Preparing a Microsoft Access Database for Migration

Using SQLyog's ODBC Import Tool, user can migrate Access database (2003/07/10) along with table indexes by simply following the wizard.

But in order to import Foreign Keys, SQLyog's Import External Data requires access to the system tables of the Microsoft Access database for the purpose of reverse-engineering. By default, read access to the system tables of an Access database is restricted for external applications. The procedure to enable the read access depends on the MS-Office/Access version. But in every case you must first unhide the system tables and next change some of their properties. This procedure can be broken down into the following three steps:

STEP 1: Unhiding system tables for all Access versions

This step enables SQLyog's ODBC Import tool to access the system tables of the Access database.

a) Unhiding system tables for Access 2003:

For Microsoft Access 2003, select tools and go to options and select the view tab.

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iew General Edit/Find		Keyboard Datasheet Forms/		s/Reports	Pages
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Figure 1: The show section in Access2003

Check the box next to the System objects option and close the options dialog. System tables for the database should now be present:





Figure 2: The system objects Note the presence of the various **MSys** tables.

b) Unhiding system tables for Access 2007:

For Microsoft Access 2007, choose the **Access Options** for the selected database after you click the Microsoft Office Button. Select Navigation Options in the Current Database category. Within the **Navigation Options** dialog, look for the **Display** section:

	Click on a Category to change the Category disp Categories	olay order or to add groups <u>G</u> roups for "Tables and Related Views"			
	Tables and Related Views	Arzneivorrat	^		
	Object Type	🗹 details			
	Custom	MSysAccessObjects			
		MSysAccessXML	H		
		MSysACEs			
		MSysObjects			
		MSysQueries			
		MSysRelationships	~		
	Add Item Delete Item Rename Item	Add Group			
Display (Options	Open Objects with			
Show Hidden Objects Show System Objects		Single-click 💿 Double-click			

Figure 3: The Display section on Access2007

The System tables for the database are displayed after selecting the **Show System objects** option in the Navigation options dialog.

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Home Create External Data Database Tools
Views Views Clipboard Font Rich Records Filter Filter Views Views Sort & Filter Views
All Access Objects 📀 «
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MSysNavPaneObjectIDs
MSysObjects SysQueries
Bulktable Query



Figure 4: The system objects for Access 2007

Note the presence of the various **MSys** tables.

c) Unhiding system tables for access 2010.

For Microsoft Access 2010, go to file and options. Select Navigation Options in the Current Database category. Within the Navigation Options dialog, look for the Display options.

Navigation Options	S 23
Grouping Options Click on a Category to change the Category display Categories	order or to add groups Groups for "Tables and Related Views"
Tables and Related Views	Unrelated Objects
Object Type Custom	
Add Item Delete Item Rename Item	Add Group Delete Group Rename Group
Display Options Image: Show Hidden Objects Image: Show Search Bar	Open Objects with Single-click Ouble-click
	OK Cancel

Figure 5: The Display section on Access2010.

The System tables for the database are displayed after selecting the Show System objects option in the Navigation options dialog.

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1		MSysNameMap					
		MSysNavPaneGroupCateg					
		MSysNavPaneGroups					
J		MSysNavPaneGroupToObj					
١		MSysNavPaneObjectIDs					
		MSysObjects					
		MSvsOueries					



Figure 6: The system objects for Access 2010

Note the presence of the various $\ensuremath{\textbf{MSys}}$ tables.

STEP 2: Change the database file format to .mdb format.

Microsoft Access 2007/ 2010, User-level security features (user and group permission) is available only if the database has a .mdb file format. It is not available in databases that use one of the new file formats like .accdb, .accdc, .accdr.

Please refer to the link below for details:

http://office.microsoft.com/en-us/access-help/what-happened-to-user-level-security-HA010234561.aspx?pid=CH100621891033

a) Save as .mdb format in Access 2007

Select the newly created .accdb file, click on the Microsoft Office Button and then go to the save as option. Either save it in the **2003-2000** or the **2000** format.



Figure 7: Save As option in Access 2007

b) Save as .mdb format in Access 2010

Select the newly created .accdb file and then click on the option that reads **save and publish**. Once you click on that option you will see save database as option onto the right hand side.

Save the database as either **Access 2000** or Access **2002-2003** database option.

Save	File Types	Save Database As
Save Object As	Save Database As	Database File Types
		Access Database (*.accdb)
🍯 Open	Save Object As	Default database format. Save a copy that will be compatible with Access 2002-2003.
🖞 Close Database		Access 2000 Database (*.mdb)
test.accdb	Publish	Save a copy that will be compatible with Access 2000. Save the current database as a database template (ACCDT).
student_acc.accdb		Advanced
New Microsoft Acce		A Make ACCDE
test.mdb		Package the database and apply a digital File will be compiled into an executable only file.
fo.		🚱 Back Up Database 🚽 SharePoint
10		Back up important databases regularly to Share the database by saving it to a
ent		prevent data loss. document management server.
w		
t		Save As
e & Publish		
	•	
Options		
Exit		

STEP 3: Give Users and group permission on Access system tables.

a) Changing table properties for all Access versions up to and including Access 2003:

After you expose the system objects to the ODBC Import Tool, you must also grant permission to access the objects. Choose the User and Group Permissions entry from the Security section of the Tools menu:

Enable the **Administrator** permission for both

the **MSysObjects**, **MSysQueries** & **MSysRelationships** tables. You will need to click the Apply button after enabling each table and before moving to the next table.



Figure 9: Selecting user and group permissions in Access 2003

User and Group Permissions	X
Permissions Change Owner	
User/Group Name:	Object Name:
Admin	<new queries="" tables=""> Accounts_table MSysACEs MSysObjects MSysQueries MSysRelationships</new>
List: Users Groups	Object Type: Table 💌
Open/Run	Read Data
Read Design	✓ Update Data
Modify Design	🔽 Insert Data
Administer	🔽 Delete Data
Current User: Admin	
ОК	Cancel Apply

b) Changing table properties for Access 2007:

After you expose the system objects to the ODBC Import Tool, you must also grant permission to access the objects. Choose the **User and Group Permissions** entry from the **Database Tools** menu.

	Table Tools	Micro	soft Access				_ = ×
Home Create External Data	Database Tools Datasheet						
Visual Basic	Relationships	Database Documenter Analyze Performance Analyze Table	SQL Access Server Database	Encode/Decode Linked Table Database Manager	Switchboard Manager Set Database Password Madd-ins *	lake IDE	Users and Permissions * Options *
Macro	Show/Hide	Analyze	Move Data	Data	abase Tools	43	User and Group Permissions
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Security Warning Certain content in the database has been disabled Options							
Tables							

Figure 11: Selecting user and group permissions in Access 2007

User and Group Permissions	X			
Permissions Change Owner				
User/Group Name:	Object Name:			
Admin	<new queries="" tables=""> Accounts_table MSysACEs MSysObjects MSysQueries MSysRelationships</new>			
List: 🖲 Users 🔘 Groups	Object Type: Table 🗨			
Permissions				
Open/Run	🔽 Read Data			
Read Design	V Update Data			
Modify Design	🔽 Insert Data			
Administer	📝 Delete Data			
Current User: Admin				
ОК	Cancel Apply			

Figure 12: Enabling Administrator Permissions in Access 2007

Enable the **Administrator** permission for both the **MSysObjects**, **MSysQueries** & **MSysRelationships** tables. You will need to click the Apply button after enabling each table and before moving to the next table.

After completing these steps, you can reverse-engineer the schema in your Access database using the SQLyog's ODBC Import Tool.

c) Changing table properties for Access 2010:

After you expose the system objects to the ODBC Import Tool, you must also grant permission to access the objects.

Once the data base is converted into .mdb format select the **Manage users and permission option**.



Figure 13: Selecting Manage users and permissions in Access 2010

After selecting this option select the first option that reads **Users and Group Permissions**.



Figure 14: Selecting user and group permissions in Access 2010

Enable the **Administrator** permission for both the **MSysObjects**, **MSysQueries** & **MSysRelationships** tables. You will need to click the ok button after enabling each table and before moving to the next table.

User and Group Permissions	×		
Permissions Change Owner			
User/Group Name:	Object Name:		
Admin	MSysNavPaneGroups MSysNavPaneGroupToObject MSysNavPaneObjectIDs MSysObjects MSysOupries		
	student		
List: 🔘 Users 🔘 Groups	Object Type: Table 💌		
Permissions			
Open/Run	🔽 Read Data		
Read Design	V Update Data		
Modify Design	🔽 Insert Data		
Administer	📝 Delete Data		
Current User: Admin			
ОК	Cancel Apply		

Figure 15: Enabling Administrator Permissions in Access 2007