



CNS Audit

Version 1.5

Setup Guide

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Preparing the database for CNS Audit

All of the example screenshots and text in this guide were taken from the CNS Audit Example database included with the plug-in. So, if you want to see a live example of the steps taken in this guide, feel free to explore that database as you follow along.

Creating the CNS Audit Tables

Before CNS Audit can start tracking changes to your database, a few tables need to be created. CNS Audit can do this for you from the CNS Audit Configuration Dialog. Open your database in FileMaker Pro and make sure you log in with an account that has [Full Access] privileges. Next, open the CNS Audit Configuration Dialog on Mac by choosing Preferences from the FileMaker Pro menu, switch to the Plug-Ins tab, then double-click on CNS Audit. On Windows, choose Preferences from the Edit menu, switch to the Plug-Ins tab, and double-click on CNS Audit. In the CNS Audit Configuration Dialog, switch to the Basics tab and press the Create Audit Tables button. A dialog should come up telling you that the tables were created.

Removing Layout Name / Table Occurrence Name conflicts

If your database will be used with any version of FileMaker Pro prior to version 11, regardless of the version of FileMaker Pro you develop with, you will need to prepare it for use with CNS Audit under those versions. In Order for CNS Audit to work properly with versions of FileMaker Pro prior to version 11, there cannot be any Table Occurrences with the same name as Layouts in the database. CNS Audit is capable of keeping track of the fields in the database even if their names are changed, but to do this in versions of FileMaker Pro prior to version 11, it needs to use the FieldIDs calculation function. This function allows for retrieving the Field IDs of all the fields in a specific Table Occurrence, so long as there is not a Layout with the same name as the Table Occurrence. If there is a Layout with the same name as the Table Occurrence, the FieldIDs function returns the Field IDs of all the fields on the Layout instead of in the Table Occurrence. Since all the fields in the Table Occurrence may not be on the Layout, this causes CNS Audit to not see, and therefore not Audit, all the fields in the Table Occurrence.

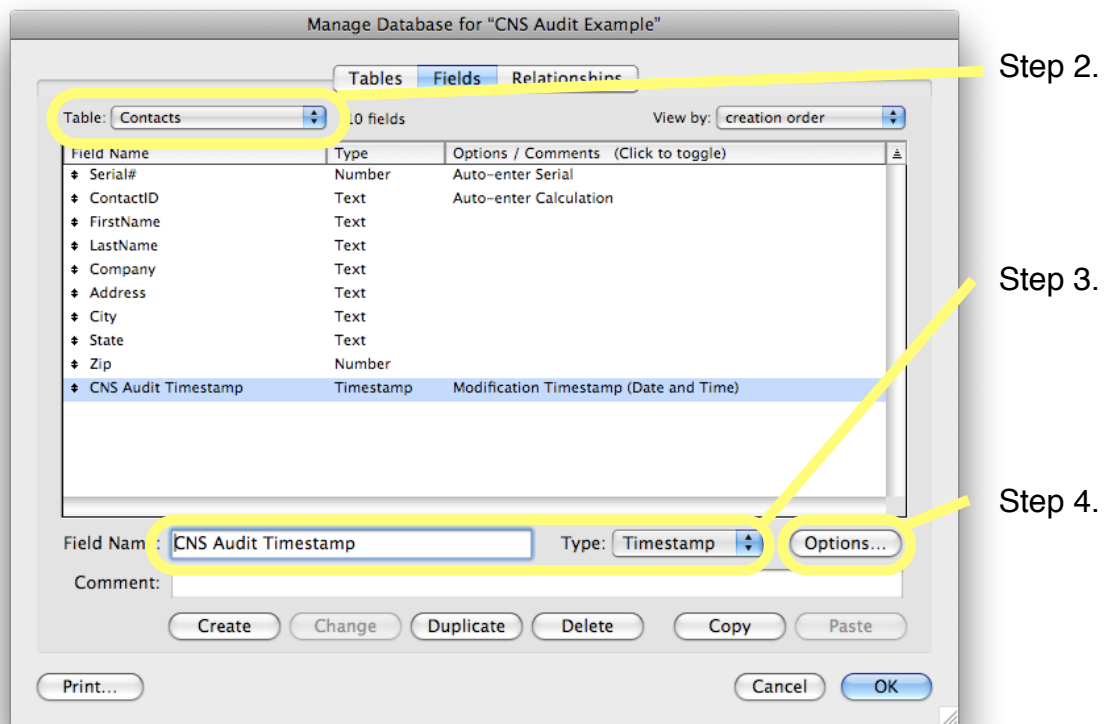
Unfortunately, when creating a table, FileMaker Pro automatically creates a Layout with the same name as the table. To prepare your database for use with CNS Audit under versions of FileMaker Pro prior to version 11, these duplicate names must be changed. Either rename the Table Occurrence or rename the Layouts. It is probably easier to rename the Layouts because when renaming a Table Occurrence, if the automatically generated Layout has never been manually renamed, FileMaker Pro updates the automatically generated Layout to have the same name as the Table Occurrence. Consider renaming the Layout by adding the word "Entry" to the end. For example, if a Table Occurrence is named Contacts, the associated Layout would be named Contacts Entry. However, this is only a suggestion.

CNS Audit makes it easy to determine which Layouts have the same name as Table Occurrences in your database. Open your database in FileMaker Pro and make sure you log in with an account that has [Full Access] privileges. Next, open the CNS Audit Configuration Dialog. (See the *Creating the CNS Audit Tables* section above for instructions on how to open the CNS Audit Configuration Dialog.) In the CNS Audit Configuration Dialog, switch to the Basics tab and press the Check for Layout Conflicts button. (Note: This button is not visible when running under FileMaker Pro 11 or above.) If there are any Layouts that have the same name as any Table Occurrences, the plug-in will present you with a list of those Layouts. After renaming those layouts, you can use the Check for Layout Conflicts button again to ensure all the conflicts have been resolved.

Set up the database for tracking field changes

This section explains the steps necessary to set up each Table in the database for auditing. After completing these steps, the plug-in will be able to track the changes to field values in the database. (Note: You may also want to implement the validation options described in the *Preventing database modification if CNS Audit is not present* subsection of the *Additional Information* section at this time.) If your solution consists of multiple files, you will also need to follow the instructions in the *Setting up Multiple Files / Data Separation Model* section.

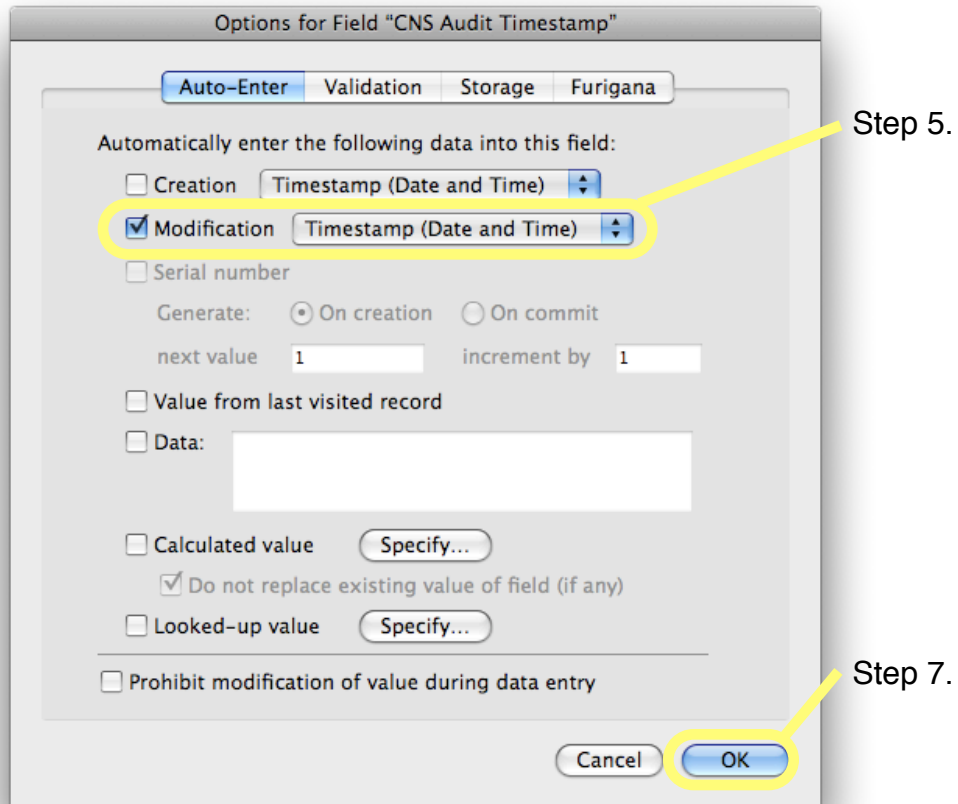
1. Open the Database file and go to Define / Manage Database.
2. Switch to the Fields tab and select the first table from the Table drop-down menu in which auditing needs to be added.



3. Add a new Timestamp field named CNS Audit Timestamp.¹
4. Press Options for the CNS Audit Timestamp field.

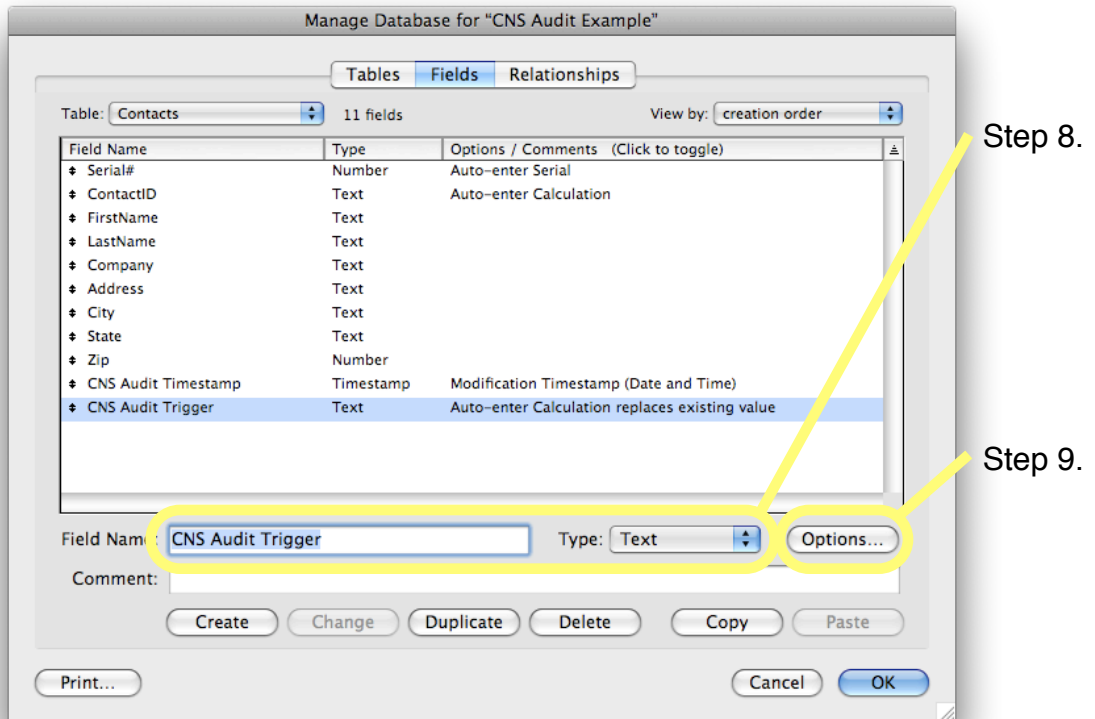
¹ Make sure the field is named CNS Audit Timestamp exactly.

5. In the Options for Field dialog that pops-up, switch to the Auto-Enter tab, and check the Modification Timestamp option.



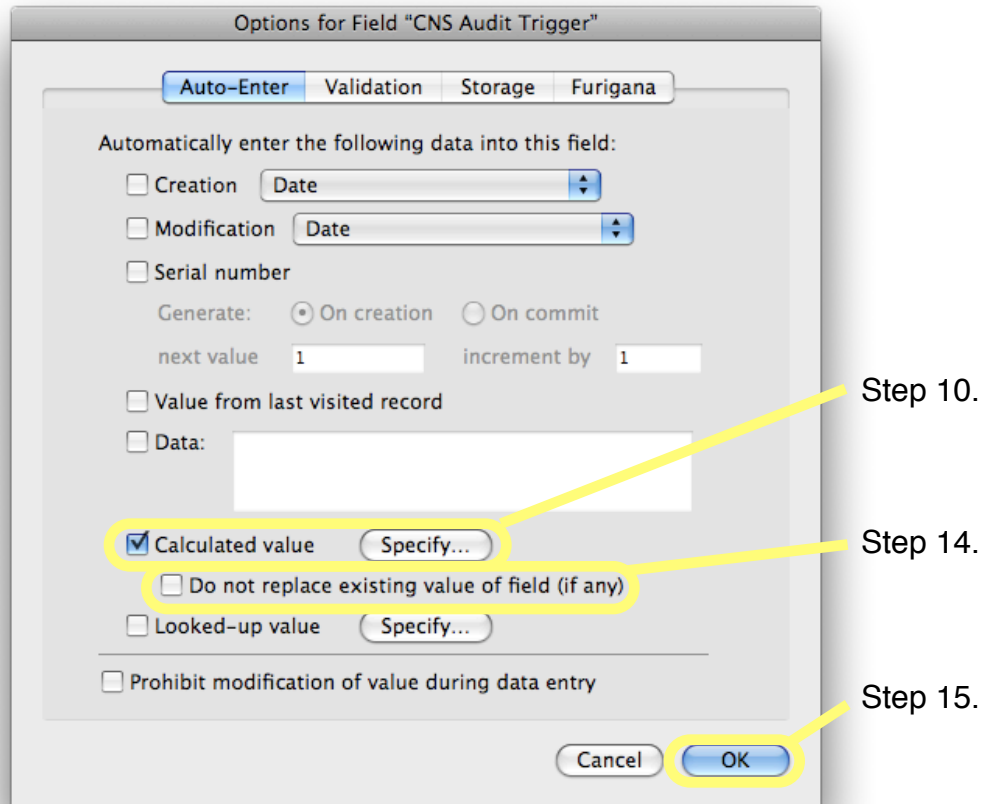
6. *Optional:* Set up the Validation options as described in the *Preventing database modification if CNS Audit is not present* subsection of the *Additional Information* section.
7. Press OK to close the Options for Field dialog.
8. Add a new Text field named CNS Audit Trigger.²

² Make sure the field is named CNS Audit Trigger exactly.

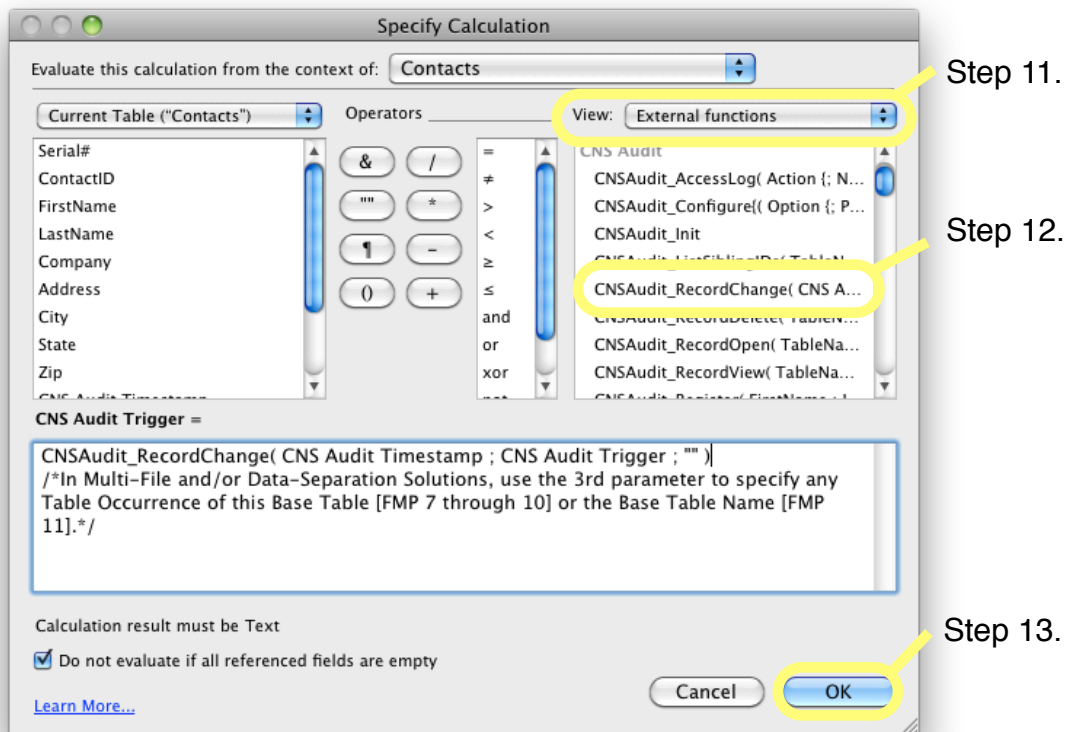


9. Press Options for the CNS Audit Trigger field.

10. In the Options for Field dialog that pops-up, switch to the Auto-Enter tab, and check the Calculated Value option.



11. In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.



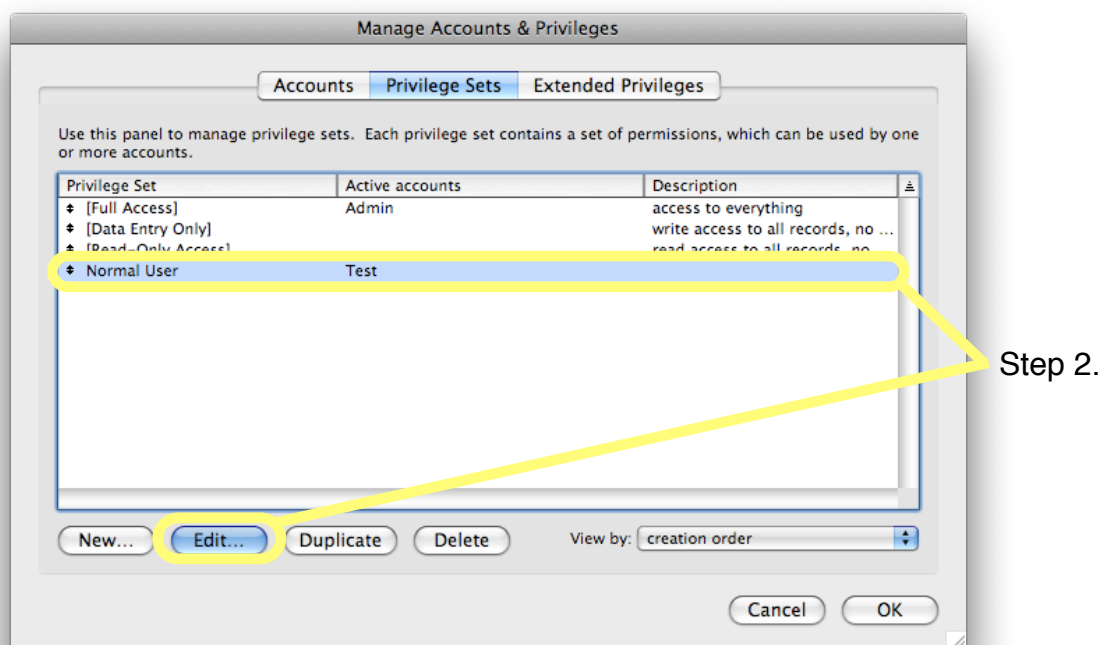
12. In the list of functions, scroll down until a line for CNSAudit_RecordChange is visible and double-click it.
13. Press OK to close the Specify Calculation dialog.
14. Back on the Options for Field dialog, uncheck the Do not replace existing value of field (if any) option.
15. Press OK to close the Options for Field dialog.
16. Repeat steps 3-15 for each table that needs auditing. (If using FileMaker Pro Advanced, highlight the two fields, press Copy, and then go to each table and press Paste.)
17. Close the Define / Manage Database dialog.

Set up the database for tracking record deletions

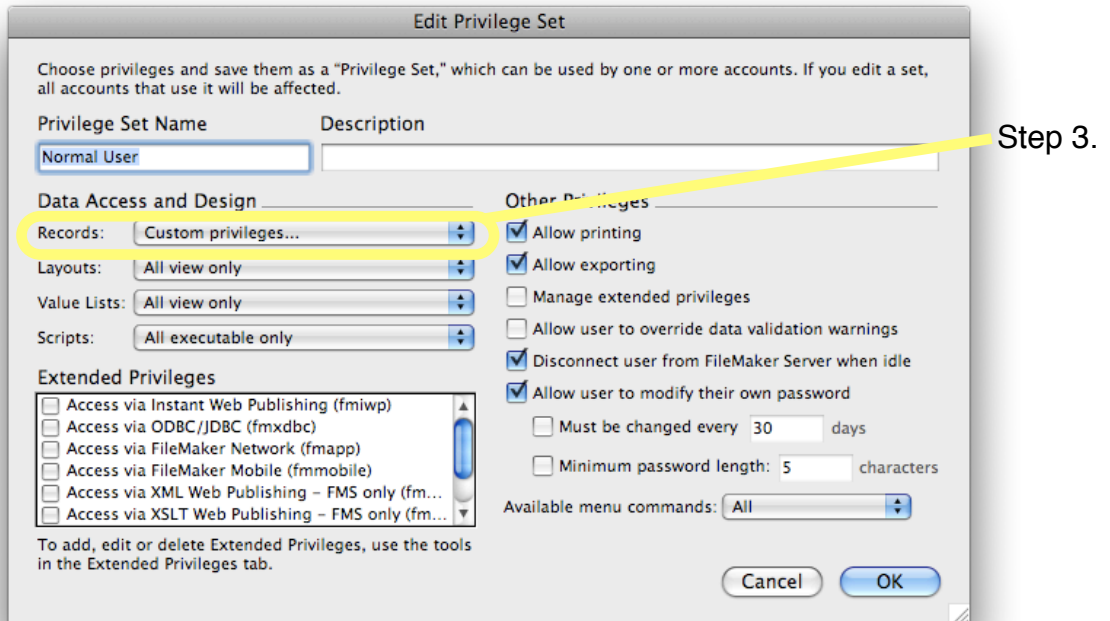
This section explains the steps necessary to set up each Privilege Set for tracking record deletions.

Note: The Record Privileges for the [Full Access] Privilege Set cannot be modified, therefore any user logging in with the [Full Access] Privilege Set will be able to view and delete records without being audited. The best practices for security in FileMaker Pro say to not have anyone logging in with the [Full Access] Privilege Set anyway, so you should consider creating a new Privilege Set with the options defined below and then apply it to your users that are currently assigned the [Full Access] Privilege Set.

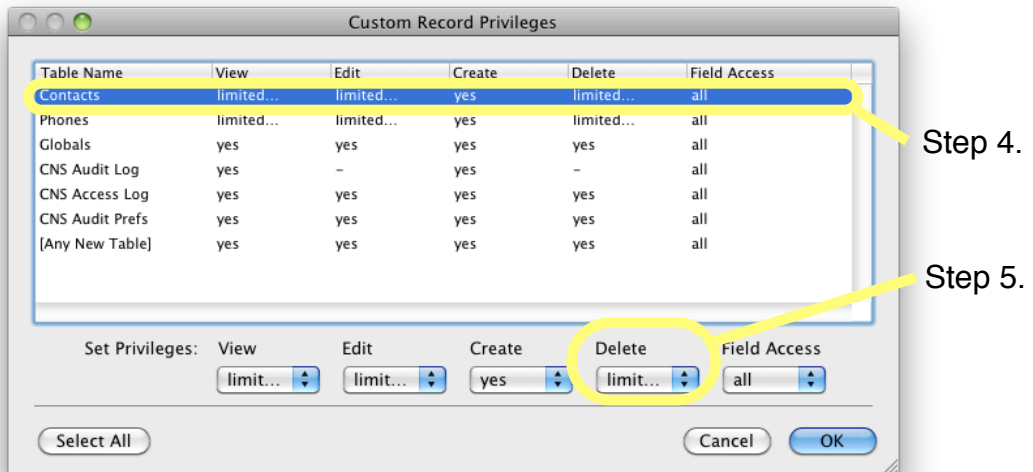
1. Open up the Accounts & Privileges / Manage Security dialog.
2. Switch to the Privilege Sets tab and edit the first custom privilege set. If there are no custom privilege sets, highlight the [Data Entry Only] privilege set, press Duplicate, and then edit that new privilege set.



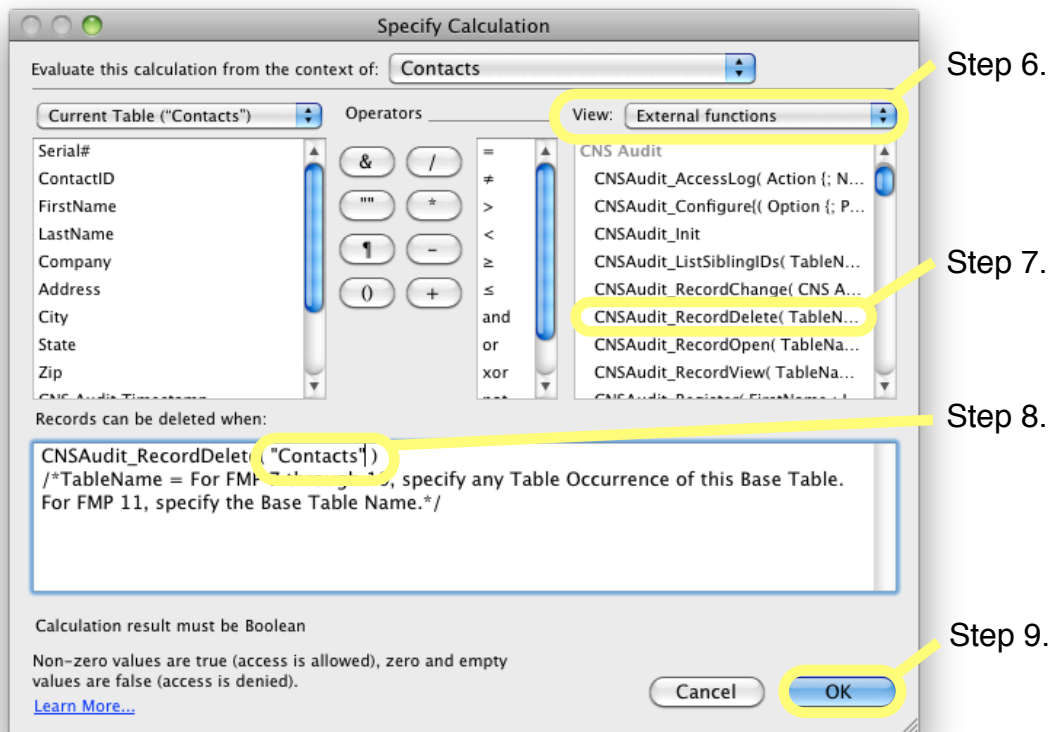
3. In the Data Access and Design section, press the Records drop-down menu and select Custom Privileges.



4. In the Custom Record Privileges dialog that pops up, select the first table.
5. Press the Delete drop-down menu and select limited....



6. In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.



7. In the list of functions, scroll down until a line for CNSAudit_RecordDelete is visible and double-click it.
8. Determine if your database will only be used by client versions of FileMaker Pro 11 or above:
 - a. If so, replace the TableName parameter with the Base Table Name of the table you are editing the privileges of.
 - b. If not, specify any Table Occurrence Name of the table you are editing the privileges of. (At the top of the Specify Calculation dialog is the Evaluate this calculation from the context of setting. You can use the same Table Occurrence name in your calculation as is selected in that setting.)
9. Press OK to close the Specify Calculation dialog.
10. Repeat steps 5-9 for each table in the Custom Record Privileges dialog. (Once the CNSAudit_RecordDelete function has been added to one calculation, copy and paste it to the other ones, or just retype it, and skip selecting the External Functions repeatedly. Make sure you update the TableName parameter for each table, though.)
11. Press OK to close the Custom Record Privileges dialog.
12. Press OK to close the Edit Privilege Set dialog.
13. Repeat steps 3-12 for each custom privilege that needs modifying.
14. Switch to the Accounts tab and reassign Privilege Sets to the Accounts as necessary.
15. Press OK to close the Accounts & Privileges / Manage Security dialog.

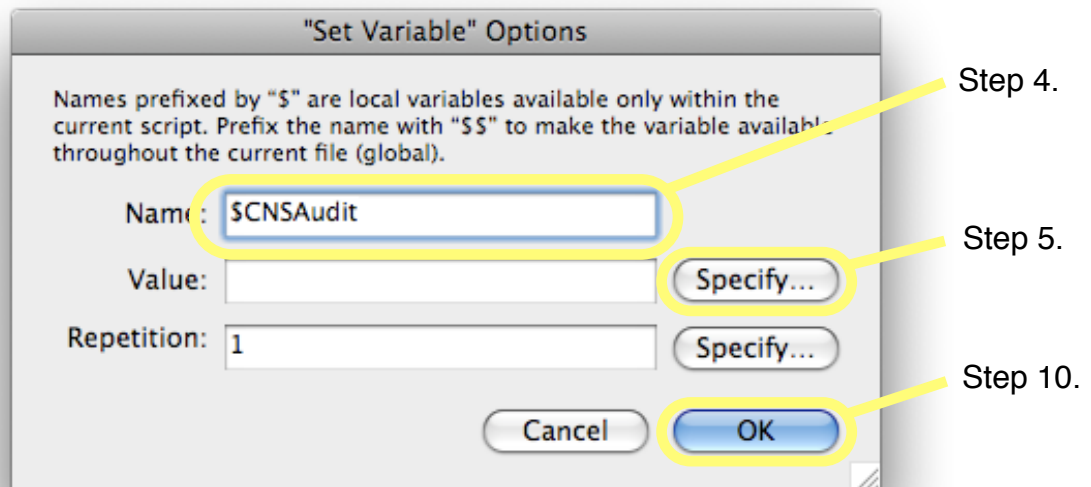
CNS Audit

Once these Custom Record Privileges are set up, the plug-in will be able to track record deletions which are stored in the CNS Audit Log table. The CNSAudit_RecordDelete function will also cause the record to be audited before it is deleted if it has never been audited before. The audit actually occurs whether the user actually deletes the record or if he or she presses **Cancel** on the record deletion confirmation dialog.

Set up the database for startup and shutdown

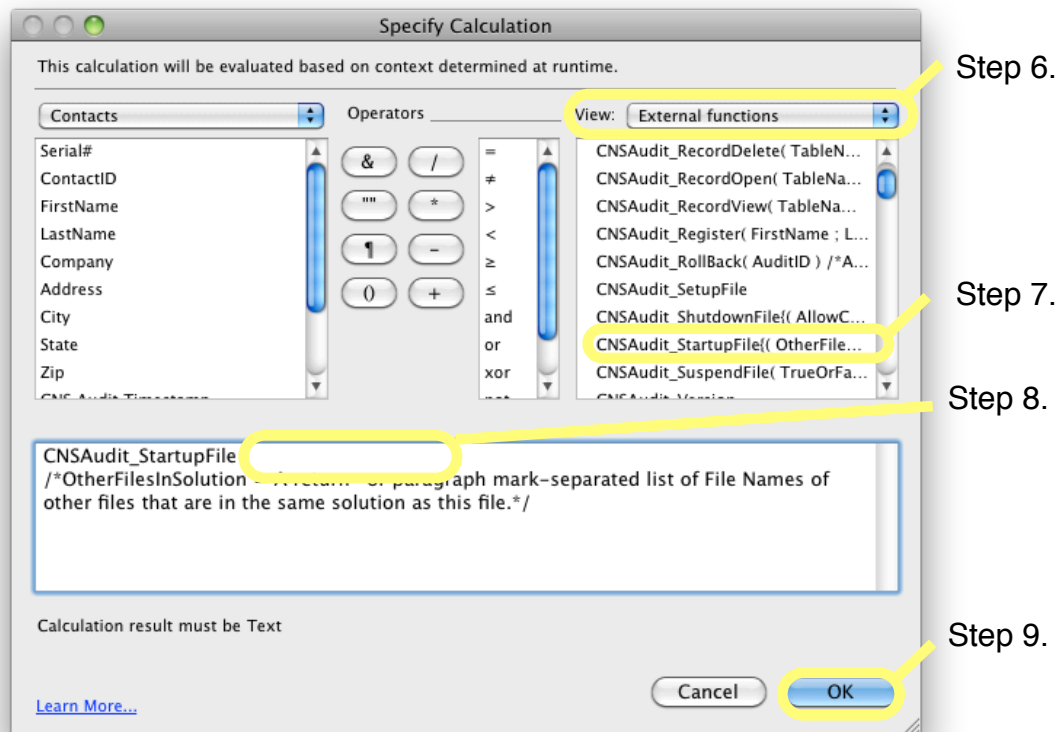
This section explains how to add or modify the Startup and Shutdown scripts for the database for setting up CNS Audit for the file. While this is optional for single-file solutions, by following these instructions, CNS Audit will function better with the database. If your solution consists of multiple files, you will be required to add at least a Startup script and follow the instructions in the *Setting up Multiple Files / Data Separation Model* section below.

1. Open up the ScriptMaker / Manage Scripts dialog.
2. Create a script named Startup (or something similar) or edit an existing Startup script if one is already in use.
3. Add a Set Variable script step and double-click it.³
4. In the Set Variable Options dialog that pops up, name the variable \$CNSAudit or something similar.



5. Press Specify... next to the Value field.
6. In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.

³ If using FileMaker Pro 7, use a Set Field script step and set a field in the database with the same calculation as the Value calculation for the Set Variable script step.

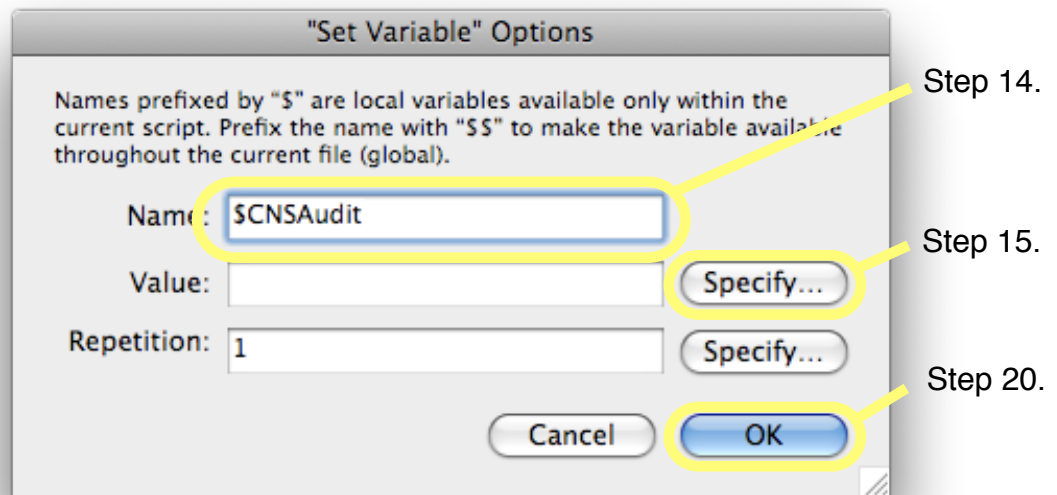


7. In the list of functions, scroll down until a line for CNSAudit_StartupFile is visible and double-click it.
8. For now, select everything in curly brackets after CNSAudit_StartupFile and delete it.⁴
9. Press OK to close the Specify Calculation dialog.
10. Press OK to close the Set Variable Options dialog.
11. Save and close the Startup script window.
12. Create a script named Shutdown (or something similar) or edit an existing shutdown script if one is already in use.
13. Add a Set Variable script step and double-click it.⁵

⁴ If your solution contains multiple files, see the *Setting up Multiple Files / Data Separation Model* section for an explanation of the optional parameter for the CNSAudit_StartupFile function.

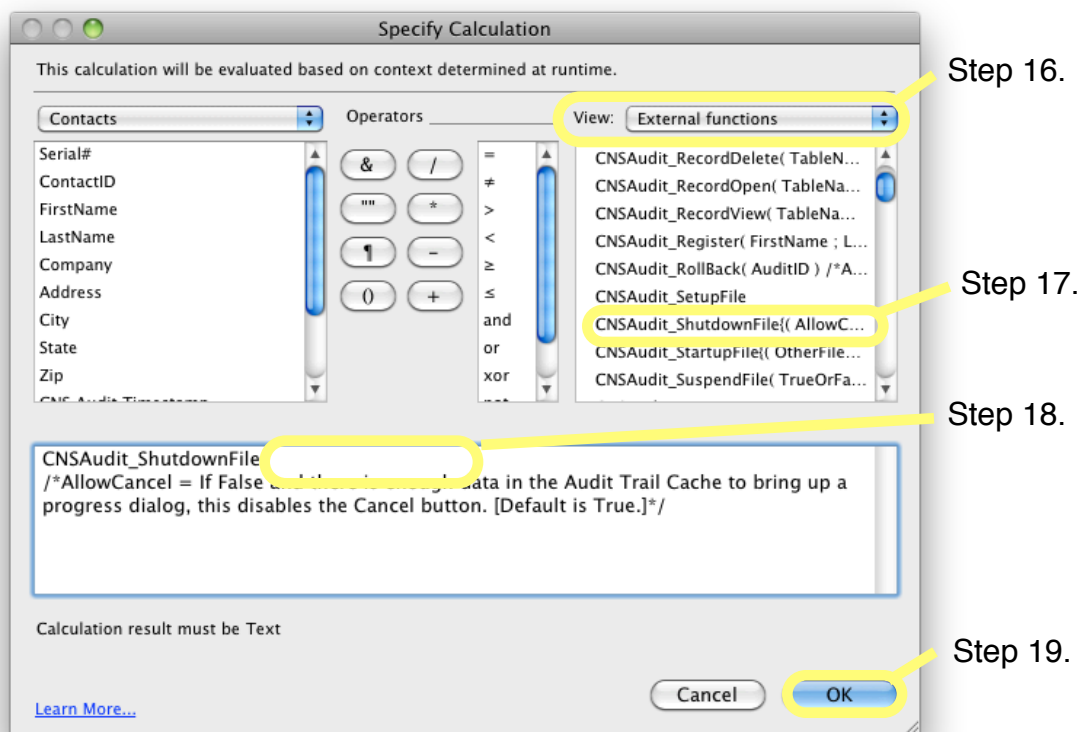
⁵ If using FileMaker Pro 7, use a Set Field script step and set a field in the database with the same calculation as the Value calculation for the Set Variable script step.

14. In the Set Variable Options dialog that pops up, name the variable \$CNSAudit or something similar.



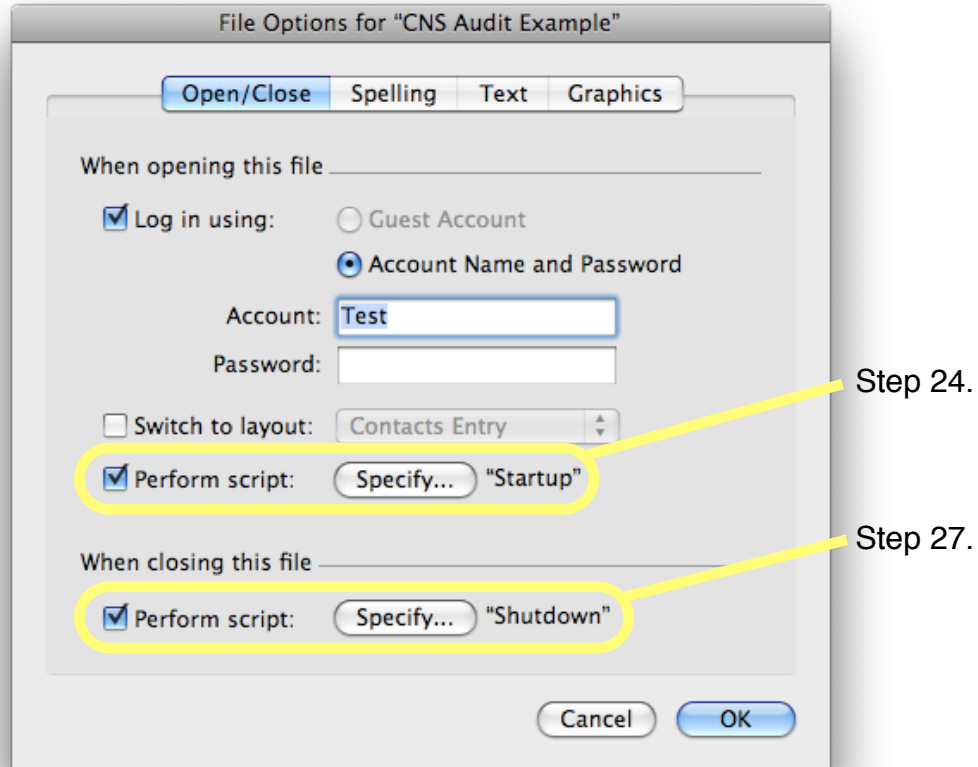
15. Press Specify... next to the Value field.

16. In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.



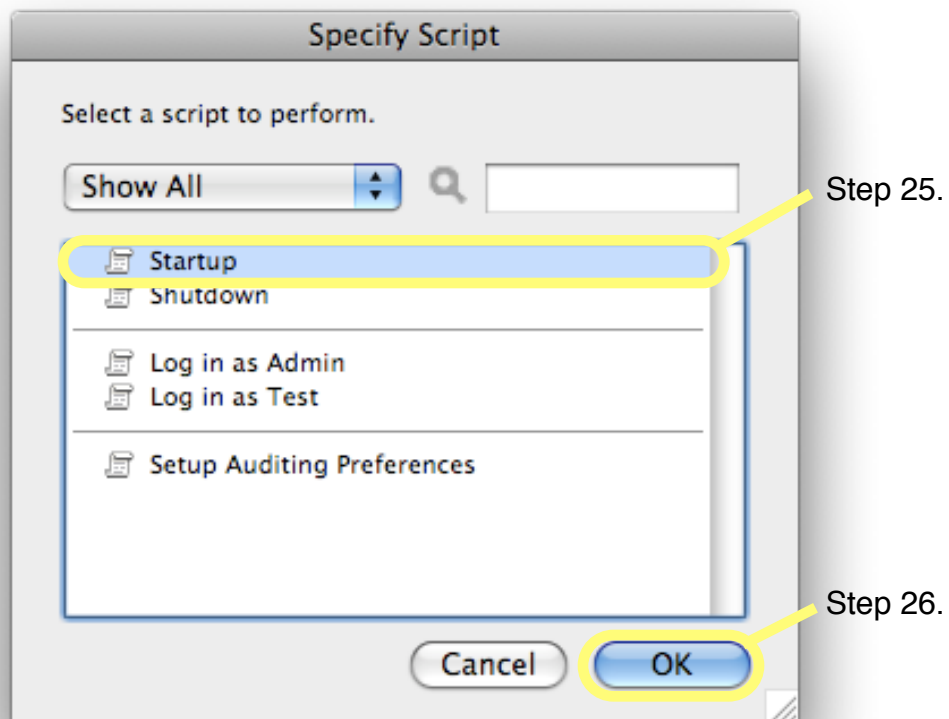
17. In the list of functions, scroll down until a line for CNSAudit_ShutdownFile is visible and double-click it.

18. For now, select everything in curly brackets after CNSAudit_ShutdownFile and delete it.⁶
19. Press OK to close the Specify Calculation dialog.
20. Press OK to close the Set Variable Options dialog.
21. Save and close the Shutdown script window.
22. Close the ScriptMaker / Manage Scripts dialog.
23. Open the File Options dialog and switch to the Open/Close tab.
24. In the When opening this file section, check the Perform script option.



⁶ See the online CNS Audit Function Reference for an explanation of the optional parameter for the CNSAudit_ShutdownFile function.

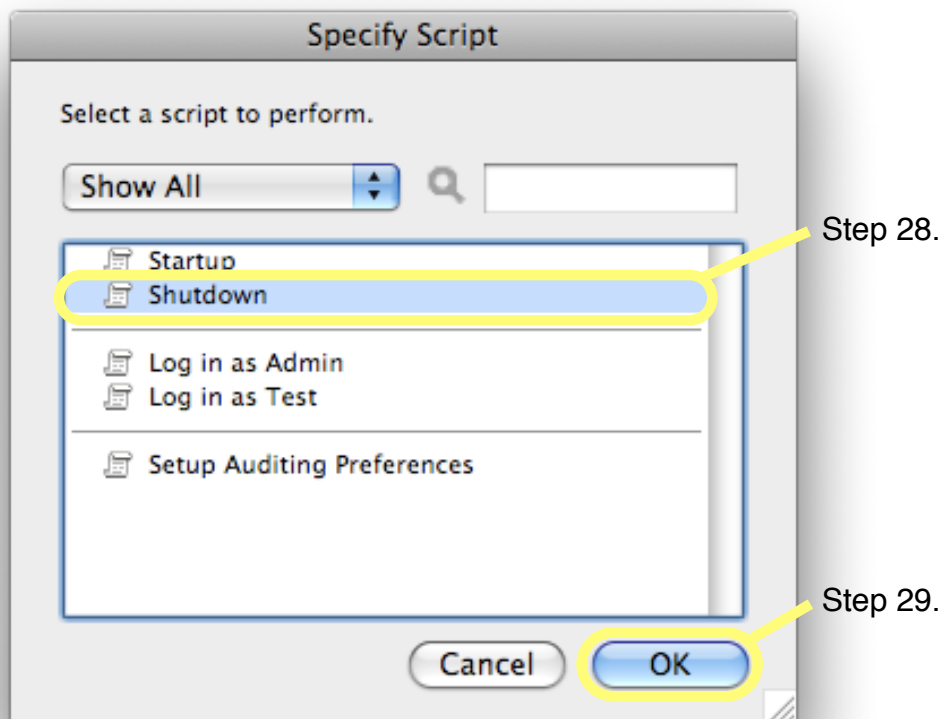
25. In the Specify Script dialog that pops up, select the Startup script created/edited in step 2.



26. Press OK to close the Specify Script dialog.

27. Back on the File Options dialog, in the When closing this file section, check the Perform script option.

28. In the Specify Script dialog that pops up, select the Shutdown script created/edited in step 12.



29. Press OK to close the Specify Script dialog.

30. Press OK to close the File Options dialog.

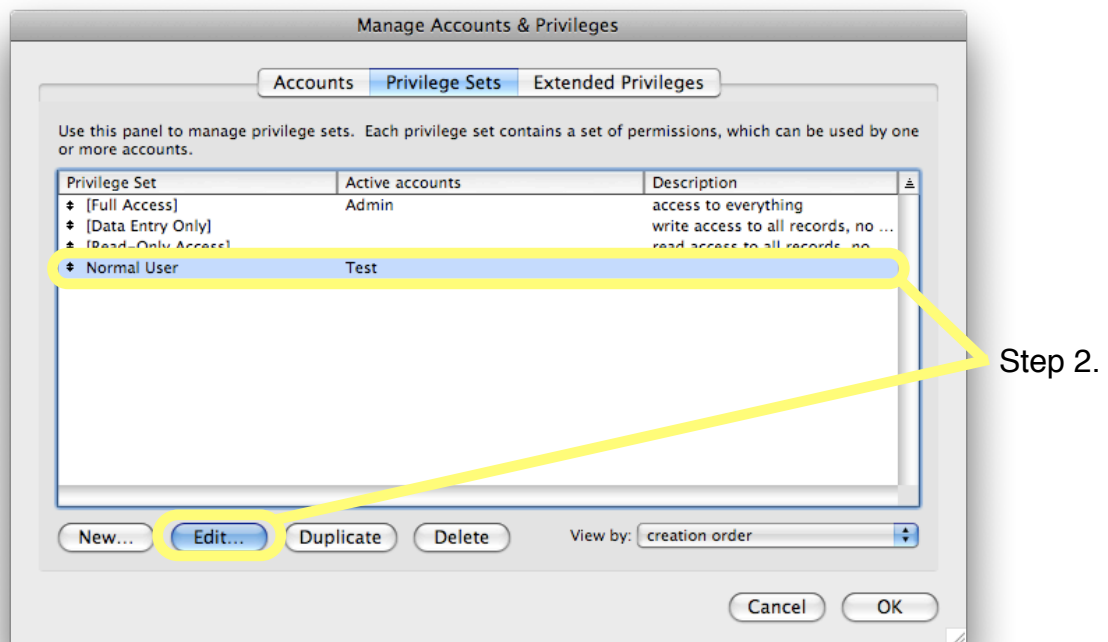
Auditing existing data

CNS Audit is normally invoked when a record is committed and at that point it compares the data in the committed record with the Audit Trail data in the CNS Audit Log database. When adding CNS Audit to an existing database with existing data (as opposed to a new database), the CNS Audit Log will not contain any Audit Trail data for the database at the point CNS Audit is implemented. If there is no previous entries for any given record in the CNS Audit Log when a record is audited, CNS Audit will create new entries for the record, but any values in the record prior to the audit will be lost. CNS Audit offers two solutions for this situation:

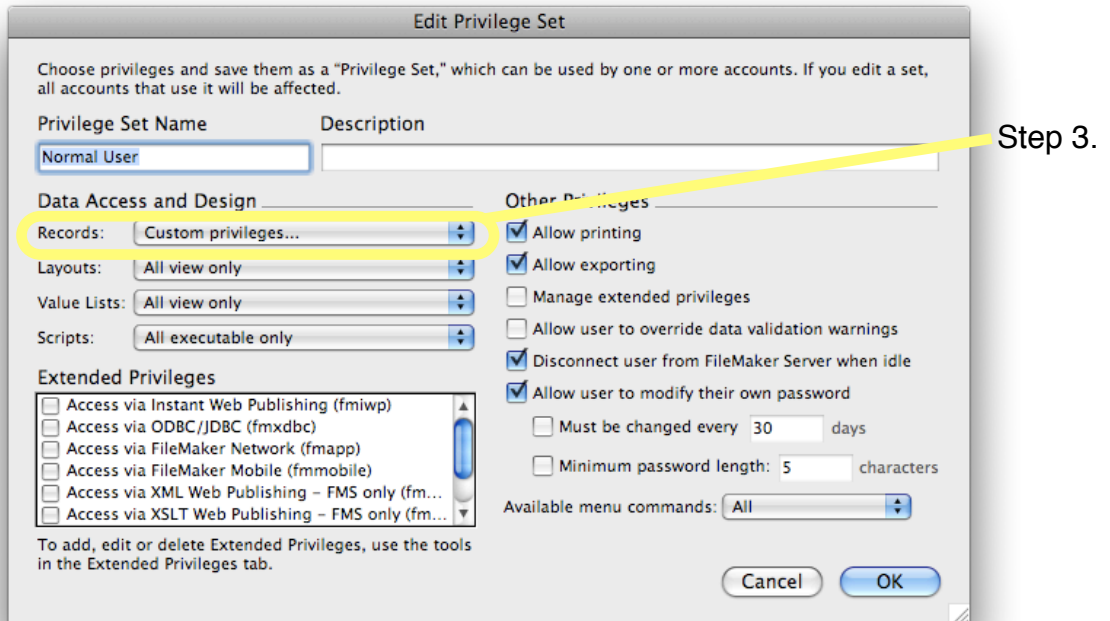
Solution 1

CNS Audit includes a function named `CNSAudit_RecordOpen`. This function is similar to the `CNSAudit_RecordDelete` function in that it's used in the Custom Record Privileges for each table in your database. By using this function with the `Edit Custom Record Privilege`, CNS Audit is able to capture the current state of the record before any edits are made. This function also logs an `Open` action to the CNS Access Log table. Follow these instructions to add the `CNSAudit_RecordOpen` function.

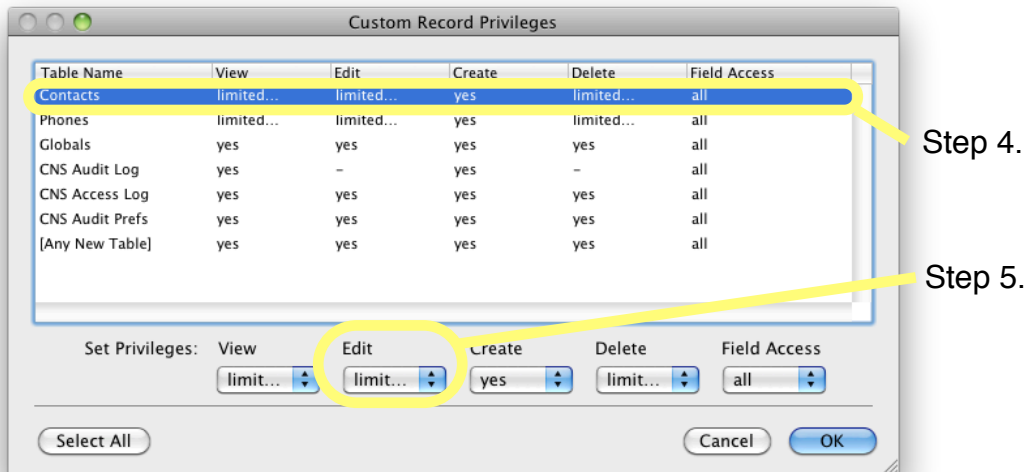
1. Open up the *Accounts & Privileges / Manage Security* dialog.
2. Switch to the *Privilege Sets* tab and edit the first custom privilege set.



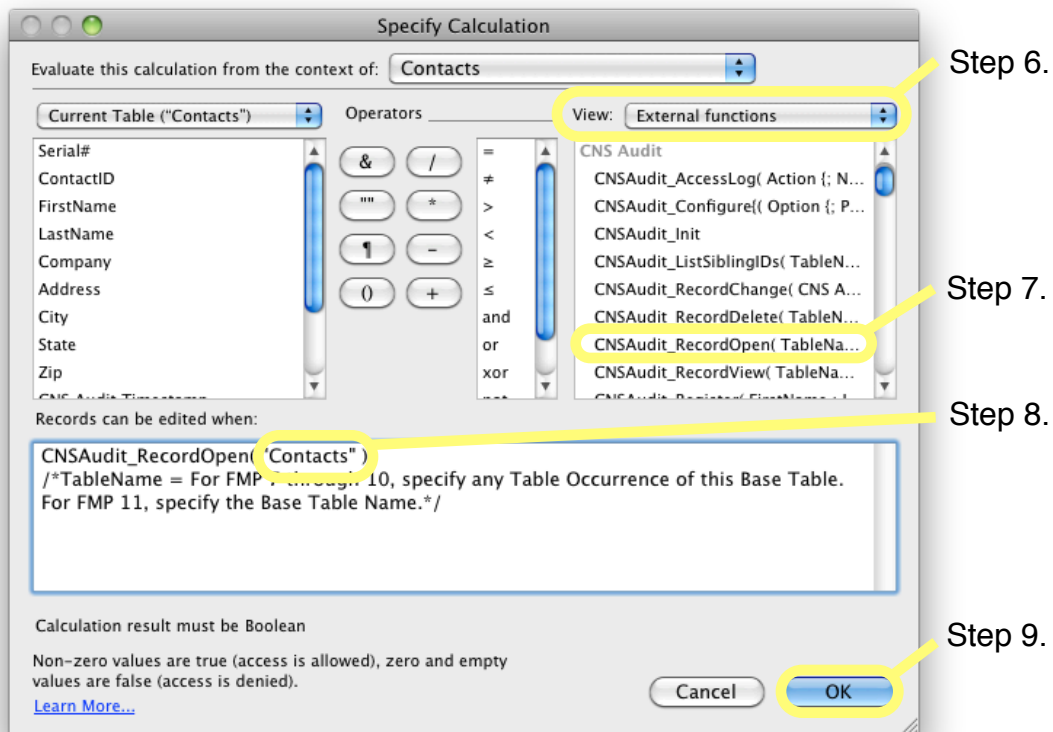
3. In the *Data Access and Design* section, press the *Records* drop-down menu and select *Custom Privileges*.



4. In the Custom Record Privileges dialog that pops up, select the first table.
5. Press the Edit drop-down menu and select limited....



6. In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.



7. In the list of functions, scroll down until a line for CNSAudit_RecordOpen is visible and double-click it.
8. Determine if your database will only be used by client versions of FileMaker Pro 11 or above:
 - a. If so, replace the TableName parameter with the Base Table Name of the table you are editing the privileges of.
 - b. If not, specify any Table Occurrence Name of the table you are editing the privileges of. (At the top of the Specify Calculation dialog is the Evaluate this calculation from the context of setting. You can use the same Table Occurrence name in your calculation as is selected in that setting.)
9. Press OK to close the Specify Calculation dialog.
10. Repeat steps 5-9 for each table in the Custom Record Privileges dialog. (Once the CNSAudit_RecordOpen function has been added to one calculation, copy and paste it to the other ones, or just retype it, and skip selecting the External Functions repeatedly. Make sure you update the TableName parameter for each table, though.)
11. Press OK to close the Custom Record Privileges dialog.
12. Press OK to close the Edit Privilege Set dialog.
13. Repeat steps 3-12 for each custom privilege that needs modifying.
14. Press OK to close the Accounts & Privileges / Manage Security dialog.

Solution 2

CNS Audit includes a function named `CNSAudit_Init` that can create an initial set of Audit Trail data. This function will look for every table in your database that contains the `CNS Audit Trigger` field (ie. tables that have been set up for auditing) and examine every record in those tables to determine if that record has been audited. If it has not, or if the record indicates there was some error the last time it was audited, then CNS Audit will create a set of initial records in the `CNS Audit Log` table to reflect the state of the record at that moment. After using `CNSAudit_Init` the `CNS Audit Log` table will contain all necessary information for rolling back changes to the database up to the point that the `CNSAudit_Init` function was used.

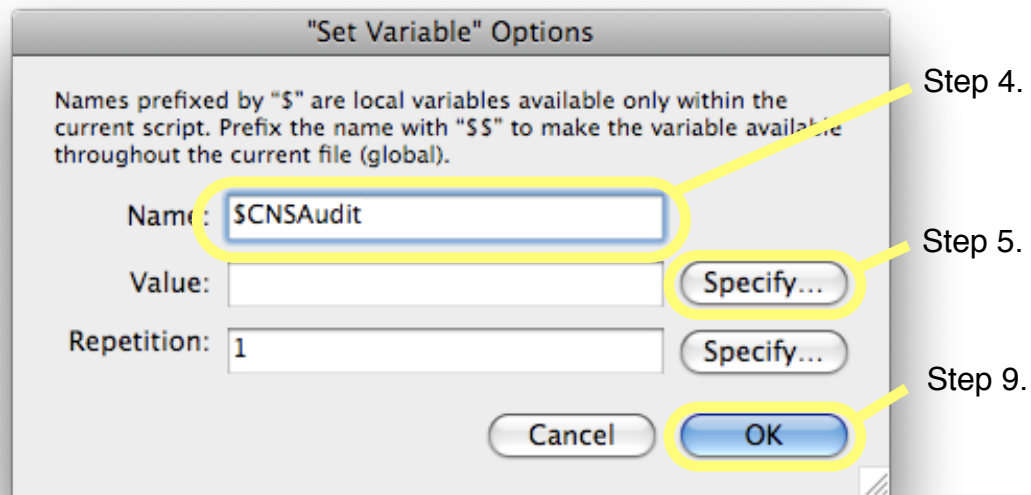
Some important information about this function: This function examines every single record in every single table that has been set up for auditing and will create a record in the `CNS Audit Log` table for every single field in each of those records. For any database that has a moderate to large number of records, the `CNSAudit_Init` function can take hours to complete and will easily triple or quadruple the size of your database. While it's possible to run the `CNSAudit_Init` function on a database that is hosted via FileMaker Server, the process will complete much faster if it's brought down from the server and run locally before being hosted again. Unless it's absolutely necessary that you have a full audit of every single record in your database (eg. to recreate the database from an empty clone), using the `CNSAudit_RecordOpen` solution above to only track changes as they happen is probably a better choice.

Follow these steps to use the `CNSAudit_Init` function:

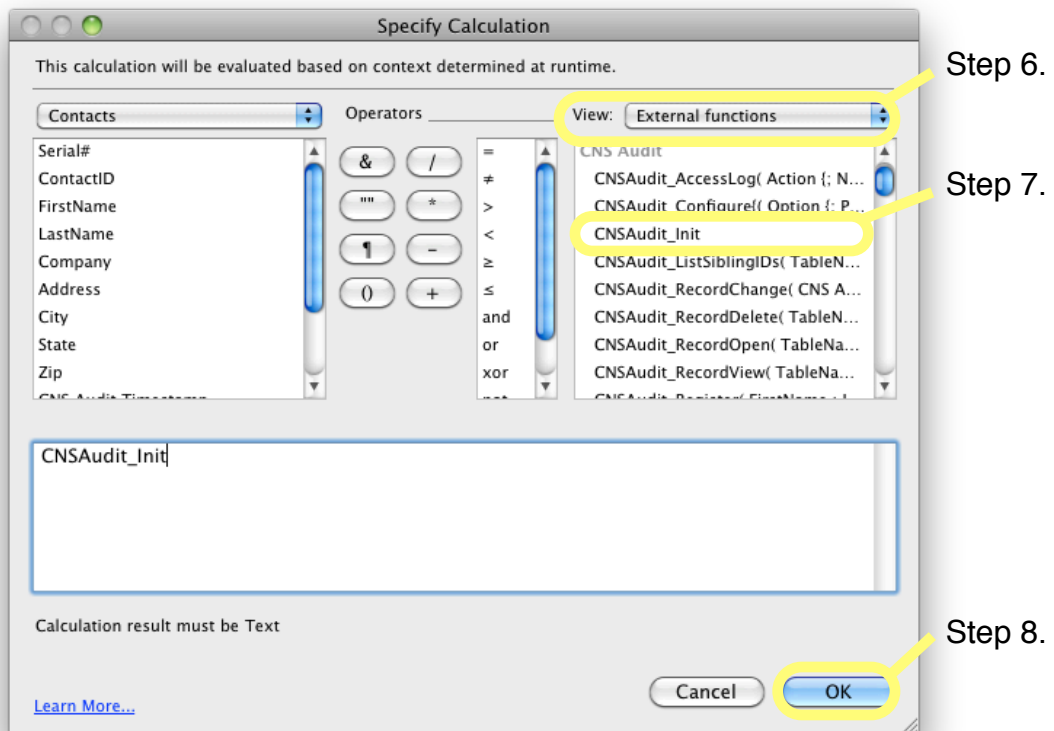
1. Open up the `ScriptMaker / Manage Scripts` dialog.
2. Create a script named `Init File` or something similar.
3. Add a `Set Variable` script step and double-click it.⁷

⁷ If using FileMaker Pro 7, use a `Set Field` script step and set a field in the database with the same calculation as the `Value` calculation for the `Set Variable` script step.

- In the Set Variable Options dialog that pops up, name the variable \$CNSAudit or something similar.



- Press Specify... next to the Value field.
- In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.



- In the list of functions, scroll down until a line for CNSAudit_Init is visible and double-click it.
- Press OK to close the Specify Calculation dialog.

9. Press OK to close the Set Variable Options dialog.
10. Save and close the Init File script window.

Run the Init File script to initialize the CNS Audit Log table with the data from the database. If the CNS Audit Log table has not yet been created, this function will create it and ask you to run the Init function a second time.

Notes:

- While running, the CNSAudit_Init function shows a dialog with a progress bar and a Cancel button. The initialization process can be stopped at any time by pressing the Cancel button. The process can then be started again by running CNSAudit_Init again and it will pick up where it left off.
- The CNSAudit_Init function can be called at any time after CNS Audit has been implemented in a database and can be called multiple times if the need arises. For example, if for some reason CNS Audit was not installed on a computer that was using the database, any records added on that computer would not be audited. The CNSAudit_Init function could be used to create Audit Trail data for those records added on the computer that did not have CNS Audit installed.

Set up is complete

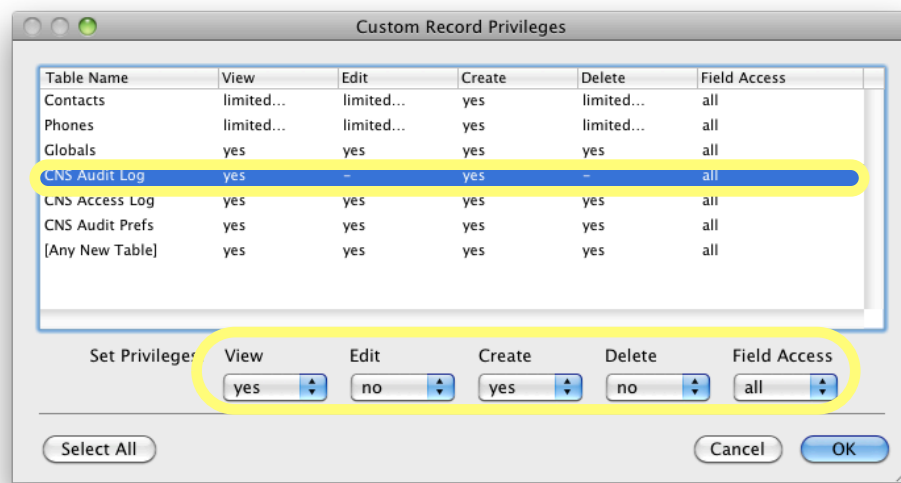
Your single-file database solution has now been set up for auditing via the CNS Audit Plug-in. Any edits to your data will now create Audit Trail records in the CNS Audit Log table. The remaining sections of this guide will show you how to make sure the plug-in is installed when your solution is open, how to add support for auditing Record Views, and how to set up multi-file / data separation model solutions to be audited.

Optional set up tasks

Protecting Audit Trail Data

While CNS Audit is in charge of creating an Audit Trail of the database, keeping everyday users from directly modifying that Audit Trail data after-the-fact is up to the database developer. To ensure that everyday users can add to, but not modify, the Audit Trail data, modify the CNS Audit Log entry in the Custom Record Privileges for the everyday users' Privilege Set as follows:

View:	yes
Edit:	no
Create:	yes
Delete:	no
Field Access:	all



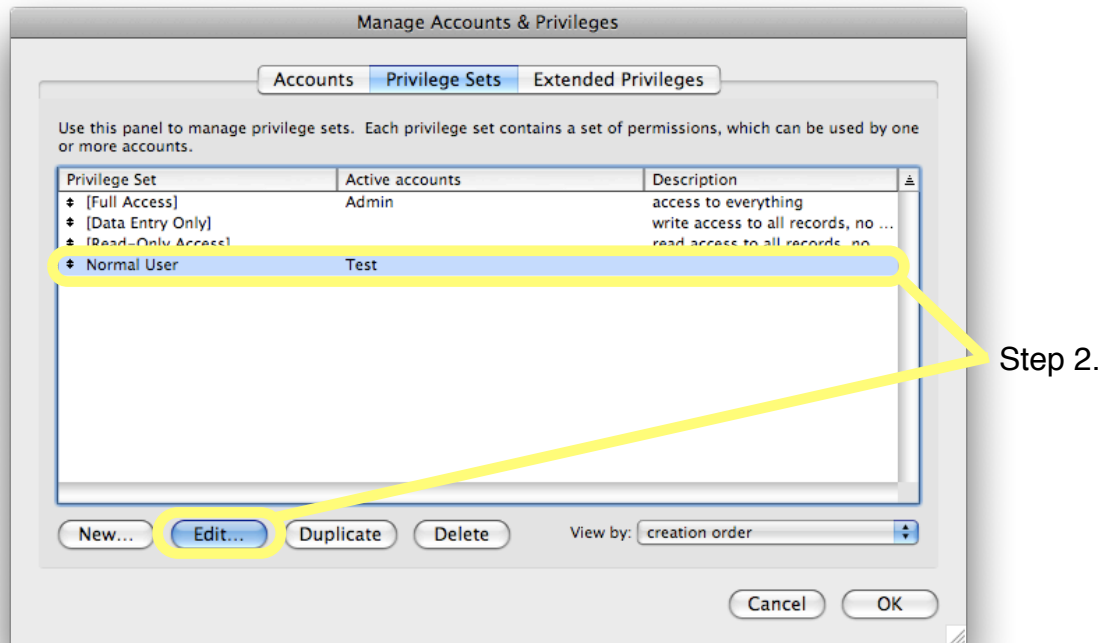
Auditing Actions other than Modifying Data

CNS Audit provides a CNSAudit_AccessLog function for auditing any custom actions performed by database users. This function has one required parameter and one optional parameter. The first parameter is the Action to log, for example User Login. The second parameter is any special Notes about the action, for example User is logged in after hours. This information is stored in a separate table in the database named CNS Access Log.

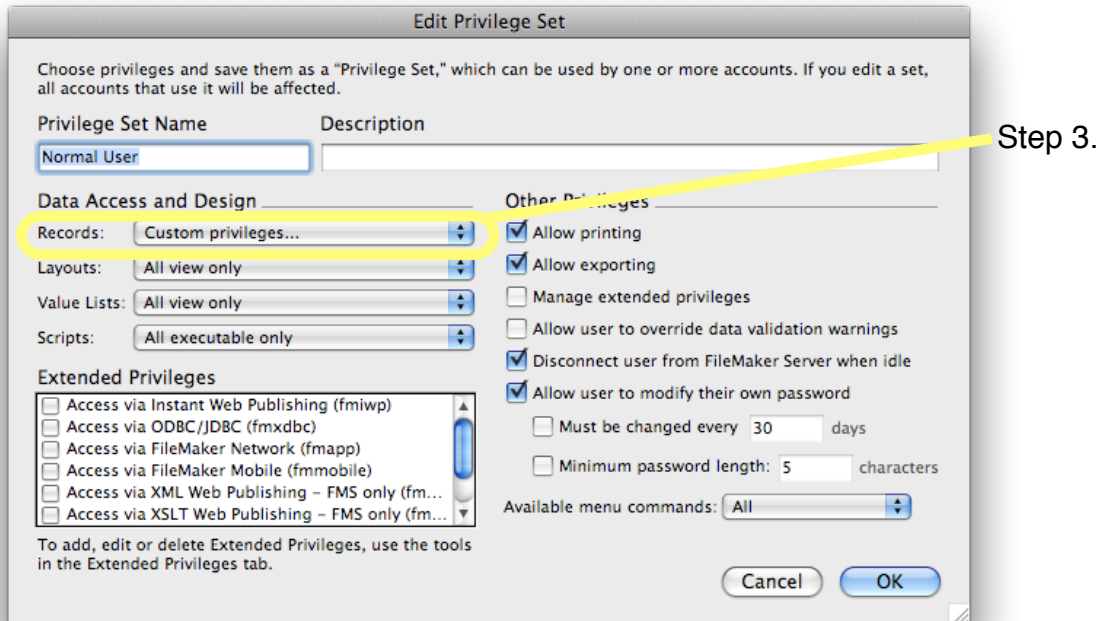
Auditing Record Views

In the same way that the plug-in offers functions for tracking records being opened and deleted, CNS Audit includes a function for tracking record views. The CNSAudit_RecordView function is used within the Custom Record Privileges just like the CNSAudit_RecordOpen and CNSAudit_RecordDelete functions:

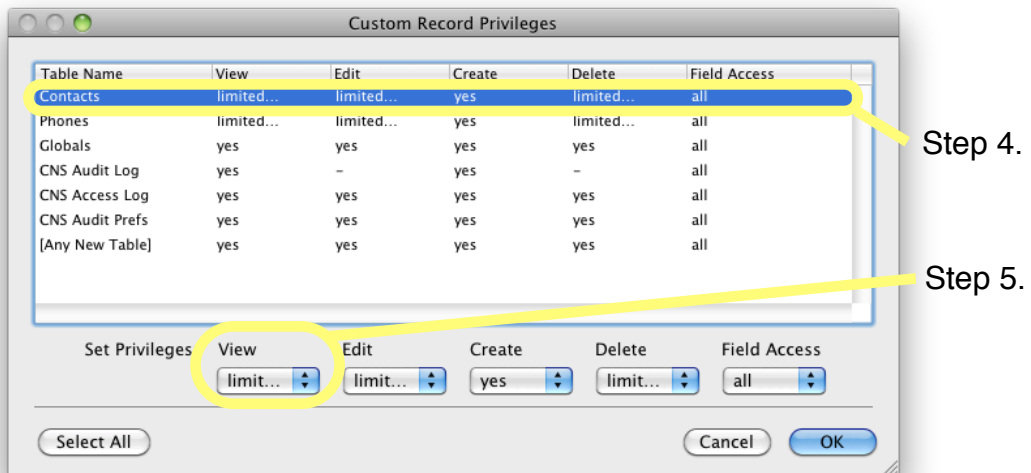
1. Open up the Accounts & Privileges / Manage Security dialog.
2. Switch to the Privilege Sets tab and edit the first custom privilege set.



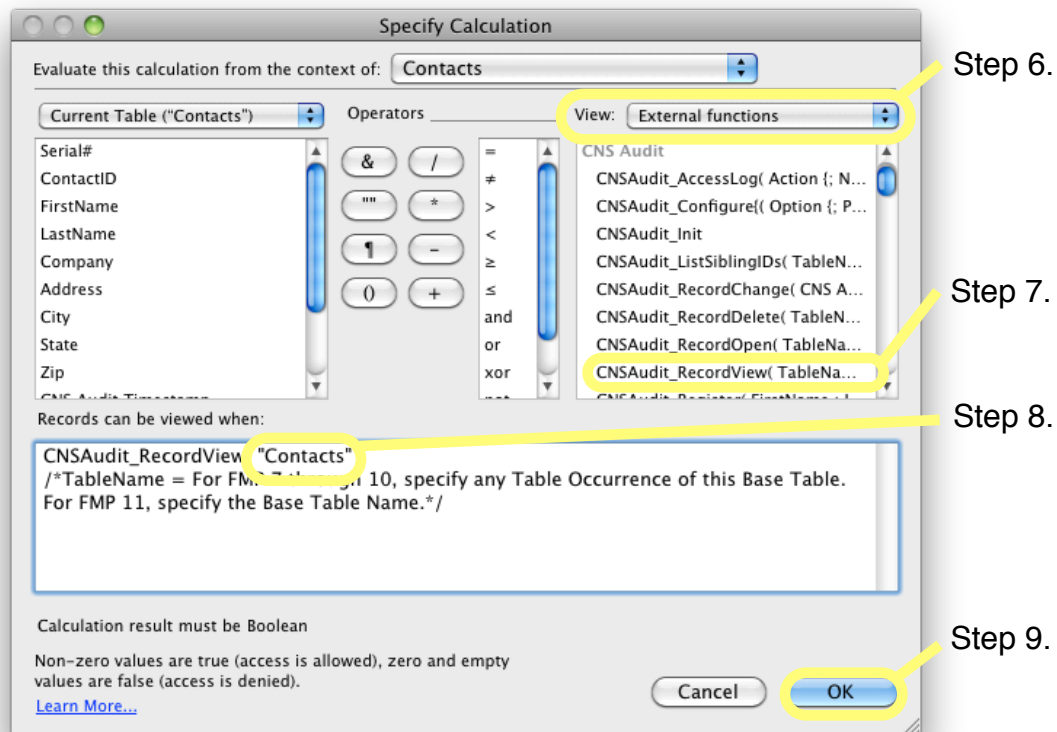
3. In the Data Access and Design section, press the Records drop-down menu and select Custom Privileges.



4. In the Custom Record Privileges dialog that pops up, select the first table.
5. Press the View drop-down menu and select limited....



6. In the Specify Calculation dialog that pops up, change the View drop-down to External Functions.



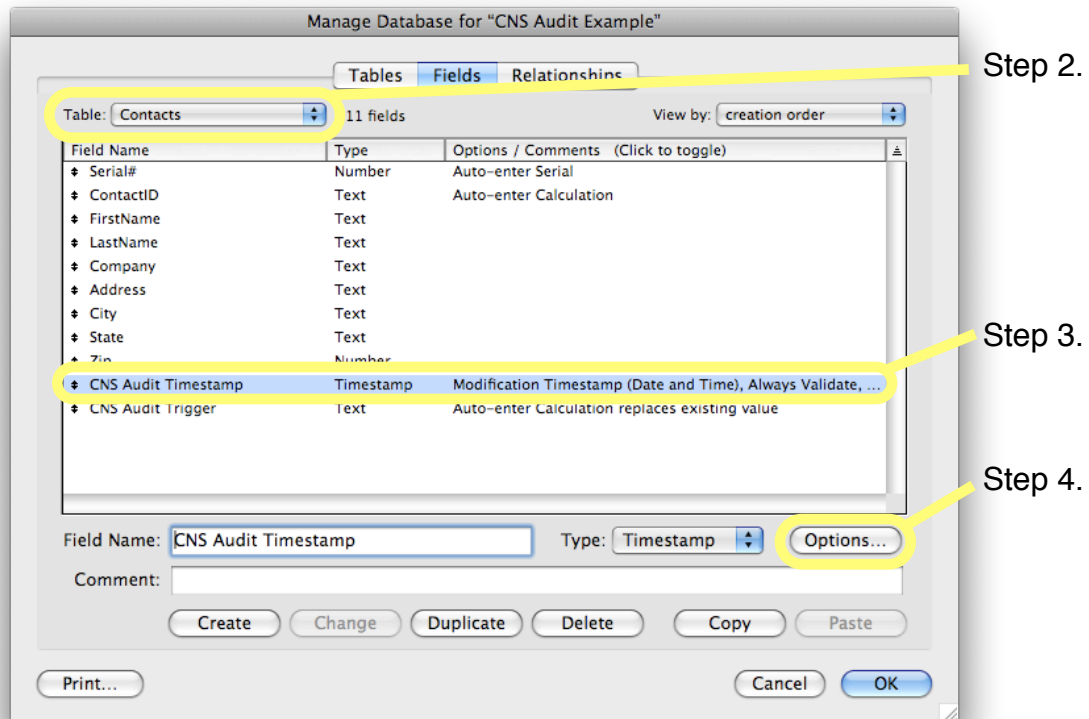
7. In the list of functions, scroll down until a line for CNSAudit_RecordView is visible and double-click it.
8. Determine if your database will only be used by client versions of FileMaker Pro 11 or above:
 - a. If so, replace the TableName parameter with the Base Table Name of the table you are editing the privileges of.
 - b. If not, specify any Table Occurrence Name of the table you are editing the privileges of. (At the top of the Specify Calculation dialog is the Evaluate this calculation from the context of setting. You can use the same Table Occurrence name in your calculation as is selected in that setting.)
9. Press OK to close the Specify Calculation dialog.
10. Repeat steps 5-9 for each table in the Custom Record Privileges dialog. (Once the CNSAudit_RecordView function has been added to one calculation, copy and paste it to the other ones, or just retype it, and skip selecting the External Functions repeatedly. Make sure you update the TableName parameter for each table, though.)
11. Press OK to close the Custom Record Privileges dialog.
12. Press OK to close the Edit Privilege Set dialog.
13. Repeat steps 3-12 for each custom privilege that needs modifying.
14. Press OK to close the Accounts & Privileges / Manage Security dialog.

Once these Custom Record Privileges are set up, the plug-in will add a record to the CNS Access Log table anytime a user views a record in the database.

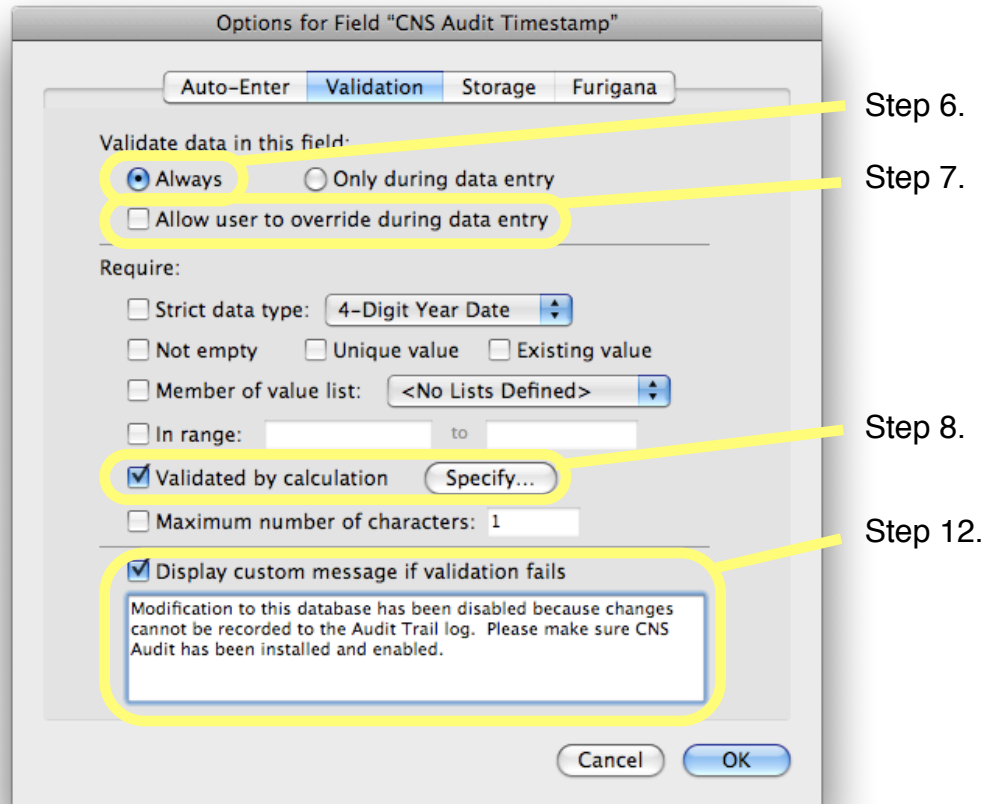
Preventing database modification if CNS Audit is not present

If CNS Audit is not installed or not enabled on a machine, any modifications to the database will not be recorded to the CNS Audit Log. To correct this behavior, some validation options can be added to prevent modification to the database. Follow these steps to prevent modification when CNS Audit is missing:

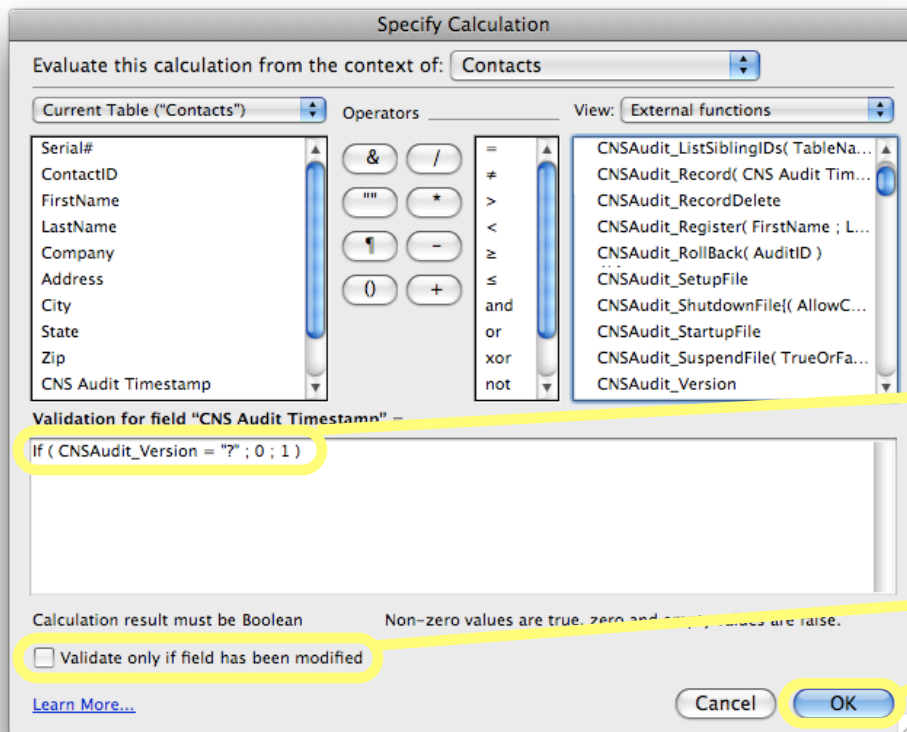
1. Open the Database file and go to Define / Manage Database.
2. Switch to the Fields tab and select the first table from the the Table drop-down menu in which auditing has been added.



3. Select the CNS Audit Timestamp field that was created when the database was set up for tracking field changes.
4. Press Options.
5. In the Options for Field dialog that pops-up, switch to the Validation tab.
6. Select Always in the Validate data in this field: section.



7. Uncheck the Allow user to override during data entry option in the Validate data in this field: section.
8. Check the Validated by calculation option in the Require: section.
9. In the Specify Calculation dialog that pops up, type into the calculation:
`If (CNSAudit_Version = "?" ; 0 ; 1)`



Step 9.

Step 10.

Step 11.

10. Uncheck the Validate only if field has been modified option near the bottom of the Specify Calculation dialog.
11. Press OK to close the Specify Calculation dialog.
12. *Optional:* Back on the Options for Field dialog, check the Display custom message if validation fails option and enter in something similar to:
 Modification to this database has been disabled because changes cannot be recorded to the Audit Trail log. Please make sure CNS Audit has been installed and enabled.
13. Press OK to close the Options for Field dialog.
14. Repeat steps 3-13 for each table that has been set up for auditing.
15. Close the Define / Manage Database dialog.

Setting up Multiple Files / Data Separation Model

If your database solution is made up of multiple related files, such as in a solution that uses the Data Separation Model, there are a few extra steps that need to be done for CNS Audit to correctly audit your databases.

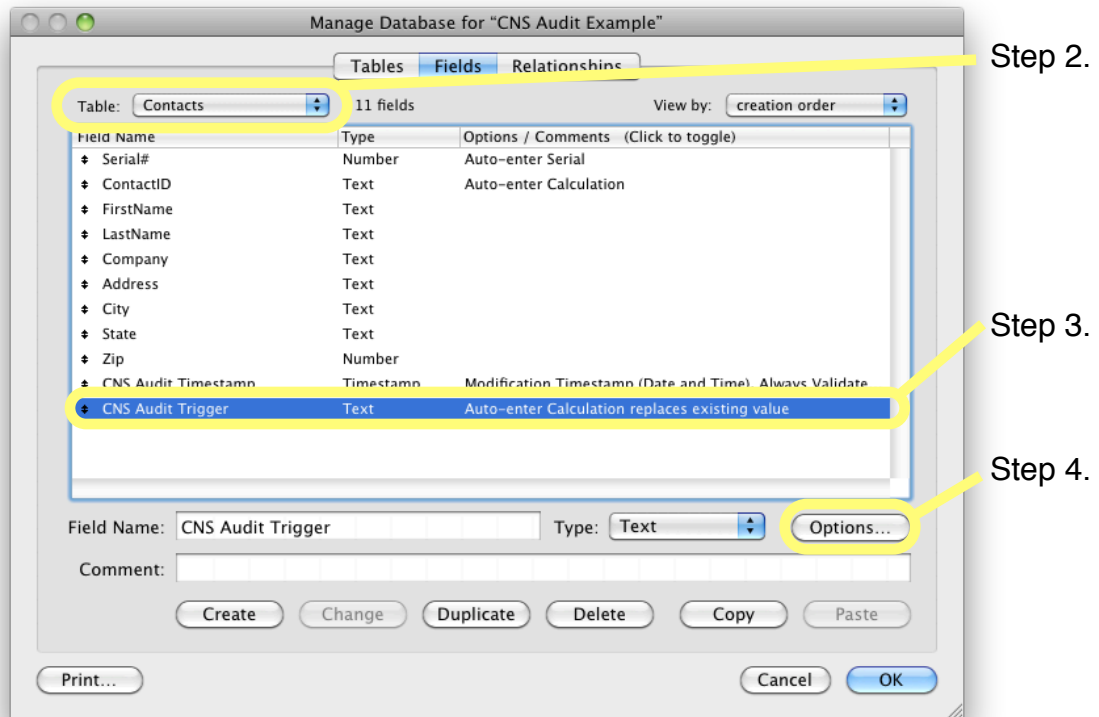
Make sure all files have a reference to the CNS Audit tables

Every file in the solution will need an external Table Occurrence reference to the three CNS Audit tables, CNS Audit Log, CNS Access Log, and CNS Audit Prefs. It does not matter which file the actual CNS Audit tables are in, and they can even be in a file all by themselves if you want, but every file in the solution needs to have access to them. Also, make sure you do not rename the Table Occurrences.

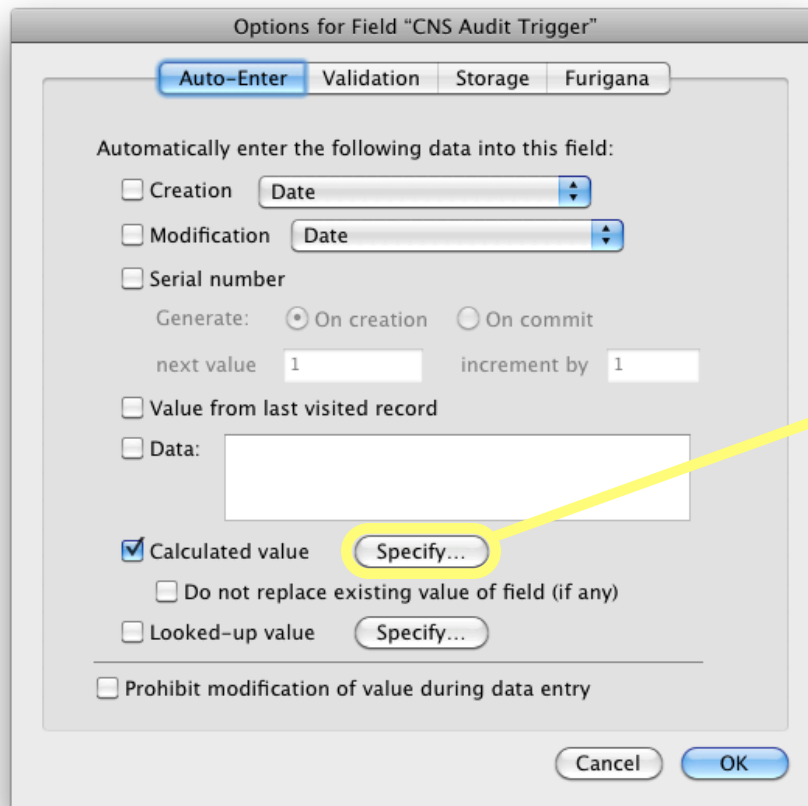
Modify the CNS Audit Trigger fields

In each of your tables that you have set up for auditing by adding the CNS Audit Timestamp and CNS Audit Trigger fields, you will need to make a small modification to the CNS Audit Trigger calculation.

1. Open the Database file and go to Define / Manage Database.
2. Switch to the Fields tab and select the first table from the Table drop-down menu in which auditing has been added.

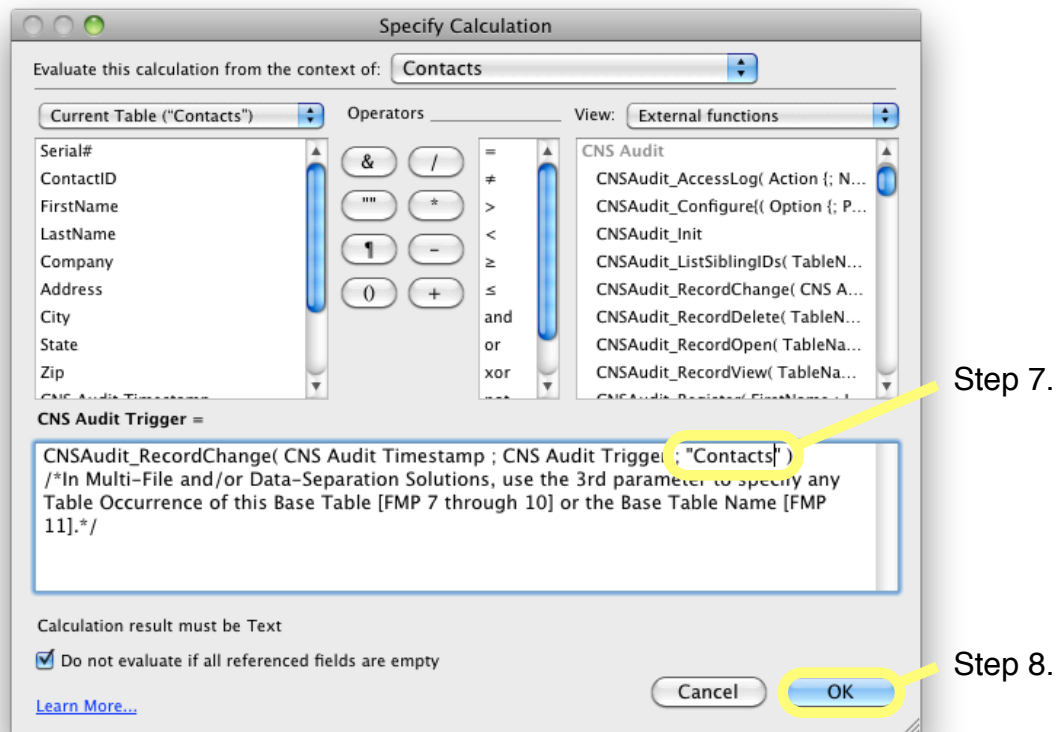


3. Select the CNS Audit Trigger field you created when setting up the database for tracking field changes.
4. Press Options.
5. In the Options for Field dialog that pops-up, switch to the Auto-Enter tab, and click the Specify... button next to the Calculated Value option.



Step 5.

6. In the Specify Calculation dialog that pops up, you should see two double quotes as the last parameter to the CNSAudit_RecordChange function.
7. Determine if your database will only be used by client versions of FileMaker Pro 11 or above:
 - a. If so, insert the Base Table Name of the table you are modifying between the double quotes.
 - b. If not, insert any Table Occurrence Name of of the table you are modifying between the double quotes. (At the top of the Specify Calculation dialog is the Evaluate this calculation from the context of setting. You can use the same Table Occurrence name in your calculation as is selected in that setting.)



8. Press OK to close the Specify Calculation dialog.
9. Press OK again to close the Options for Field dialog.
10. Repeat steps 3-9 for each table that you have setup for auditing.
11. Close the Define / Manage Database dialog.

Modify the Startup scripts

Every file in your solution will need a script that is called when your solution is opened. You can follow the instructions in the *Set up the database for startup and shutdown* section if you have not already. However, it's important to note that it's possible for a database file to be opened without the Startup script being run. This usually happens if FileMaker Pro opens the file to satisfy a relationship from the current file. Because of this, you need to ensure that the main database file for your solution will call the Startup scripts of every other file in your solution.

In the Startup scripts for each of the files, modify the CNSAudit_StartupFile function to include a paragraph-mark delimited list of every file name in the solution. For example, if your solution is made up of three files named Contacts.fp?, Calendar.fp?, and Interface.fp?, then modify the CNSAudit_StartupFile function in each file to look like:

```
CNSAudit_StartupFile( "Contacts¶Calendar¶Interface" )
```

Note: Do not include the .fp? extension when listing the file names.

Modify any CNSAudit_AccessLog calls

If you are using the CNSAudit_AccessLog function in any scripts or calculations, you will need to update those calls as well. That function also has an optional third parameter like the CNSAudit_RecordChange function. If your database solution will only be used with FileMaker Pro 11+ clients, specify the Base Table Name of the table that is in context for the script or calculation as the third parameter. If your database solution will be used with any version of FileMaker Pro less than version 11, specify any Table Occurrence name of the table that is in context for the script or calculation as the third parameter.

After making the above four changes, your multi-file database solution will be set up for auditing with the CNS Audit plug-in.

Additional Information

Modifying schema

One of the many steps CNS Audit takes to speed up auditing is to cache the schema information from the database. When running under versions of FileMaker Pro prior to version 11, this cached schema information can become out of sync with the actual database if you are actively developing the database (eg. adding/renaming tables, fields, and layouts). To ensure that CNS Audit is correctly auditing the database when running under versions of FileMaker Pro prior to version 11, the `CNSAudit_StartupFile` function can be used at any time to force a reload of the schema information. When running under FileMaker Pro 11 or above, the plug-in is able to track changes to the schema and will reload the schema information automatically.