ITRINEGY

ITRINEGY'S 'GREEN BOX OF LAG' ENSURES A POSITIVE GAME EXPERIENCE FOR JAGEX RUNESCAPE PLAYERS

JAGEX

Established in 2001, Jagex Games Studio today stands as the UK's largest independent game developer and publisher and is the home of the legendary RuneScape, the world's largest MMORPG (Massively Multi-Player Online Role-Playing Game). Celebrating its 15th anniversary in 2016, RuneScape has welcomed over 245 million players to its world and more than two million of them play every month, while millions more interact avidly through social channels.

SERVED GLOBALLY, DELIVERED LOCALLY

RuneScape is a client/browser-based game serving several million players across the globe with large concentrations in Europe, North America, South America and Australia. In order to optimize the user experience across the globe, Jagex has established dedicated local datacenters in key territories, enabling players to access RuneScape from their nearest server.

Jagex's RuneScape is the world's largest multi-player online role-playing game.

However, with such a large base of players it is inevitable that some users, particularly those in more remote locations, will report performance issues to the Jagex support teams.

Responsibility for both mitigating performance issues prior to any updates and dealing with them post-launch falls to Mathew Burnett - Head of RuneScape CoreTech who manages the Technical QA team, the RuneScape Tools team and their Engine team.

"While RuneScape is a very well established game, with the great majority of potential issues already understood and documented, occasionally a new problem will surface that necessitates deeper investigation", comments Mathew, "and the most effective way to resolve the problem is to replicate the user experience in our test environment in Cambridge".

INVESTIGATING THE IMPACT OF NETWORKS

In order to make the test environment as realistic as possible Jagex factors in the player's network connections. To do this, they deploy a virtual test network which can recreate, on demand, common network impairments such as high latencies (often referred to 'lag' in the games industry), restricted bandwidth and data loss. Having access to this type of technology enables Jagex to rapidly identify whether performance related issues are associated with the links the player is using to access the game or due to some inherent fault in the game code. Either way, it helps them to better understand the true cause of the problem and the best way to fix it.

ENHANCING THE NETWORK TESTING CAPABILITY

"We have recognized the value of this type of technology for some years now and initially we deployed an in-house solution to deliver this capability," explains Willem Amoraal, Jagex IT Manager. "However, the limitations of this freeware product soon became apparent to us, both in terms of its restricted functionality and the amount of time needed to set up and run it. We knew it was time to explore a more robust and easy-to-use alternative."

A purely chance meeting between iTrinegy's Operations Director and Jagex's Head of Business Intelligence at a DevOps conference alerted the company to the fact that iTrinegy, Europe's leading producer of Virtual Test Networks (network emulators) could have the solution.

The primary purpose of the proposed solution was to test the links between the regional datacenters and the users. A key priority was the ability to set up and run these link tests quickly and easily as Mat explains: "Our Operations Engineers are highly skilled but we need them to focus on core business rather than spending time trying to simulate appropriate network conditions. As a result, we were looking for a virtual test network that was quick to set up, easy to use and didn't require the user to be a 'network specialist' to operate it."

EASE-OF-USE

iTrinegy's NE-ONE desktop network emulator, coming with both a highly initiative GUI to initially set up the required test scenarios and its LCD panel and radio buttons to quickly activate any test, as well as switch between different scenarios, comfortably met Jagex's criteria. The built-in contextual training videos embedded into the unit also help to minimize the need for formal training.

Commonly referred to as 'The Green Box of Lag', the NE-ONE has become an established component of Jagex's test environment and is regularly used by the Technical QA team to understand the impact of network impairments such as latency, restricted bandwidth, packet loss, packet sequences arriving out of order and packet corruption on game play.

In addition to helping the support teams resolve player issues, NE-ONE played a key role in testing RuneScape's new client interface that was released in April 2016 and which needed to be verified as being suitable to run across different combinations of machines, operating systems (Windows, MacOS and Linux) and network connections.

The 'Green Box of Lag' has become an become an integral part of the Jagex test environment

More recently, it has been used in the testing of Chronicle: RuneScape Legends, an adventure strategy card game that launched at the end of May.

RETURN ON INVESTMENT

Willem Amoraal sums up the value of the NE-ONE emulator to Jagex: "The cost of purchasing iTrinegy's NE-ONE has easily been recovered in the savings in time we have achieved by not having to use our old in-house emulator. The ROI for us has been the real ease of use of the product and quick speed of set-up and deployment. However, the main benefit is the fact that we have been able to achieve a higher level of customer service which fits in with our philosophy of providing fantastic experiences for our community."