



London Clubs International Makes a Safe Bet with VMware Casino Consolidates Core Business Applications onto VMware Infrastructure



KEY HIGHLIGHTS

INDUSTRY: CASINO GAMING

CHALLENGE

- Complete move to electronic gaming platform across UK
- Ensure reliable, robust IT infrastructure across branch offices and headquarters

SOLUTION

- VMware Infrastructure 3 provides highly available platform for future growth

RESULTS

- Roll-out of electronic games system on virtual infrastructure
- Cost avoidance through not buying physical servers
- Continuous availability through VMware HA
- Application delivery cut from one day to less than an hour

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Charles Rayer, IT Manager, London Clubs International

Moving to Electronic Gaming Platforms with Virtualization

London Clubs International (LCI) is a leading casino operator with eight sites across the UK, as well as operations in Egypt and South Africa. Now part of Harrah's Entertainment, the world's largest provider of branded casino entertainment, LCI has run casinos for more than 40 years and supports every level of the gaming market.

LCI decided to roll out a new electronic gaming platform across all of its sites in the UK. Each casino would run a variety of new games for customers that would be hosted locally, but all customer activity data would be taken and sent to the organisation's head office based in London. There, the data could be mined and loyalty programs designed to ensure retention of the high-value customers. With a great deal of competition for the exclusive premier player sector in which LCI specializes, these loyalty programs have become the best way for casinos to differentiate themselves in the market.

Charles Rayer, IT manager for London Clubs International, was responsible for managing the roll-out of the IT systems that would support the new electronic gaming systems. Working with Foundation IT, a VMware Enterprise Partner, he evaluated the IT infrastructure that LCI would put in place at both local and head office locations. "As we were essentially starting our electronic gaming system from scratch, we had to look at the best ways that IT could support the business," said Charles. "The biggest decision that we had to make was how to ensure that the data generated was always protected."

To meet the casino's high availability and management needs, Charles and his team selected VMware® Infrastructure 3 to run the organisation's central database platforms, as well as host a number of other applications.

VMware Infrastructure 3 Helps Eliminate Downtime

Critical to the success of this roll-out was the level of availability the system could deliver. "In the casino industry, any incident would have a severe effect on how customers perceive us, and potentially lead to them going elsewhere," said Charles. "The loss of any application data can have an impact on the decision-making ability of the company as well. The solution that we put together with Foundation IT meant we were covered against any IT issue affecting customers, and that there were no single points of failure within the system."

Moving to a virtualized environment has delivered the following benefits:

- **Avoidance of downtime.** The portability of virtual machines means that there is no downtime incurred whenever physical server maintenance has to be carried out. Any virtual machine on the affected physical host can be moved to another system using VMware® VMotion™, without any impact on end users accessing the application.
- **High availability.** VMware® High Availability (VMware HA) is one of the key components of VMware Infrastructure. If the host server underneath a virtual machine is affected by any issue, VMware HA automatically restarts that instance on another physical platform.
- **Application delivery.** Putting new applications onto a physical server had been a time-consuming process. The testing and re-building of each application across the various product versions would take a full day to complete. Using VMware Infrastructure, Charles and his team can now accomplish the same task in less than an hour, as the various machines are stored as templates and deployed when necessary.
- **Cost avoidance.** By using VMware Infrastructure with HP blades, LCI was able to buy far fewer physical server platforms to run its electronic gaming systems. This led to cost savings in terms of power and space, and also meant that the company avoided having to buy additional physical server hardware.

Rolling out Loyalty Programs with VMware

In rolling out an electronic gaming platform, LCI has issued each customer with a loyalty card. Every transaction made by a customer can now be tracked, including food and drink purchases and gambling stakes. While bets can be made in cash, all winnings are made in the form of tokens; these can be cashed in at the casino or retained for subsequent visits.

The electronic gaming system covers the company's casino network of eight locations that all feed real-time data back to the databases that are held at the head office in London. At each site, a fault-tolerant server from Stratus Technologies is used to host the gaming applications and harvest the data from customer loyalty cards. This information is then held with the company's SQL Servers: these databases host information that supports the conference booking system as well as internal IT resources and the electronic gaming systems.

Within the head office data centre, Charles installed an HP blade centre chassis with six BL25P blades. VMware Infrastructure is installed on three of the blades and hosts a number of key applications, such as SQL Server, Lotus Domino, Terminal Server environments and file and print servers. The SQL databases support the firm's electronic gaming applications, conference booking system and Terminal Server instances. The three remaining blades host two domain controllers and the company's catering application server.

VMWARE INFRASTRUCTURE 3 AT WORK

- VMware Infrastructure 3 Enterprise Edition
- HP BL25P Blades
- HP StorageWorks 1500cs SAN
- Guest OS: Windows
- Applications run include SQL Server, Lotus Domino, Terminal Server, electronic gaming and conference booking systems

“Now that we have moved over to a virtual infrastructure, we have taken a ‘virtualize first’ policy on any new applications that we decide to install,” said Charles. “We have a large amount of computing resources that we can tap into so, unless there is a specific reason, we will always run an application in a virtual machine. We currently have our time and attendance application, Citrix servers and additional Lotus Domino instances being tested within virtual machines; as soon as we have completed our test procedures they will be added to the VMware Infrastructure pool.”

One of the key reasons for LCI’s use of VMware Infrastructure was the level of availability that its system required. Avoiding any downtime within the system was a critical part of the solution that was chosen, due to the round the clock nature of LCI’s business. “We rely on our loyalty and gaming systems because they are at the heart of our business model,” commented Charles. “We had to be sure that these systems could be protected against any possibility of failure. By using VMware HA, our virtual machines are always available. We have set up pairs of virtual servers to run our most important applications in a cluster system, and we have rules set up in the VMware® VirtualCenter management console so that these machines automatically reside on different blades. Even if a problem does affect one of these physical systems, the cluster will carry on working and we will not experience any downtime.”

Aside from rolling out additional applications within virtual machines, Charles is planning to upgrade his physical blade servers over time. “We started off with six gigabytes of RAM per machine, but we have the ability to add more memory to the blades as we need it,” Charles explained. “Making this addition is very simple, and vMotion ensures that we don’t have to go through any downtime. Being able to carry out proactive maintenance without any affect on our customers was one of the primary reasons we chose VMware.”

The second element of LCI’s expansion plan is a remote disaster recovery site that will be available over a WAN link, also based on VMware Infrastructure 3. Currently, LCI is using Neverfail for SQL Server to provide additional protection for its SQL databases. “The reason why we chose Neverfail was for their Low Bandwidth Module. Once we are protecting our applications in a WAN environment, as well as on a LAN, we will be able to optimize our overall network. Having VMware and Neverfail together gives us peace of mind.”

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