Profile

This client owns a group of online portals which associate lottery programmes with online charity and fundraising promotions wherein people get a chance to bid for special time with celebrities. The money generated through this bidding is then utilized for charity purposes. In this process, the client performs duties of an external manager which handles the overall lottery process for its charity clients. The client holds a valid license from the Gambling Commission, and provides various online marketing tools used by charities for promoting campaigns.

The client has multiple portals, each of which is associated to a specific areas like sport celebrities, comic celebrities, celebrities on various social networking sites.

Business Challenges

Although the client decided to have individual portal for each type of lottery and fundraising, this decision put forth some key infrastructure related challenges, which were:

- **Handling huge traffic to each portal** - During promotions, campaigns etc.
- **Handling very high MySQL query transactions** – These transactions are integrated to different payment gateways at the backend.
- **Security** – As the portals involve financial transactions, security had to be top notch.
- **100% uptime** – all portals have to be up and running all the time.
- **Session management** – The sessions on each portal had to be managed appropriately as they involved commercial transactions.
- **UK based Server and 24/7 Support:** Required a host that would always respond quickly to requests.
- **Completely Managed Solution:** A host that could look after the server maintenance and software upgrades including the server security.

Solution

Considering that security and availability were of paramount importance, the eUKhost Solutions Team proposed a multi-server load balanced cluster consisting of redundant Apache and MySQL Servers, which also assured high availability. The solution comprises of a Load Balancer and 4 nodes, each having an instance of Apache and MySQL serving the incoming traffic and executing queries to database. The Load Balancer receives internet traffic through a dedicated CISCO firewall and directs it to the individual nodes based on various load balancing algorithms. The Load Balancer also acts as a management node for MySQL.

This solution distributes the traffic between nodes in the cluster supporting tens of thousands of connections. The nodes are also being synched in real time to ensure that information on all nodes is updated to the latest timestamps.
The following network diagram shows overall setup of this cluster:

Benefits

The solution was designed in keeping with certain specific requirements and benefits. After the setting up of this solution, the client started to notice improvement as indicated below:

- Each portal being served from multiple servers thereby distributing load evenly on all servers.
- Load being spread among several servers assuring service availability at all times.
- Highly secure and redundant infrastructure.
- Availability of backup servers in case a main server fails.
- Protection from specific types of malicious scripts and requests avoiding unwanted traffic and cyber attacks.
- Guide clients to the right application server depending on application cookies.
- Ability to add any number of servers, web or DB, as and when needed.
- 24x7 Customer Support
  - Designated staff assigned for problem handling
  - Easy to reach either by email, phone, or online chat
- Secure Data Center with multi-layer security
- Round the clock server monitoring
- Hardware Guarantee