KB Group

Robust, Proven IT Solutions

eticketing Solutions

eticketing Architecture Overview

The purpose of this document is to provide Ticket Office management with an introduction to eticketing service capabilities. With the uptake of ecommerce on the Internet, Ticket Office management are now wishing to develop eticketing services that provide real time online ticket booking transactions that directly interface to their existing ticketing systems using the World Wide Web.

This document attempts to provide initial and preliminary information in order to assist customers determine how they should proceed. If you are interested in developing eticketing in more details then please contact KB Group.

Architecture Options

There are two primary architecture options available to implement eticketing services using your ticketing system. Two diagrams at the end of this document specify the two architecture options that are available in order to establish eticketing services. The first option is having an internally based web server. This means your web presence is managed within your existing network. This involves purchasing or leasing a web server to run the eticketing services and configuring it to operate within your existing network. This option provides more control over the web server for the customer, however it requires a separate server as well as ongoing technical expertise to manage the environment. It is possible to operate this environment while still retaining a separate non-ticketing website at another location, such as the existing company website. Configuration of the firewall is required to allow traffic to pass through on designated ports applicable to the web traffic.

The second option is having an externally based web server. This means your Internet Service Provider manages your eticketing web presence. Typically this involves leasing space on an existing web server, leasing an entire web server or providing your ISP with your own equipment on a facilities management basis. The fundamental difference between this architecture and the first option of an internally based web server is that the web server is located at your ISP. Configuration of an Internet firewall is required to allow traffic to pass through on designated ports applicable to the web traffic.

KB Group has further discussion documents regarding which topology to employ. If you have any questions or queries then do not hesitate to contact us.

Minimum Requirements

There are a number of minimum requirements both in terms of hardware and software that are required before eticketing services can be commissioned. These are subject to the architecture option chosen. The minimum requirements for developing eticketing services are:

Microsoft Products

All server equipment must be running Microsoft Windows Server. We also have functionality available on the Linux/Unix platforms (contact us for more details about these platforms). If your existing web presence is hosted on a non-Microsoft platform then you can maintain this presence and establish an eticketing presence by adding hyperlinks from your existing presence to your eticketing site. This would be on a separate domain. For example your main content marketing site at http://www.yourcompany.com/ would contain hyperlinks at appropriate places pointing to https://tickets.yourcompany.com/ where the online eticketing services operate.

The ticketing system also requires a Microsoft SQL Server or an alternative SQL database (eg Oracle, Sybase or MySQL). Alternative database platforms can be investigated as required.

Third Party Products

Eticketing services can use a variety of different credit card authorisation systems. These include Retail Logic's SolveSE, Commidea's WinTI, IC Verify or Anderson Zaks RedCard for online credit card authorisation. Other third party online credit card authorisation products can easily be implemented and will be investigated as required. This includes interfaces to electronic payment gateways such as Barclay's ePDQ payment gateway or World Pay for example. Solve SE and WinTI

interface directly with the bank acquirers to obtain credit card authorisations for online transactions and perform end of day payment file generation for the transfer of funds.

KB Group have developed a formal process for obtaining bank authorisation using these credit card authorisation products. Banks and credit card acquirers require that a separate Merchant Number be obtained for all Customer Not Present (CNP) eticketing transactions.

Firewall Technology

It is mandatory that each site implement suitable firewall technology. This is designed to prevent unauthorised use of any of the resources associated with establishing a public presence on the Internet. KB Group do not have any particular preference as to which products are used although we are happy to offer consulting assistance. The establishment of eticketing services requires careful consideration of your network design and architecture, especially with the security risks associated with establishing a Demilitarised Zone or DMZ.

Internet Connections

An external connection to the Internet is required. You will need to discuss the various bandwidth connection options with your ISP to ascertain which options best meet your requirements. The bandwidth for the external connection to the Internet is largely driven by price and expected demand. An analogue or digital dial up connection (such as ISDN) is not likely to be sufficient to meet the requirements of the eticketing services. A leased line to the Internet of at least 256 kbps is the likely minimum bandwidth, however this minimum requirement may be higher and is subject to the anticipated usage of the web presence. Many telephone companies offer services whereby larger bandwidth connections can be ordered and installed but a lesser bandwidth utilised and paid for on an ongoing basis. When increased bandwidth is required the remaining capacity of the

connection can then be used. Typically this option is slightly more expensive to initially install. However it is much cheaper to upgrade later on when demand has increased.

Technologies such as SDSL have also been proven to be cost effective. If you wish to discuss your permanent Internet connection topology please contact KB Group.

Domain Registration

In order to establish a web presence you will need to register a domain. This provides you with a unique worldwide pointer to your web presence. Domains are the name given to your entire web presence. These are referenced by your customers as a URL, eg www.yourcompany.com

The establishment of eticketing services do not require that a dedicated domain be registered, however many customer like to distinguish between their static web presence and the online eticketing services.

Secure Site Certificate

It is essential that you obtain a Secure Site Certificate for your eticketing web presence. Most banks will not authorise customer not present Internet based transactions without a Secure Site certificate installed. This provides the security for your customers that while they are entering personal and confidential information into the website that no unauthorised personnel can access the same information. Utilising a secure site certificate means the server software encrypts information, ensuring that Internet transactions stay private and protected.

Other Components

Eticketing services make extensive use of email to send information to ticketing customers regarding their bookings. This is an optional feature but it has become the accepted standard on the Internet for communicating with customers. It is strongly recommended that this functionality be included in your website development plans. Connectivity to your email system is required to facilitate external communication via email.

Suggested Equipment Specifications

There are recommended minimum hardware specifications for each of the components that comprise the complete eticketing solution. These are specified on the diagrams at the end of this document. It is possible to operate on platforms with lower specifications however this may have a negative impact on the overall performance on the eticketing service. If you are in doubt, contact KB Group.

Creating the Testing Environment

In order to develop an eticketing system, an Intranet based testing environment will need to be established internally. The purpose of this is to provide staff with a mechanism to ensure the website performs as expected and meets the requirements of the business. It also has an ongoing function in that additions to the website can be tested by staff prior to being published into the live environment.

In order to establish a test system an internal test web server will be required. This is not required to have the same specifications as the live web server. A test installation of your card authorisation solution is also required. This creates test authorisation numbers for use while implementing the solution.

Environmental Considerations

In addition to the hardware and software specifications there are also physical environmental considerations that need to be considered. The equipment that operates the eticketing services must have adequate physical and electronic security. This is to prevent unauthorised access to critical information stored on the various components.

In order to ensure robust and reliable performance the equipment must be kept in a controlled environment. This environment needs to be kept clean at all times with air conditioning and power conditioning (uninterrupted power supplies).

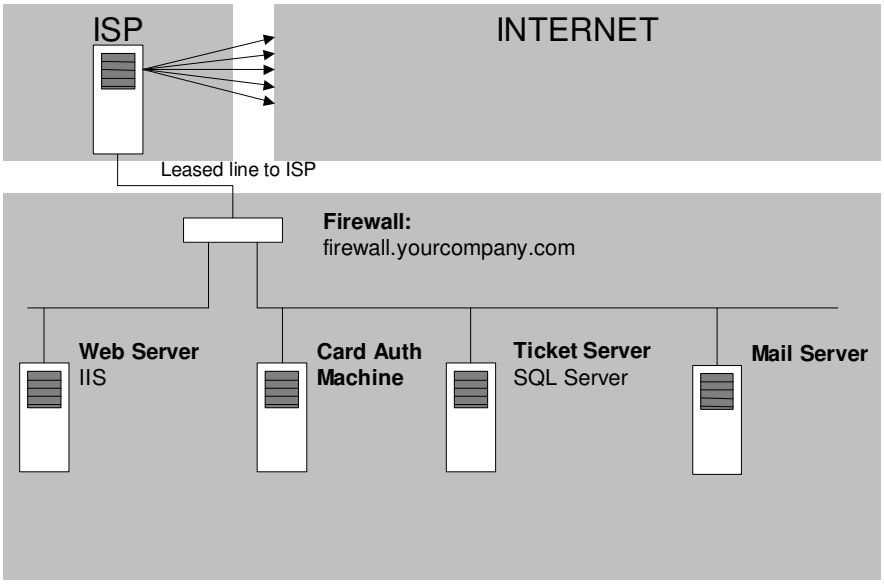
Where to from here?

If you are interested in developing eticketing services the appropriate steps to take are:

1. Advise KB Group of your interest in developing eticketing services
2. Ascertain whether or not you meet the minimum specifications
3. Ascertain your business requirements in as much detail as possible
4. Create a storyboard of your proposed site using a tool such as PowerPoint

Architecture Diagrams

Online eticketing network - Internal Web Server



Online eticketing network - External Web Server