GUID removal

In On-line module

DB Restructuring

**Process Followed in GUID:**

1. **In Master tables**
2. Put a auto-generated column against each GUID
3. Change the data type of GUID column from varchar(50) to varchar(20)
4. Update the GUID column with the auto generated new columns
5. The entire table is copied to another table
6. Old one is dropped
7. Rename the new table with the old table name.

**II. In Transaction tables**

1. Step 1-3 is followed for the GUID column itself in the transaction table
2. Every master table ID related with Transaction is updated with the new ID in master table.
3. Step 4-6 is followed
4. **Key Enforcement :**
5. Primary Key and foreign key is enforced
6. **Necessary changes in store procedure in terms of Insert & update for the ID fields to make them incremented.**

**Changes have been observed after this that 30 – 40 % space reduced. In live after one month no such incremental growth has been seen. Attached excel sheet with comparative values**

1. To prevent incremental size in DB as each transactions table has at least 15-20 GUID columns, each GUID occupying 32 bytes.,
2. To enforce PK & FK

(space is reduced in respective tables as given in attached excel sheet)

1. Fast data search/ retrieval

Table Indexing (PK & FK)

Migration to Sql Server 2016

1. Fast aggregation queries
2. Single thread execution is much faster
3. Table compression

Conversion of technology

Converted to

Using Json in existing ERP

Client side validation throughout the module even for data required from DB

Server side validation which causes round trip to the server

No post back on any change / click event handler to send or receive data Using ajax call data is send to the server /retrieve from the server using web methods

Post back on any change / click event handler to send or receive data from the server

Data adapter using Entity framework which binds as a list

Data adapter using ADO.NET

Any list (dropdown,listbox, grid) binding using server side with ADO.Net & looping

List binding (dropdown,listbox,gridview) using web methods from server side & binding through jquery

Html Controls

Traditional ASP.net Controls

ERP application in web forms

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Page rendering  Conversion of technology | | Separations of concerns | Support of jquery/javascript & typescript | Data Models | |
| Current Architecture | | Server side Controls convert to HTML | No separation of programming logic from user interface | Difficult to integrate for json request & response | Traditional ADO.NET / Entity framework |
| Change Architecture | | Direct HTML rendering  1.Fast rendering.  2. No post back  3. Less request & response time | It provides a clean separation of the UI , Business Logic , Model or Data.  1.Separation of code makes application lighter.  2 Re-usability of code becomes easier.  3. Helps for change request/maintenance | Easy integration of jquery, typescript.  Fast data exchange from client to server & vice versa | Entity framework. Dapper ORM (lighter in handling bulk data)  1.Easy binding in models  2. re-usability of models.  3. Handling large data sets with fast rendering at least by 45%-55% than ADO.Net |

Business logic

URL request

State management, using viewbag,viewdata & browser cache

Filters

Various action result & for Business logic

Simple ,partial & Strongly type views

Controller

Simple & complex model json request & response

Client side validation using json toast messages,

Json form post

Bootstrap 4 & jquery in HTML rendering & objects, Jquery data table & standard HTML Controls

View

SQ: server 2016/

TVP for bulk insert/using transaction locks/sp,UDT

SP

Complex Model

Simple Model

Model Binding from DB & applications

Model

Data adapter using Dapper ORM

B

DAL/Data Context

Application in MVC5

ERP MVC

All json / ajax call written in separate js file.

Js file is encrypted

Remarks: The distributor portal has already been converted to MVC & deployed in server:

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