

Phoenix Learning Labs Using SQLite with Microsoft Access Lessons Learned

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Version 2.1b, 04/05/2017

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The Back Up and Security (BUS) system is used to help track all the various systems, back up status, backup scenarios and security. It will be a throw together system initially to allow to eliminate the spreadsheet. It will also be an experiment in using SQLite as the back-end for a Microsoft Access 2016 front end.

Table 1. Document Revision History

Date	Version	Author	Description
04/05/2017 12:40 PM	2.1b	JHRS	Initial version of document created

Database .Net DBA tool

My tool of choice for maintaining any SQL database, including SQLite, is the Database .NET program from [Fish-Lib](#). It is only available for the Windows environment. Database .Net covers any SQL database I currently use including Teradata. Database .Net has a command line interface that allows it to be used in PowerShell script to perform standard DBA maintenance tasks.

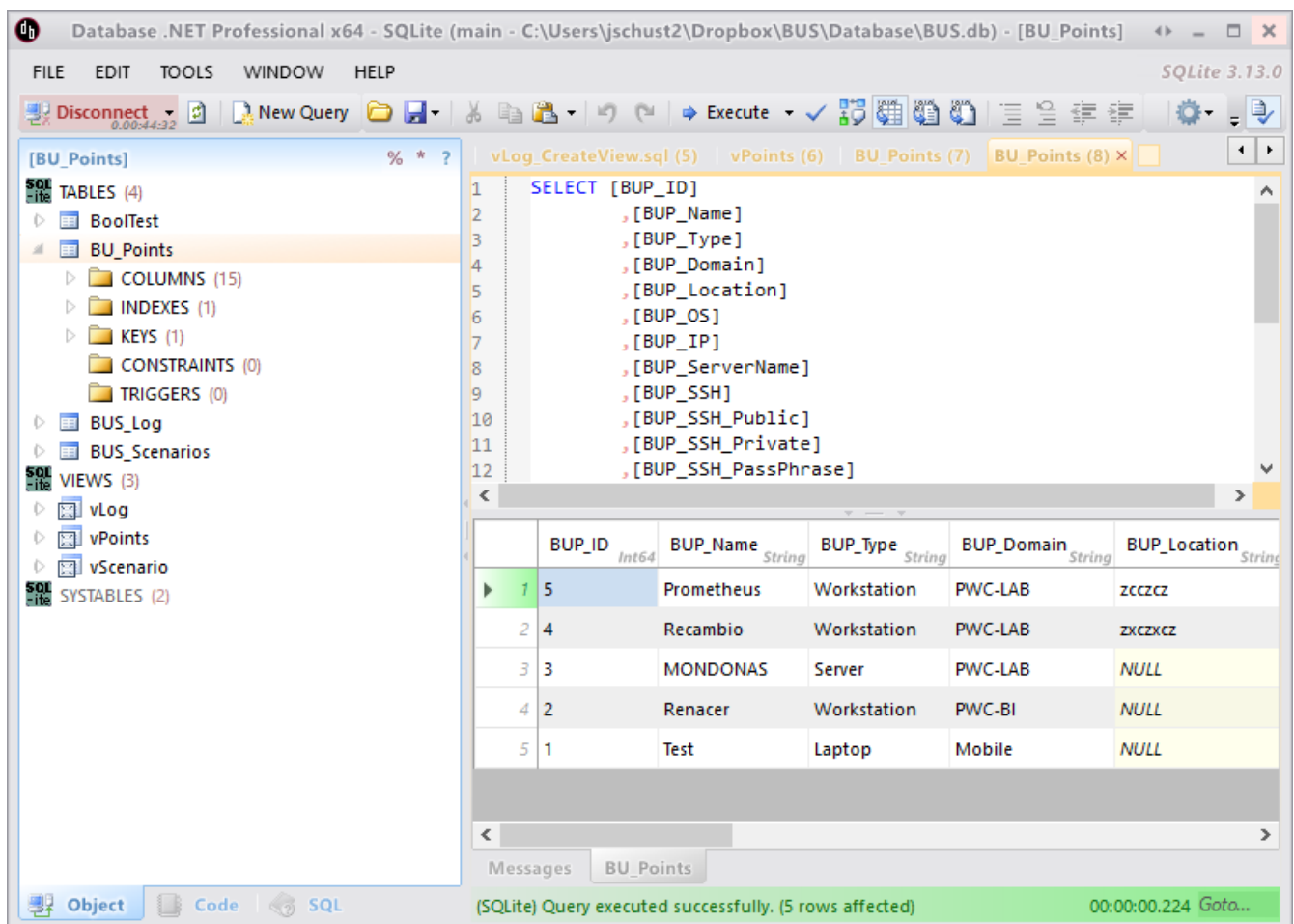


Figure 1. Database .Net DBA tool for SQLite

It is possible to have Database .Net open and doing work and have the MSAccess frontend open doing work. Just don't attempt to update data in objects you are working on the schema.



Any schema changes in the SQLite database schema will require a relink of the tables in the MSAccess front end.

Use the **Linked Table Manager** from the main ribbon and just refresh all of the linked tables.

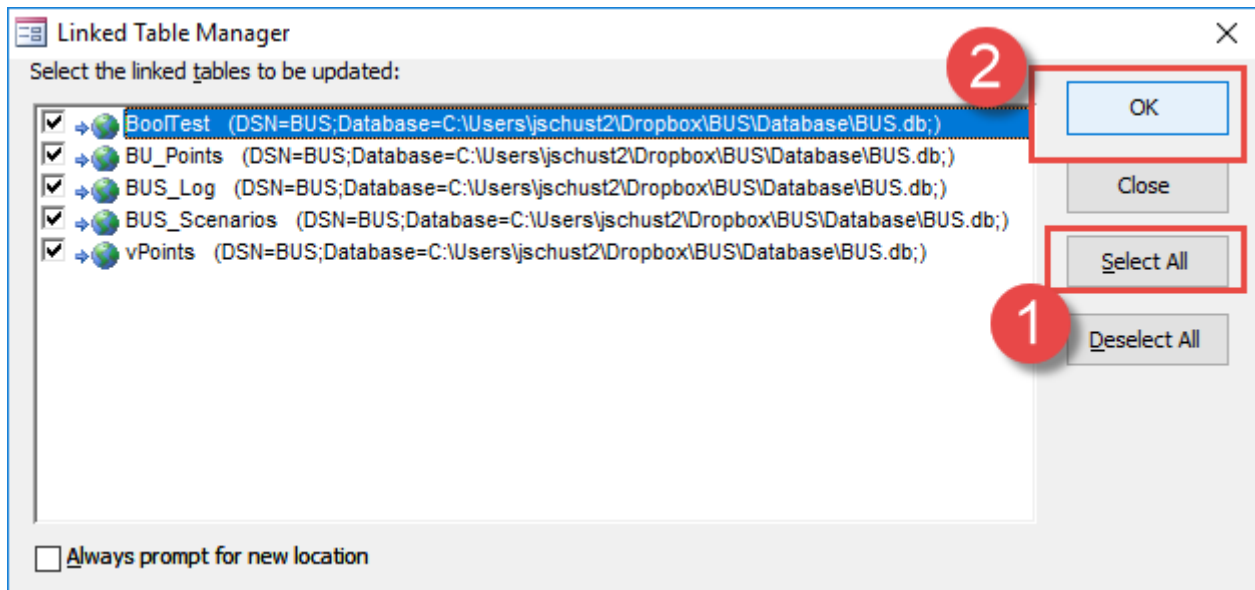


Figure 2. Linked Table Manager

Write Conflict issues

Boolean Default

Initially one of the tables (Points) was experiencing a **write conflict** error any time something was updated.

Issue appeared to be that one of the columns in this table was defined as **boolean** and had no default set up.

Design Table - BU_Points						
	Column Name	Data Type	Null	Data Type(Length)	Default value	Auto
▶	BUP_ID	integer	<input type="checkbox"/>	integer		<input checked="" type="checkbox"/>
	BUP_Name	varchar	<input checked="" type="checkbox"/>	varchar(30)		<input type="checkbox"/>
	BUP_Type	varchar	<input checked="" type="checkbox"/>	varchar(20)		<input type="checkbox"/>
	BUP_Domain	varchar	<input checked="" type="checkbox"/>	varchar(20)		<input type="checkbox"/>
	BUP_Location	varchar	<input checked="" type="checkbox"/>	varchar(254)		<input type="checkbox"/>
	BUP_OS	varchar	<input checked="" type="checkbox"/>	varchar(15)		<input type="checkbox"/>
	BUP_IP	varchar	<input checked="" type="checkbox"/>	varchar(15)		<input type="checkbox"/>
	BUP_ServerName	varchar	<input checked="" type="checkbox"/>	varchar(30)		<input type="checkbox"/>
	BUP_SSH	bool	<input checked="" type="checkbox"/>	bool	0	<input type="checkbox"/>
	BUP_SSH_Public	text	<input checked="" type="checkbox"/>	text		<input type="checkbox"/>
	BUP_SSH_Private	text	<input checked="" type="checkbox"/>	text		<input type="checkbox"/>
	BUP_SSH_	text	<input checked="" type="checkbox"/>	text		<input type="checkbox"/>
	VMServer	int	<input checked="" type="checkbox"/>	int		<input type="checkbox"/>
	VMName	varchar(254)	<input checked="" type="checkbox"/>	varchar(254)		<input type="checkbox"/>
	LastUpdated	datetime	<input checked="" type="checkbox"/>	datetime		<input type="checkbox"/>

MSAccess needs a default value for Boolean columns

Figure 3. Boolean default

ODBC DSN Sync Mode setting

Second issue was that the ODBC DSN configuration had one setting incorrect.

The Sync Mode setting needs to be set to Normal

SQLite3 ODBC DSN Configuration

Enter options for connect

Data Source Name: BUS

Database Name: C:\Users\jschust2\Dropbox\BUS\Databas

Browse...

Lock Timeout (ms):

No TXN

Step API

Sync Mode: NORMAL

Short Column Names

Foreign Keys

Long Column Names

OEMCP Translation

Don't Create Database

Always BIGINT

No WCHAR

Julian Day Conv.

Load Extensions:

OK

Cancel

Figure 4. SQLite ODBC DSN configuration

Views are for Viewing

In many SQL based application I have created One-To-One views of the tables. These view can only be **viewed**, no editing is allowed.