Connecting Consumers in the Cloud

Xoriant helps a social networking photo-sharing start-up company leverage the power of cloud computing to shorten time to market and lower upfront investments.

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Background:

Our client, an upcoming Web 2.0 company, was formed to offer their customers a facility to create, modify, store and share pictures and videos online, where the customers could bring in their own pictures and videos either in electronic, paper or magnetic format. The idea is to allow users to get a seamless high quality digital experience without making any major changes from the content in the current format.

Traditionally, the experience has been that as consumers move increasingly towards creating, modifying, sharing and storing digital content online in the form of photos and videos, the demand for constant on-the-fly availability of large storage and server resources has been increasing correspondingly. Instead of taking the traditional route of making huge upfront infrastructure investments, our client, a Silicon Valley start-up has been extremely judicious in choosing and implementing their digital album applications over on-demand clouds like the Amazon S3. This on-demand infrastructure usage has allowed our client to enjoy pay-as-you-go benefits, without sacrificing any growth opportunities.

Our client's digital album facility encourages users to sign up and use many of their free features in cleaning and creating high-quality pictures and movies in print and video. To enable this, our client offers to collect the native prints and video content via self-mailing UPS shipping schedulers that have been integrated into the site. Xoriant implemented this capability using the UPS APIs, thus offering a seamless user experience for the customer to create and schedule a shipment of their digital assets to our client site. At this point, the customers are offered an option to:

- Clean up colors and red-eyes in photos
- Clean up and edit videos into full sequences, adding music

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Once these digital assets are ready, the users can create their digital albums using online tools to create and manage custom design themes. Since the entire site leverages Amazon's S3 as the backbone, our teams leveraged the right in-house technical expertise to integrate rapid-design HTML/CSS and UI components with the Amazon S3 REST APIs.

Xoriant built appropriate tracking/billing/payment mechanism to monitor and invoice usage of storage services consumed by our client's users. The payment mechanism was implemented using our standard credit card framework. Tracking/billing/payment mechanism was also built for the users who use premium services over their storage levels.

Some of the project features, which involved special implementation on our part included:

• A choice of themes for the album for the photos and videos uploaded: For e.g. If the photo set was of a birthday event, then the user could choose the album background and frame of birthday themes. The site was designed using strict CSS rules for the html pages

• Appropriate discounts and storage area for uploading photos depending on the membership level chosen.

• Various services related to photos as on-demand features on the site, which the users could purchase and pay online using "Authorize.Net Payment" gateway

To facilitate seamless back-end administration, Xoriant provided a Cron Job component that would monitor and administer user requirements, generate and publish email alerts, and provide financial consolidation for the owners. The highlight for this project has been to offer flexible, high-quality album and collaboration features for users to create, consolidate, and share their digital assets, while affording a very thin infrastructure footprint ownership for our client, thus significantly reducing the upfront investment requirement.

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In summary, the project highlights could be outlined as:

- Rigorous implementation process based on Waterfall methodology, where we sliced the project into tightly integrated modules that led into subsequent modules
- High-quality, customizable album elements, and overall site design
- State-of-the-art Microsoft technologies for design and implementation including:
    a. Visual Studio 2005 with C#,
    b. MS SQL 2005,
    c. CSS, Master Page and Asp.Net User Controls for common usage,
    d. Asp.Net 2.0 Membership Library for Managing users.
    e. Third party component integration involving:
        i. AmazonS3 Storage Service - Storing all the media files
        ii. UPS Freight Service API -Provide online courier service to customer and track the parcel.
        iii. Payment Gateway of Authorised.Net- For credit card process

Xoriant teams can now combine the experience obtained during this project and our overall experience designing and implementing web technologies, tools and applications to help our future Web 2.0 and enterprise software clients better leverage the virtues of Software-as-a-Service (SaaS) and cloud computing, the emerging standards in the industry.

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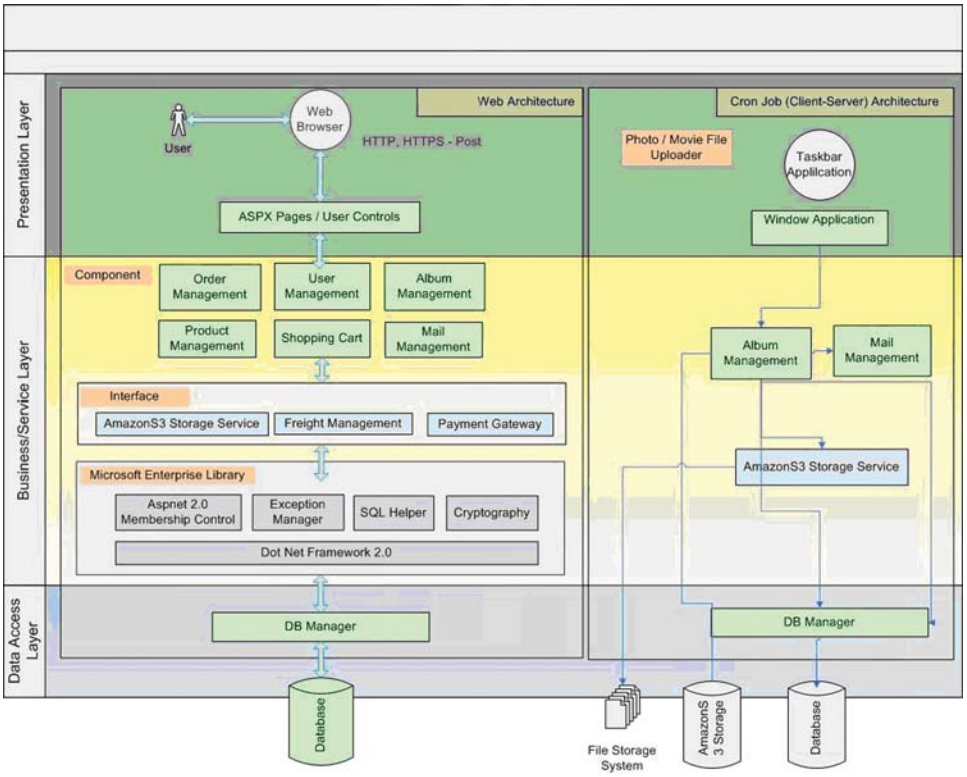

Architectural Notes

The application is composed of 3 broad modules:

1. Web UI Module (Website)
   - o The site is an eCommerce website that is built on Dot Net Framework 2.0 and used C# language.
   - o This website offers unique, end-to-end services to convert, catalog, consolidate personal media collection online and enables user to transfer their videos to other locations. They convert videos and photos into digital format. Catalog and organize them into fun on line albums. Consolidate and store media collection in a safe and secure location
   - o The web application is hosted on IIS as the web server.
   - o It is integrate with the third party components like Payment Gateway of Authorised.Net, Online Freight Services of UPS (United Parcel Service) and Storage service of AmazonS3.
   - o Created theme base dynamically creation of Photo Album.

2. Cron Job (Taskbar Application)
   - o This is the client-server application that is installed on the server for seamlessly uploading content (Photo and Movie files) from server over to the AmazonS3 Storage Network.
   - o Also it is responsible for maintaining user membership with the album environment, recovering membership fees from the user according to the scheme selected by the user.
   - o Implemented auto mailer functionality for sending scheduled email to the concern person.

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3. Admin Website

o This is an admin website used for maintaining Back Office work like:

- Creating category and product master.
- Tracking Order placed by user
- Managing album of a user
- User Management
- Membership Management

Within the architecture, a waterfall design patterns have been utilized. Created a component base architecture, which is easy to maintain and code. The technologies used by the developers are:

- Visual Studio 2005 with C#, MS SQL 2005
- CSS, Master Page and Asp.Net User Controls for common usage
- Asp.Net 2.0 Membership Library for Managing users

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