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**BRITISH AIRWAYS
CHECKS
APPLICATION
PERFORMANCE
OVER DISPARATE
WORLDWIDE
NETWORK USING ITRINEGY PRODUCTS**

British Airways is the UK's largest airline, based on fleet size, international flights and international destinations. Based in Waterside, near its main hub at London Heathrow Airport, British Airways is a full service global airline, offering year-round low fares with an extensive global route network flying to and from centrally-located airports.

Recently, British Airways has embarked on a major move away from their legacy IBM green-screen systems, to a new enterprise online Airport Booking system, which today is very much in evidence at Terminal 5, Heathrow Airport. With business processes such as flight preparedness, aircraft readiness, flight load control, baggage protections, baggage delivery through to printing, messaging etc., being delivered over the company's data network, ensuring everything runs smoothly is of prime importance. This is the responsibility of the Networks Team based at British Airways' main offices in Waterside.

EQUIPPING SKYLAB

To help address network-related issues the team has established its own testing lab called 'Skylab', a very apt name, with the major airport networks being tested within this division. Ian Matthars, Senior Network Infrastructure Engineer at British Airways comments, "Sky Lab is at the hub for testing all the network integrations involving our back-office and front-end networked applications. We don't leave anything to chance - before an application can go live we thoroughly test for all the variables experienced in 'real-world' live networks, including conditions such as latency, loss, delay and jitter. These conditions can impact any application, and with our new front-end check-in/seating system for agents and customers, it's essential that we guarantee a good experience for all".

Ian and his team looked at the market and made aware of iTrinegy, as a provider of technology to test and monitor application performance across networks.

Ian and his team purchased iTrinegy's INE LCD network emulator to replicate the network and all the associated network conditions.

MAKING IT FLY

British Airway's new application 'FLY' uses a common service architecture called ESB (Enterprise Service Bus). FLY will be deployed over the coming months with vigorous testing of global networks to guarantee that it will work in Nairobi, Kenya as well as Terminal 5, Heathrow. Over time, it will replace the company's old green-screen application delivered to check-in operators, by using faster more modern devices.

The issue the team had was that the green-screens used very little bandwidth e.g. 16Kbps and this suited most of British Airway's end-point locations - some 150 airports. Now, with a richer client and poor links to some airports like Nairobi there may be performance issues due to the much higher bandwidth demands of the new application. Some of the locations rely on satellite links and here the high latencies must be taken into account.

Ian continues, "Skylab is the test environment we have set up to replicate all the networks that will be utilised for 'FLY'. We needed to replicate a target network environment between the UK and Africa. We noticed very quickly that FLY was running much slower in

With British Airway's extensive experience in WAN networks, they realised the scope of these risks and knew they absolutely needed to test their new 'FLY' applications in the worst possible network environments. Understanding the impact the network has on application performance is essential and it's part of the 'Skylab' team's remit to continue to guarantee that British Airway's business processes remain unaffected by the application journey over world-wide networks.

"We noticed very quickly that FLY was running much slower in Nairobi due to the high latency associated with the country's in-place satellite links, and using the network emulator we were able to easily set-up and test the application as if we were actually testing using the actual network in Nairobi."

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CREATING THE WORST KIND OF NETWORKS

Ian again "Network emulators allow us to create the worst kind of networks, and seeing how our applications behave allows us to make sure our systems work no matter where in the world our networks, staff and customers are located and INE LCD continues to be an important part of our network testing within our Skylab."

iTrinegy's INE LCD Network Emulator is a portable appliance that is well suited to this type of task as it enables the user to see how an application or device will work in a realistic replication of environments such as WAN, Cloud, Mobile, Wireless and Satellite networks etc., prior to actual deployment. Its ability to mimic characteristics such as restricted bandwidth, link speed, latencies, jitter and packet loss etc. means that the user is able to quickly identify how these factors can affect application behaviour.

British Airways is no novice when it comes to making the most of new emerging technologies to enhance both their staff and customers experiences of the company's services. Recognising the potential benefits of mobile devices such as tablet PCs and smart phones that their customers and staff use every day, Ian and the rest of the Networks Team are now looking at the best way to test these technologies and the INE LCD will be an essential part of the project.