Our Domain: Conference Management System

Meetup is an organization, plans to launch the Conference Management System, a new online service that will enable other companies or individuals to organize and manage their own conferences and events.

The Conference Management System application is one of the first innovative online services that Meetup wants to take to market. As a startup, Meetup wants to develop and launch these services with a minimal investment in hardware and IT personnel. Meetup wants to be quick to market in order to start growing market share, and cannot afford the time to implement all of the planned functionality in the first releases. Therefore, it is important that the architecture it adopts can easily accommodate changes and enhancements with minimal impact on existing users of the system. Meetup has chosen to deploy the application on Windows Azure in order to take advantage of its ability to scale applications as demand grows

# Overview of the system

Meetup plans to build an online conference management system that will enable its customers to plan and manage conferences that are held at a physical location. The system will enable Meetup’s customers to:

• Manage the sale of different seat types for the conference.

• Create a conference and define characteristics of that conference.

The Meetup Conference Management System will be a multi-tenant, cloud-hosted application. Busi­ness customers will need to register with the system before they can create and manage their confer­ences.

# Selling seats for a conference

The business customer defines the number of seats available for the conference. The business cus­tomer may also specify events at a conference such as workshops, receptions, and premium sessions for which attendees must have a separate ticket. The business customer also defines how many seats are available for these events.

The system manages the sale of seats to ensure that the conference and sub-events are not oversubscribed. This part of the system will also operate wait-lists so that if other attendees cancel, their seats can be reallocated.

The system will require that the names of the attendees be associated with the purchased seats so that an on-site system can print badges for the attendees when they arrive at the conference.

# Creating a conference

A business customer can create new conferences and manage information about the conference such as its name, description, and dates. The business customer can also make a conference visible on the Meetup Conference Management System website by publishing it, or hide it by unpublishing it.

Additionally, the business customer defines the seat types and available quantity of each seat type for the conference.

Meetup also plans to enable the business customer to specify the following characteristics of a conference:

• Whether the paper submission process will require reviewers.

• What the fee structure for paying Meetup will be.

• Who key personnel, such as the program chair and the event planner, will be

# Nonfunctional requirements

Meetup has two major nonfunctional requirements for its conference management system

1. scal­ability
2. flexibility

# Scalability

The conference management system will be hosted in the cloud; one of the reasons Meetup chose a cloud platform was its scalability and potential for elastic scalability.

Although cloud platforms such as Windows Azure enable you to scale applications by adding (or removing) role instances, you must still design your application to be scalable. By splitting responsibil­ity for the application’s read and write operations into separate objects, This recognizes the fact that for many applications, the number of read operations vastly exceeds the number of write operations.

# Flexibility

The market that the Meetup Conference Management System oper­ates in is very competitive, and very fast moving. In order to compete, Meetup must be able to quickly and cost effectively adapt the con­ference management system to changes in the market. This require­ment for flexibility breaks down into a number of related aspects:

• Meetup must be able to evolve the system to meet new requirements and to respond to changes in the market.

• The system must be able to run multiple versions of its software simultaneously in order to support customers who are in the middle of a conference and who do not wish to upgrade to a new version immediately. Other customers may wish to migrate their existing conference data to a new version of the software as it becomes available.

• Meetup intends the software to last for at least five years. It must be able to accommodate significant changes over that period.

• Meetup does not want the complexity of some parts of the system to become a barrier to change.

• Meetup would like to be able to use different developers for different elements of the system, using cheaper developers for simpler tasks and restricting its use of more expensive and experienced developers to the more critical aspects of the system.