Application Performance Testing for
Utilities Industry

JAR:emulate

high precision **network emulators**

Network Emulation & Pre-Deployment Testing Solutions for the Utilities Sector

To maintain the rapidly expanding set of industry applications in the utilities market, organisations are turning to network emulators to ensure they provide their customers with a high level of QoS.

Background

Throughout the world, utilities companies are increasingly planning for a future based on smart grid applications, which require more complex and advanced telecommunications systems.

The Challenge

Utilities companies have a responsibility as critical infrastructure operators to maintain electric power delivery and control in all circumstances, even when public service provider networks are congested or an extended power outage occurs, causing long latencies and considerable data loss.

There is a vital requirement for utilities companies to use a solution for application performance testing that simulates a steady increase in bandwidth consumption as traffic increases. Those responsible for maintaining electric power delivery and control grid equipment need to understand, as early as possible, the issues they will face with application performance so the costs of rework are minimal and end user performance is ensured.
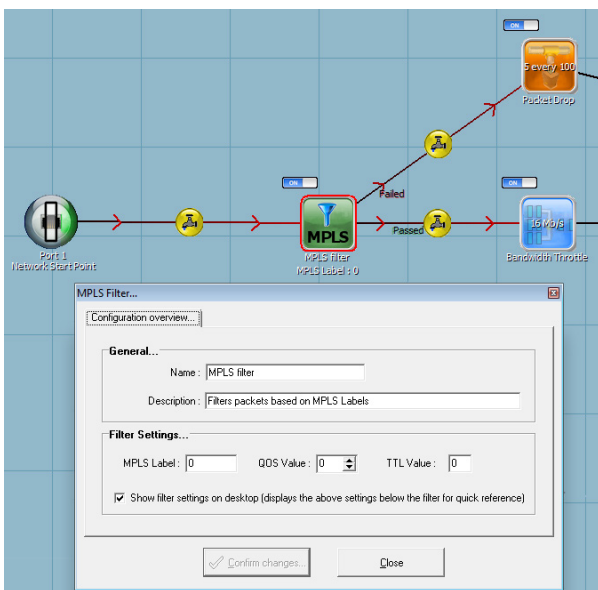
JARs' products are used to test the resilience of these business critical applications, thereby:

- Reducing the costs associated with application re-writes late in the development lifecycle
- Ensuring quality of delivery for end users – first time – regardless of the satellite network conditions present
- Reducing the costs of fixing issues by allowing for accurate trouble shooting in a virtualised, replicated satellite network

JAR:Emulates network emulators can be deployed to accurately create the high latency of Satellite uplink/downlink transfers, the effects of power outages, and congested networks that can impact on public service providers. Issues are resolved in the test lab, long before end users running business critical applications encounter them.

Ensuring Application Performance with MPLS Filtering

Multiprotocol Label Switching (MPLS) Filtering is a element of WAN Emulation ideal for utilities companies who need to filter traffic based on MPLS labels and QoS/TTL values.

By emulating a network, the size, router specifications and topology can all be controlled through the use of a 'Drag and Drop' User Interface. This allows for more flexible and larger scale testing than in a real network and costs are significantly reduced since no expensive network devices are needed. JAR:Emulate is beneficial for testing in real-time the conditions found on MPLS networks.

Casestudy

JAR was commissioned by a leading energy provider to test the preparedness of its IT and communications infrastructures in dealing with the heavy influx of traffic that is expected as a result of a new government initiative in the energy market. This organisation had to adhere to stringent end-to-end service level agreements under all possible field conditions. The JAR:Emulate unit was employed to rigorously test and troubleshoot the new networks and infrastructures that were put in place. Conditions such as limited bandwidth, high latency and data loss were injected onto the test LAN, with measurements taken of how the network reacted. This visibility allowed the application team to predict the pressure on infrastructure to dramatically reduce costs and ensure on time deployment to the end customer.

JAR: WAN Emulation Solutions

JAR provides a precision testing solution for emulating the full range of wide area networks from the safety and repeatability of a testing environment. By introducing network conditions such as latency, bandwidth limitations, jitter, packet loss, and packet fragmentation, those responsible for ensuring application performance across networks can determine the end user experience whilst the costs and time associated with remedial action are minimal.
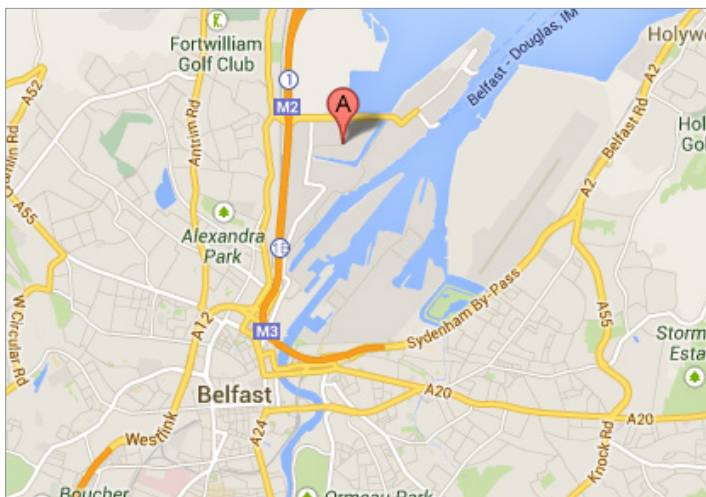
About JAR Technologies

JAR is a leading provider of Web and Application Testing Tools for the Application Performance and Quality Assurance market.

With a wide spectrum of experience and expertise from developing the **'World's first hybrid WAN Emulator'** to offering cloud based web load testing tools, JAR are committed to providing revolutionary and flexible bespoke solutions for our partners and their customers.

For more information on JAR:emulate, including more detailed information on the product range and feature set please visit www.jartechnologies.com

If you would like to discuss how JAR:emulate can benefit your company or are simply interested in finding out more please use the contact details below to get in touch.

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