabearville.com was problem free
- ▶ AppLabs managed the coordination between the external development team, the Build-a-Bear QA team and our Performance Testing Experts
- ▶ AppLabs uncovered system issues that had not been considered and assisted to quickly resolve them with the development team
- ▶ The test showed that once system issues were addressed, Build-a-Bear could meet its target capacity of 5000 concurrent users.

Dave East said of the project, "AppLabs was the only source that we researched that had the knowledge and ability to push this project the way that we needed. AppLabs provided the required resources and was able to adjust quickly to changes and was the only company we found able to handle our requests and were very successful at doing so.

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