Uploading electronic Signature into Cloud

One of the world's largest Logistics Organization

EXILANT

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ABOUT THE CLIENT

One of the largest logistics organizations in south Asia, providing efficient and high quality domestic and international postal services. The client is also the leading logistics provider in the domestic market and own one of the largest retail distribution networks.

EXISTING BOTTLENECKS

Customer delivers wide range items and mail across the globe for large number of customers, locally and worldwide. After delivering the items, the delivery personnel captures electronic signature of the customer as a proof of delivery after deliver and these electronic signatures are then kept in multiple databases based on the based various tracking system in place. There is no single online portal or application available to track the items delivered and its' corresponding proof of delivery. Prior to the current implementation, the reporting mechanism is manual and there is no single place to track the delivery.

Because of constraint in IT budget, customer does not want to invest on procuring a server to make the centralized application for keep track of proof of delivery.

KEY DRIVERS FOR THE INITIATIVE

The key driver for the client was to provide an easy to use a common platform that would store electronic signatures of the customer who receives mails from client. The new system was envisaged to meet the following expectations -

- Develop interface on windows azure to allow external applications to upload electronic signature and associated details to azure cloud in a batch job.The storage in AZURE is either Azure Tables or blobs (no SQL DB to be used)
- On the web-front-end, allow downloading or printing the report either an instant report or a batch report.
- Create a simple authentication module for the web-front-end that will allow users to upload e-signatures and produce reports.

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SOLUTION OVERVIEW

EXILANT was engaged for right from collating the requirements to design, develop, deploy and support this system.

The system will have the components as shown below:

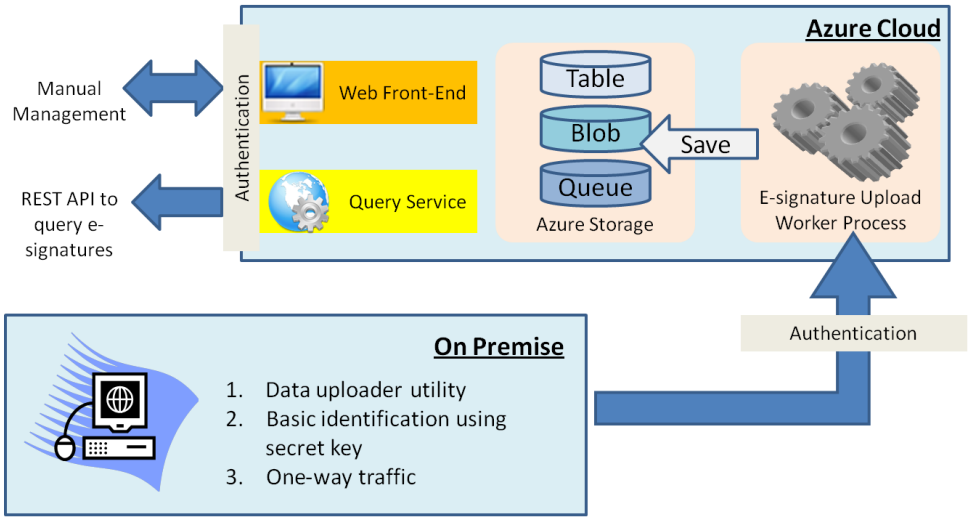

Figure 1- High-level component view of various layers and the involved components

The key components are:

1. On Premise:
    a. This is the external system that will run a batch process to upload the e-signatures to azure cloud.
    b. The authentication mechanism is based on the GOOGLE and Yahoo authentication mechanism with simple key.
2. E-Signature Worker Process
    a. This is a worker role that will accept incoming signatures and will store them in a combination of Blob and Table.
    b. The only job this worker process will do is to expose a simple REST API for upload process.
    c. This is a write-only interface
3. Web Front End
    a. Customer is authorized users to manually upload signatures and download a report will use this.
    b. The authentication for this is planned as of now as ASP.NET role/membership provider for Azure
    c. This is a read-write interface

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4. Query Service
    a. This would be a REST API that will provide a signature for a given unique identifier key combination.
    b. This may be limited to only authorized callers based on a simple unique key combination.This is a read-only interface

TECHNOLOGY

Environment	Detail
Client Development	Client side component will be developed using a combination of ASP.NET, HTML, CSS and JavaScript.
Database	Azure Table, Blobs and Queue for data storage and retrieval.
Others	• Code components are deployed on Azure instances. Development is done using “Extra Small” instance. First production release is done on two small instances. After that, based on need, the instances can be scaled up (by moving to “medium” instance) or by scaling out (by adding more “small” instances)

QUALITATIVE BENEFITS REALIZED

The key business benefits can be summarized as –

By using the Windows Azure platform, Client efficiently implemented its e-signature system on cloud:

Reduced IT Costs

With a tight IT budget that continues to shrink, Client lean IT operations and relies on an easily managed IT infrastructure. With Windows Azure, the Client can eliminate much of its need to procure, host, and manage its own physical servers. It also does not need to redirect valuable developer resources or hire additional staff to deploy and manage the server infrastructure. Instead, because the solution is hosted by Microsoft, Clientcan rely on enterprise-class service for maintenance tasks.

The ability to scale vertically and horizontally also enables the IT department to reduce costs. Instead of running the risk of buying too much server hardware during its five-year procurement cycle, Client can now forego an often inaccurate process for estimating storage and processing needs, and simply use, and pay for, what it needs to run its applications.

Fast Time-to-Market

Previously, developers at the Client had to use several different environments, each managed by a different teams, causing delays in the amount of time it took to extract the signatures for each customer and based on the tracking numbers. Now, with the development fabric in Windows Azure, developers can

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upload the signatures along with corresponding item # and tracking # and get the reports at any point of time without any manual intervention. As a result, Client is able to speed up time-to-market for electronic proof of delivery"

CLIENT TESTIMONIAL

"Thanks for the great support you have been giving to myself to make this deployment a success.
Please extend my gratitude to the team on getting this done as planned and accommodating to our users' requests.
Great job!
"

Business Analyst, One of the largest logistics providers

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