

**We make history at
6:30 PM**

Call your neighbors and let them know.

About Ben and I



Click to view Juan's MVP profile

Juan Soto, Access MVP

Juan is our founder and principal of the firm. He's a frequent contributor on the official [Microsoft Access Blog](#), where he writes about the latest Access techniques. He's also the first Access developer to be [profiled](#) on the blog.



Click to view Ben's MVP profile

Ben Clothier, Access MVP and Author

Ben is also a frequent author on the official [Microsoft Access blog](#) where he's written about SharePoint and Microsoft Access. He's also a contributing author to [Access 2010 Programmer's Reference](#) and recently co-authored [Microsoft Access in a SharePoint World](#).



The case for Virtual Access User Groups

- We are few, the proud
- We live in a wide range of areas worldwide, not easy to come together
- There is a HUGE interest to mingle and share ideas
- Online we can come together easier, share ideas and have a wide range of presenters



This is YOUR group, YOUR organization!

- Ben and I are here to make it happen
- We are looking for the next generation of Access leaders
- Promote the use of Access to a wider population
- We welcome your feedback and look forward to growing this organization



Groups already forming soon

- Connecticut Access User Group
- Hebrew Access User Group
- Access Enterprise



What does each group get?

- Up to 25 Office365 accounts!
- Ben and I support
- Conference Capabilities
- Your own site with blog
- The full support of Microsoft Technical Communities



What makes a great group? Great Leadership!

- Be committed to participate each month
- Find great topics and presenters
- Promote your meetings on Social Media
- Foster more leaders to step up



Groups can be formed around anything...

- Language: Spanish, German, Portuguese, Hebrew
- Around a technology: Access Web Apps, Access Macros, Access with SQL Server
- Around a Geo Area: Access Spain



Which of you wish to start a group?

- Please go to AccessUserGroups.org and let us know via the contact us page



Just what the heck are two Access guys talking about SQL?

- Not a SQL Server Expert
- Not a DBA
- And now: a deep discussion on running SQL Server clusters for high availability



I



Access



Why the Love?

- Rapid development - save money/time vs. .Net
- Contains all of the tools I need to develop rich applications: report designer included
- No need for custom controls
- Wide range of solutions possible
- Rich integration with office



Why is Access used if it's so bad?

- It's in Office, my company gave it to me along with Word, PowerPoint and Excel, so I guess I can use it?
- Users first choice is to go to IT and ask for help, but IT is too busy with enterprise projects.
 - (SQL Server Guys: How many times have you turned away small projects?)
- Business is so unique off the shelf software not a solution
- Employees can “cobble” together a database quickly, just enough to be dangerous



Why IT doesn't like Access databases

- Departmental Islands of Data
- Non-Conformity
- Hard To Support at Help Desk
- Not possible to share data over WAN or VPN
- Not sharable outside the corporate net
- NOT secure, sneaker net
- Can become mission critical, than what?



I don't care for Jet



What is Jet anyway?



Why Jet does not cut it

Disadvantages

- File based, no server component
- Can't handle more than 25 users
- Prone to crashes/corruption

Advantages

- No need for server equipment
- Great for small (less than 5 users) databases IF there is a small data set



I



SQL Server (Express)!



SQL Server (Express)

- Best thing that ever happened to Access!
- Make an unbeatable combination if done right
- Saves on development costs over web and .net
- Provides UI flexibility and rapid response to business changes
- Cut out Jet or minimize Jet's role
- No need for separate reporting tools
- No need for custom controls



Top ten things you can do in SQL Server you can't do in Access

- #10 Table Triggers
- #9 Identity Insert
- #8 Identity Seed
- #7 Table Function Calls
- #6 Table Variables
- #5 Triggers for Views
- #4 Batch Transactions/Rollback
- #3 Backup while in use
- #2 Column Security
- #1 Intellisense in SQL



Great links for Access Guys needing help with SQL Server

- [Microsoft SQL Server Access Migration Tool](#)
- [Using IIF in TSQL](#)
- [Short SQL Server tutorials](#)
- [Must read on dynamic SQL dangers](#)
- [Access equivalents in TSQL](#)
- [Essential time and date functions in TSQL](#)
- ***NEW*** Backup your SQL Server Express database with [SQLBackUPandFTP.com](#) software.



Use Access only for the Eye Candy

- All code and reporting in Access
- All data storage, security and querying in SQL
- Use local tables to minimize traffic, i.e. static tables in Access
- Minimize connections
- In short, treat Access as the presentation layer, not the data layer



Migrating Access Data into SQL

- Use the [Microsoft SQL Server Migration Assistant for Access](https://bit.ly/SQLMigration) bit.ly/SQLMigration
- REVIEW the suggested conversions
- Follow these conventions:
 - Make all Yes/No fields bit, with zero as default
 - All tables must have a time stamp field (avoids record conflicts)
 - Create Indexes for foreign keys, (Access will auto-generate them if the field ends in ID, such as CustomerID but SQL server does not)



Migrating Queries into Views

- Can't migrate hybrid queries that use local Jet tables
- Must replace Access custom functions
- Convert Access native functions to SQL version
- Views used in data entry will require local indexes, which can be created in Access using this SQL code:
 - *Create IndexName On ViewNameInAccess (field1, field2,...) WITH PRIMARY"*
- Views will also require delete trigger when multiple tables used in view
- *Views are considered tables in regular Access*



Optimal Design

- Use Windows credentials for user validation, security roles and limiting users to features and data
- Use SQL Server to store most data, use local tables for small lists.
- Use DSNless tables for rapid deployment
- Use ADODB with SQLOLEDB and bypass jet to send commands direct to SQL



Design continued

- Use a unique view for each report
- Use stored procedures for inserts, deletes, and business rules
- Use pass through queries to retrieve output of stored procedures as tables in Access



What about Stored Procedures?

- Only way to use them in regular Access is through a pass-through query, which would require rebuilding them each time arguments change or through code using ADODB recordset or command object.
- Use the QueryDef object to create queries on the fly with code
- In code: Use ADODB recordset object to return recordset from stored procedure



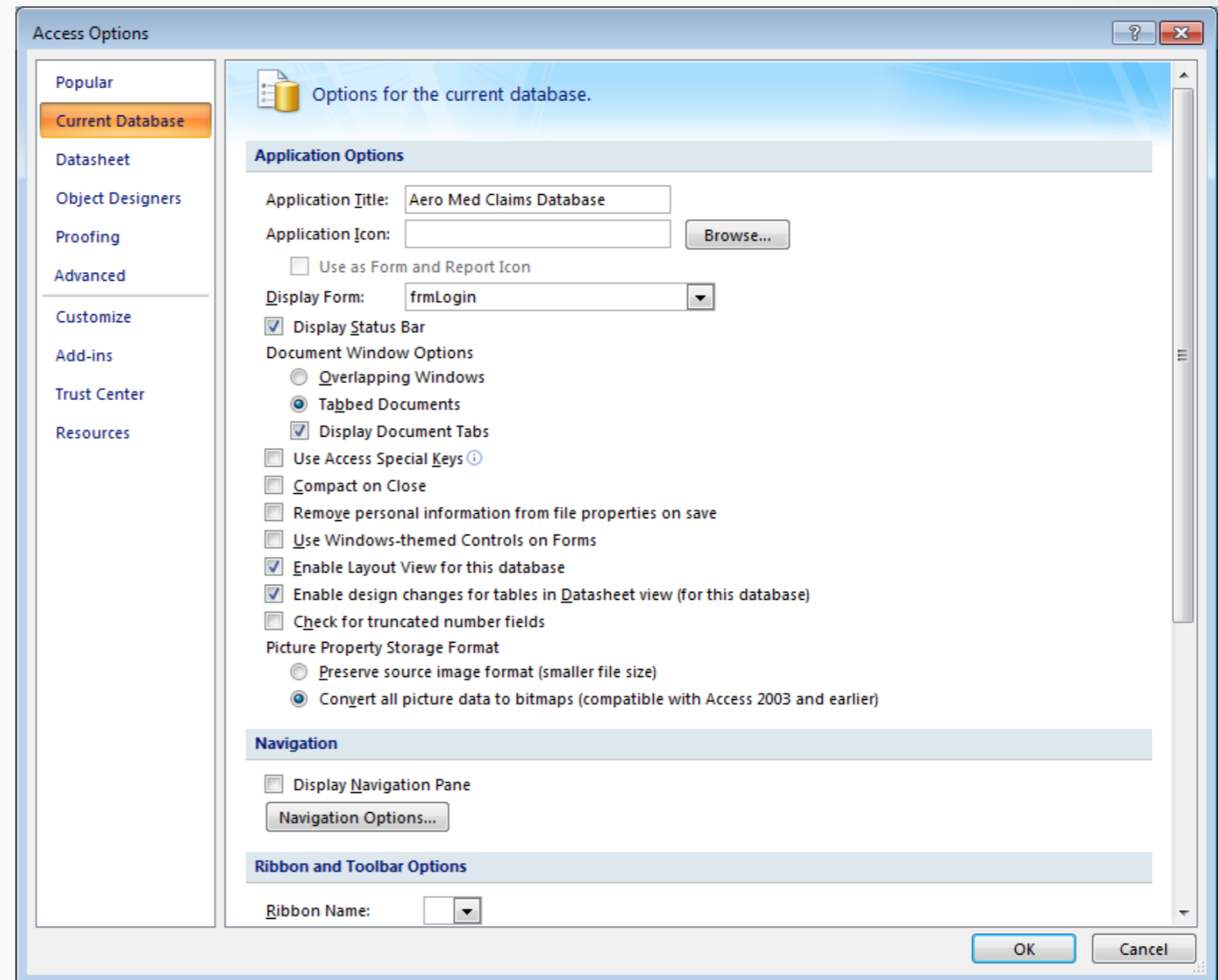
Access Help for the SQL DBA Guy

- Review application and determine best way to convert tables, queries and code:
 - SQL Server Table, view or stored procedure
- Create a development environment and let them experiment and learn with SQL Server (Express)
- Have them learn the SQL equivalent to common Access functions:
 - IIF = CASE WHERE
 - Format () = Convert or Cast
- More help at AccessExperts.net/blog



Deployment Recommendations

Lock them out of everything but the UI



Deployment Continued

- Install latest SQL Server native client on each PC
- Use DSNless table links, (can only do this via code in Access, sorry), otherwise, create ODBC connections on each PC
- Use Active Directory groups where possible for your security schema
- Limit user application privileges by checking membership in AD groups; i.e. Admin Group has access to everything, etc.



SQL Server over the web and Access

- Great when there is no VPN available
- Requires extensive optimization and tweaking
- Faster than Jet!



Suggested Deployment

- Use [Access Runtime](http://Bit.ly/AccessRuntime) if needed. Bit.ly/AccessRuntime
- Stick to Access 2007 for best compatibility
- Use [Access Developer Extensions](http://Bit.ly/DevExtensions) to create setup program that will bypass security warning and install in User directory Bit.ly/DevExtensions
- *Demo Developer Extensions*
- Avoid Windows 7 SP1 – Breaks ADODB



SQL Server with Access over Web Login Procedure – No AD

- Manage user logins through your Application (just like a website app)
- Use the following login process:
 - Create your own login screen in your app
 - Validate user using a user table
 - Store user and login in your code
 - Distribute using FREE Access Runtime



DSNLess technique

- No need for a DSN at each PC running your app
- Using trusted Connection:
 - `stConnect = "ODBC;DRIVER=SQL Server;SERVER=" & stServer & ";DATABASE=" & stDatabase & _";Trusted_Connection=Yes"`
 - and here's one using SQL Server security:
 - `stConnect = "ODBC;DRIVER=SQL Server;SERVER=" & stServer & ";DATABASE=" & stDatabase & ";UID=" & stUsername & ";PWD=" & stPassword`
- ***Note*** Will save user's credentials with the table link, re-link every time a new user logs in.



DSNLess technique Continued

- Using SQL Server native client 10
- stConnect = "ODBC;DRIVER=SQL Server Native Client 10.0;SERVER=" & stServer & ";DATABASE=" & stDatabase & ";UID=" & stUsername & ";PWD=" & stPassword



Sending multiple SQL commands

```
Private Function CreateDatabaseRecord() As Boolean
```

```
Dim strSQL As String
```

```
Dim rsDoc As ADODB.Recordset
```

```
Dim rsValue As ADODB.Recordset
```

```
On Error GoTo CreateDatabaseRecord_Error
```

```
    strSQL = "Insert Into TableName(field1, field2,...) Values(value1, value2,...);  
SELECT SCOPE_IDENTITY() as NewKeyID"
```

```
    If con.State = adStateClosed Then
```

```
        OpenMyConnection
```

```
    End If
```

```
    Set rsDoc = con.Execute(strSQL)
```

```
    Set rsValue = rsDoc.NextRecordset
```

```
    lngDocumentID = rsValue!NewKeyID
```

```
    Set rsValue = Nothing
```

```
    Set rsDoc = Nothing
```

```
    CreateDatabaseRecord = True
```

```
    On Error GoTo 0
```

Exit Function

Virtual Access User Groups

Bi.ly/MultiSql



What's Next?

- Subscribe to my blog at AccessExperts.net/blog
- Contact me at AccessExperts.net
- Consider our SQL Server Hosting solution for Mission Critical Applications and SQL Databases over the web
 - AccessHosting.com

