

# Network Component Development for Xml Migration

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## ABSTRACT

This Network Component Development for XML Migration is developed for Company. In the cutting edge Internet, age a large portion of the business is being directed through the Internet. As a result, space comes at a premium, more space that is needed the more it costs. In the existing scenario a client wants to store data in the web server has to rent space in the database server of the deploying agency as well as paying for the web space in the web server. This system is not economical and furthermore the client has lesser control over the data as the Database Administrator belongs to the ISP. To counter these disadvantages the proposed system implements the changes as follows, when a user submits data to the deploying agency instead of storing it in a separate database server the data is stored in a flat file format like XML in the web server space itself, thereby eliminating the cost of renting a database server completely. The client can then login to the web server and downloads the necessary XML files that are stored in the local database. This provides an added advantage in that the client can have better control over the data as they can have their own Database Administrator.

**Keywords:**Internet Service Provider (ISP), Data Base Administrator (DBA), Extensible Markup Language (XML), Electronic Data Interchange (EDI)

## I. INTRODUCTION

The system will produce data as per XML format. This will be a web application hosted on standard web server. The network component checks the validity using a Login. The Username and password are stored in a separate database; the given password is checked for authentication against the user name. If there is a match, the user is allowed to enter in to the session, failing which he is denied permission.

If by chance a phonetic error occurs, the user has to re-login to establish his identity. New users need not undergo this password check, the very first time they

try this. However user names and password are registered, the very first time itself and any future login needs a valid username and password. Once logged in, then they both can use EDI standard to grab the data residing in the web application or server using socket programming.

Here the information is saved in XML files which will be residing in the application tier. XML supports an elegant way of storing the data in a tag format as per the specification. This completely avoids the need for having the database in server. The networking component developed will download the XML files over the internet, parse the data available

in XML files and migrate the data to the database, which will be available locally.

For the past couple of years Internet applications have relied on the databases installed in the server for storage of information. An Internet application, which requires persistent data, uses a database provided by the hosting agency (ISP).

Usually clients who use the Internet solutions will have Database servers running in their local Intranet. In other words, if a client wants to store some data in the deploying agency he has to buy space with the database server of the deploying agency. It will be very efficient if the company can use the existing databases, since consolidation of data can be made quickly. Also in the administration point of view, it is very hard for the company to maintain the data.

The Internet plays a major role in achieving the centralization of data and applications. This provides a mechanism for accessing the same resource from different locations all over the world. The major drawbacks of existing database oriented Internet applications have to be eliminated by some alternative solutions.

## II. NEED FOR THE SYSTEM

In the existing system, database has to be present in the middle-tier where the Internet application is deployed.

The existing system has the following disadvantages:

- a. For the user this is very costly as deploying agency will be billing a huge amount for the usage of database.
- b. Moreover user is not having full control over the database and it is not possible to do DBA level administration. So data consolidation (Data warehousing) is not possible.

Today's advancement in the field of data formatting with a clear separation between presentation and data has made the IT industrialists to rethink on the existing solutions and proposing a new system wherein actual data is saved in the applications tier in the file formats like XML. By using EDI standards this data can be transferred to any other location.

## III. PROPOSED MODEL

With the rapid development of the Internet services there is a far reaching need for a low cost and efficient data storage mechanism that can support quick data transmission and management. This solution provides a better utilization of network bandwidth and also reduces the traffic by avoiding congestion. Here the information is saved in XML files which will be residing in a tag format as per the specifications. This is very efficient since storing the data into a flat file like XML file will be very quick. This completely avoids the need for having a database in the server. The data will be downloaded as XML file and the file will be parsed for the data and is then migrated to the local database.

Summarizing, the proposed system aims to achieve the following goals:

- a. Eliminating the need for buying a separate database server space from the deploying agency thereby reducing the cost.

Have a better control over the information by transfer of data and subsequent migration of data to the local database.

## IV. PROBLEM FORMULATION

This enables persistent data storage for an internet application in the local machine. The utility when implemented for intranet can also relieve the overhead of maintaining a database in an application server which is costly and difficult to manage over the network. At the same time, the utility can be used

as a means of having a local database thereby avoiding the overhead of maintaining a remote DBA. So, a network component is developed for downloading the XML document that contains data from the server, then to extract actual data from document using XML Parser and Transfer the data from XML file to RDBMS table residing on the local client machine.

When a user submits data to the deploying agency instead of storing it in a separate database server the data is stored in a flat file format like XML in the web server space itself, thereby eliminating the cost of renting a database server completely. The client can then login to the web server and downloads the necessary XML files that are stored in the local database. This provides an added advantage in that the client can have better control over the data as they can have their own Database Administrator.

## V. USER DESIGN AND DEVELOPMENT STAGES

The following are the various design and development stages:

- a. User authentication
- b. Building the XML data with DTD
- c. Initializing & Establishing connection with server
- d. Data transfer from server to local machine
- e. XML data parsing
- f. Migration of the parsed data to a local database
- g. Connection termination
- h. Maintenance

### A. User Login

The network component checks the validity using a login form. The username and password are stored in a separate database. The given password is checked for authentication against the username. If he is an authorized user he is allowed to enter a session. Once logged in, they both can use EDI standard to grab the

data residing in the web application or server using Socket programming.

### B. Data Grabbing As Per EDI Specification

Java socket Programming allow the utility to transfer the data from a remote application server to the local machine. Data in the server will be in the form of XML files which will be validated as per the DTD for the application which resides in server.

### C. XML Parsing Using SAX Parser

Once the data is grabbed into the local machine it has to be parsed to extract the data inside.

### D. JDBC Connectivity for migration of the data to RDBMS

The extracted data has to be ported to a database. This will be along using JDBC. This Software is a start to the next generation of software that separates the data and presentation.

## VI. IMPLEMENTATION

### A. Steps to Store the User Data

This describes the series of steps to store the user data into the web server in XML format.

- a. User data to web page
- b. Converted to XML file in specific format
- c. Stored in web server

### B. Steps Performed By the Administrator

This describes the series of steps performed by the Administrator

- a. User authenticated to web server
- b. Receives list of files stored in the server
- c. Download the necessary files
- d. Parse with XML parser
- e. Stored in local database

### C. Transferring data and conversion to XML

- a. User enter data to web browser
- b. Web browser transfer data into ISP server

- c. ISP server converts data into XML files
- d. XML files store company's web space

## VIII. REFERENCES

### D. Connection establishment by client

- a. Company's DBA request connection ISP server
- b. ISP server establish connection

### E. Database Creation

- a. Company's DBA generate database tables

### F. File download and database update

- a. Company's DBA downloads XML files
- XML files update query into local database

## VII. CONCLUSION

This application "Network Component development for XML migration" will produce data as per XML format. This will be a web application hosted on standard web server. The network component checks the validity using a Login. Here information is stored in XML files which will be residing in the application tier. XML supports an elegant way of storing the data in a tag format as per the specification. The system is very efficient since storing the data into a flat file like XML file will be very quick. This completely avoids the need for having the database in server. The networking component developed will download the XML files over the Internet, parse the data available in XML files and migrate the data to the database which will be available locally.

Low-cost and efficient data storage mechanism that is implemented in this system can support quick data transmission and management. This solution provides a better utilization of network bandwidth and also reduces the traffic.

Future enhancements for this XML component can also be created for other tasks by which the performance and can be better utilized and by using this, the maintenance can be done efficiently.

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