

# Audit Trail for The Raiser's Edge

## Overview

Audit Trail for The Raiser's Edge tracks to varying degrees changes that have been made to records. There are three versions of the application; Audit Trail Free, Audit Trail Basic and Audit Trail Professional. This document only covers Basic and Professional in any detail. Please see the corresponding guide to Audit Trail Free for more information about that version.

## Versions

### Audit Trail Free

Audit Trail Free records whenever a constituent is deleted. It stores the biographical, address, phones and attributes of the constituent. It also stored the date and time of the deletion as well as who deleted the record.

### Audit Trail Basic

Audit Trail Basic records whenever a change is made to a constituent, whenever a new constituent is added or whenever it is deleted. It stores biographical, address, phone and attribute data. It audits changes made manually to records, made through import and now using the global audit module, can record changes made through The Raiser's Edge Global Change and Global Delete functions.

All change data is stored in the database and can be viewed using the Audit Trail Viewer. This plug-in allows you to view, filter and search for changes based on numerous criteria.

### Audit Trail Professional

Audit Trail Professional work in exactly the same way as Audit Trail Basic only that it covers many more areas of The Raiser's Edge. As well as covering the constituent record, it also tracks changes to gifts, individuals, organisations, solicitors/canvassers, education records, actions and participants. Not all areas of each record are covered so see the appendix for more the feature comparison table.

## Installation

When you download Audit Trail from Zeidman Development and unzip the compressed file, there are four directories containing four applications to be installed:

- Audit Server Installation – installed on the server and only run once in order to set up the server.
- Audit Trail Client – Installed wherever The Raiser's Edge is installed and you need to track changes.

- Audit Trail Viewer – Installed on workstations of those users who need to analyse the changes that have been made.
- Global Audit Trail plug-in – Installed on workstations of those users who regularly perform global changes to data.

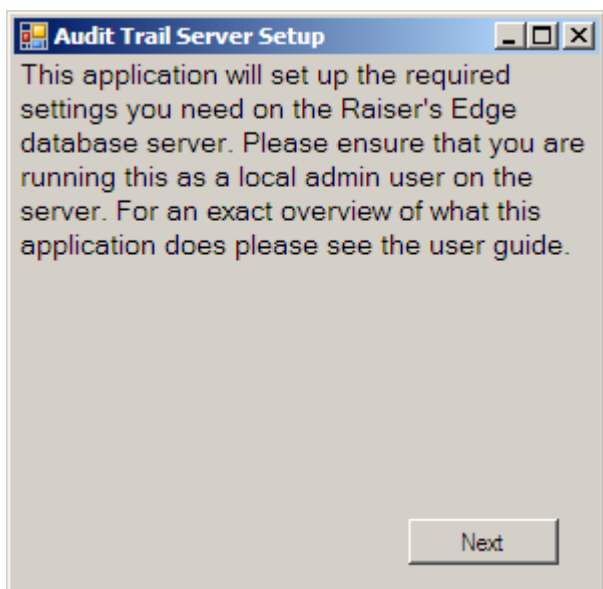
Each application performs a different role. Not all applications will need to be installed on all workstations.

In general the installation is straight forward. In each case run the setup.exe file and follow the wizard.

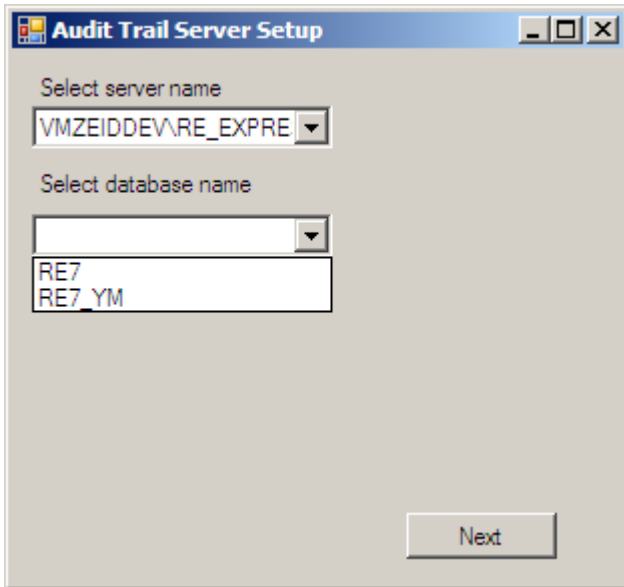
FOR A NEW INSTALLATION ALWAYS START WITH THE SERVER INSTALL.

## Audit Server Installation

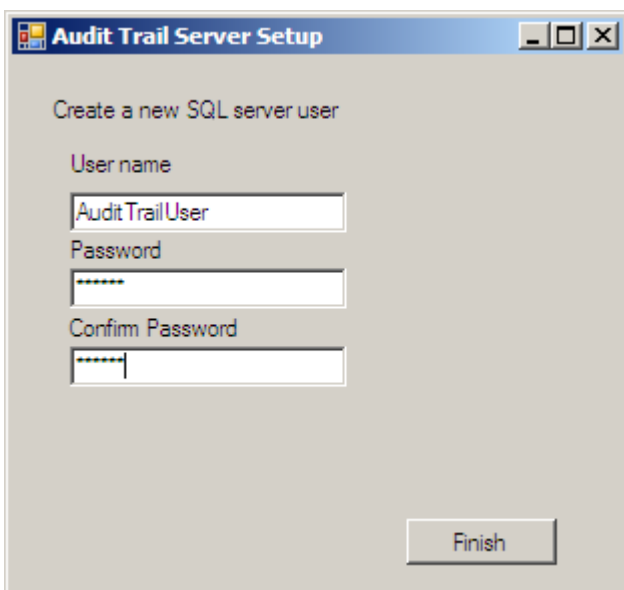
When you have installed the server install application you need to run it. Running it is in the form of a wizard and will set up the database server with all the correct tables.



This gives an introduction as to what is about to happen.

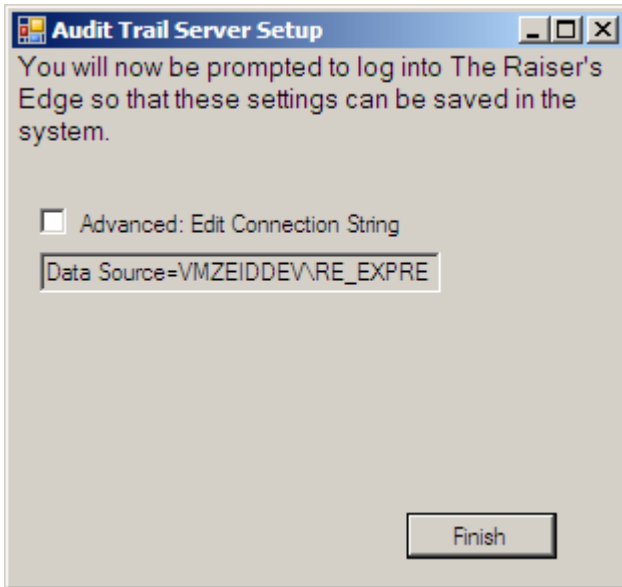


Select the server where you want to install Audit Trail. This should normally be the local server where you are running the application from. If it is not then ensure that you have full administrator rights to the other server otherwise the installation will fail. Select the name of the database to be used. If you are testing Audit Trail then select the sample database (not shown here) normally called RE7\_SAMPLE. If you have purchased a registration key from Zeidman Development then select your production database.



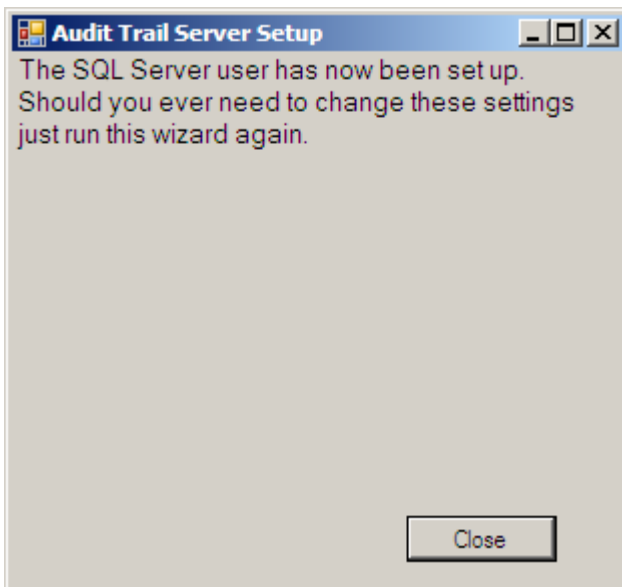
Next enter a SQL Server user name and password that will be created. Ordinarily you will not need to use this user name and password again but you are given the option of selecting your own values in case you do need to work with this SQL Server users in the future.

On press Finish the application creates the user in SQL Server and creates the tables it needs to run the application.



On pressing finish again, you will be prompted to log into The Raiser's Edge so that the connection settings for the user you just created can be set up. Note that The Raiser's Edge itself will not start but the traffic lights will change from red to green and then disappear. If you are an advanced user you are able to change the connection string that the application uses to access the database at this point but this should not normally be necessary.

When prompted to log into The Raiser's Edge it is important that you log into the same database that you have just set up the user on.



After you have logged into The Raiser's Edge, the application will perform some processing and log you out again. Simply press close to exit the application.

*It has come to our attention that some users are experience an application crash after pressing the Close button. We are currently looking into this but from what we can ascertain it does not affect the Audit Trail server installation in any way.*

The server installation is now complete. There is no requirement for the server installation application to remain on the server now that everything has been set up and can be safely uninstalled should you so wish. If you are demoing the application against the sample database then you may want to keep the application installed as you will need to run through it again if you decide to purchase the application.

Note the server install should also be run for any existing user who is upgrading from a version of Raiser's Edge lower than 1.5. Changes are made to the Audit Trail tables in the database that may well take some time to process. Please plan the upgrade accordingly and always make a backup of your database before starting.

## Day to Day Usage

### Audit Trail Client

Note the Audit Trail client should not be installed until after the Audit Trail Server Installation is complete.

There is little to describe here. The user goes about their regular activity in The Raiser's Edge. Any changes that are made are recorded seamlessly. For best effect ensure that the Audit Trail client is installed wherever The Raiser's Edge is installed.

If the application has not been registered then the audit trail will not warn you from the client. It will simply not store any changes. Once you have purchased a registration code the application can be registered from within the Audit Trail Viewer plug-in.

### Audit Trail Viewer

The Audit Trail Viewer shows the changes that have been made to various records in The Raiser's Edge.

The following screenshots show the Audit Viewer plug-in. The results show the before and after values, the person who made the change the area the change was made to and also the transaction number. Transaction numbers group a specific action so that all the changes made when one record is saved are grouped under the same transaction number.

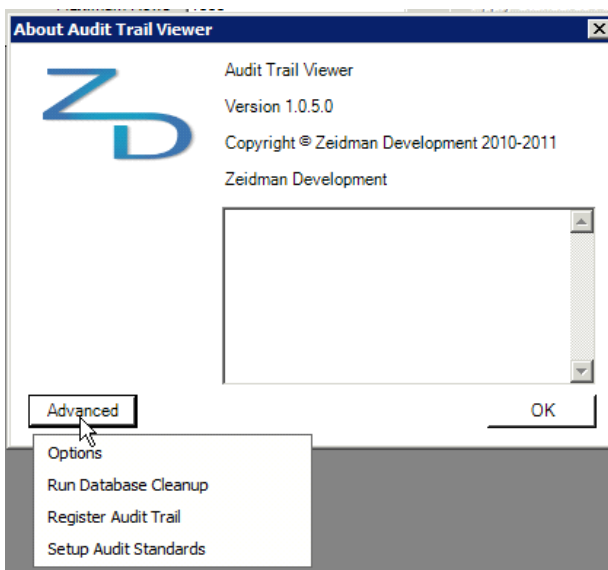
You can run a search, without any criteria; with limiting criteria, such as date changed, record area, field, transaction number or changes made by a specific user. You can also search on changes to a specific constituent.

Transaction Id	Date Changed	Record Type	Field Name	Old Value	New Value	Changed By	Constituent Name	Inpoit Id
22	7/12/2011 11:21...	Constituent	Surname	Sharp	sharp	Supervisor	Monica sharp (74)	00001-079-0...
22	7/12/2011 11:21...	Constituent	Primary Addressee	Mrs Sharp	Mrs sharp	Supervisor	Monica sharp (74)	00001-079-0...
22	7/12/2011 11:21...	Constituent	Name	Monica Sharp	Monica sharp	Supervisor	Monica sharp (74)	00001-079-0...
22	7/12/2011 11:21...	Phone	Phone type		Email	Supervisor	Monica sharp (74)	00001-517-0...
22	7/12/2011 11:21...	Phone	Phone number		monica.sharp.co.uk	Supervisor	Monica sharp (74)	00001-517-0...
22	7/12/2011 11:21...	Phone	Do Not Share		No	Supervisor	Monica sharp (74)	00001-517-0...
22	7/12/2011 11:21...	Phone	Do Not Contact		No	Supervisor	Monica sharp (74)	00001-517-0...
23	7/12/2011 11:22...	Constituent	Auto display smn...		No	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	ID		217	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	First Name		Lewis	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Constituent is an ...		No	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Key Indicator		2	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Surname		Richards	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Marital status		Single	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Organisation Mat...		No	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Primary Addressee...		No	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Primary Salutatio...		No	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Receipt type		One receipt per gift	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Gender		Unknown	Supervisor	Lewis Richards (2...	00001-593-0...
23	7/12/2011 11:22...	Constituent	Constituent is a c...		No	Supervisor	Lewis Richards (2...	00001-593-0...

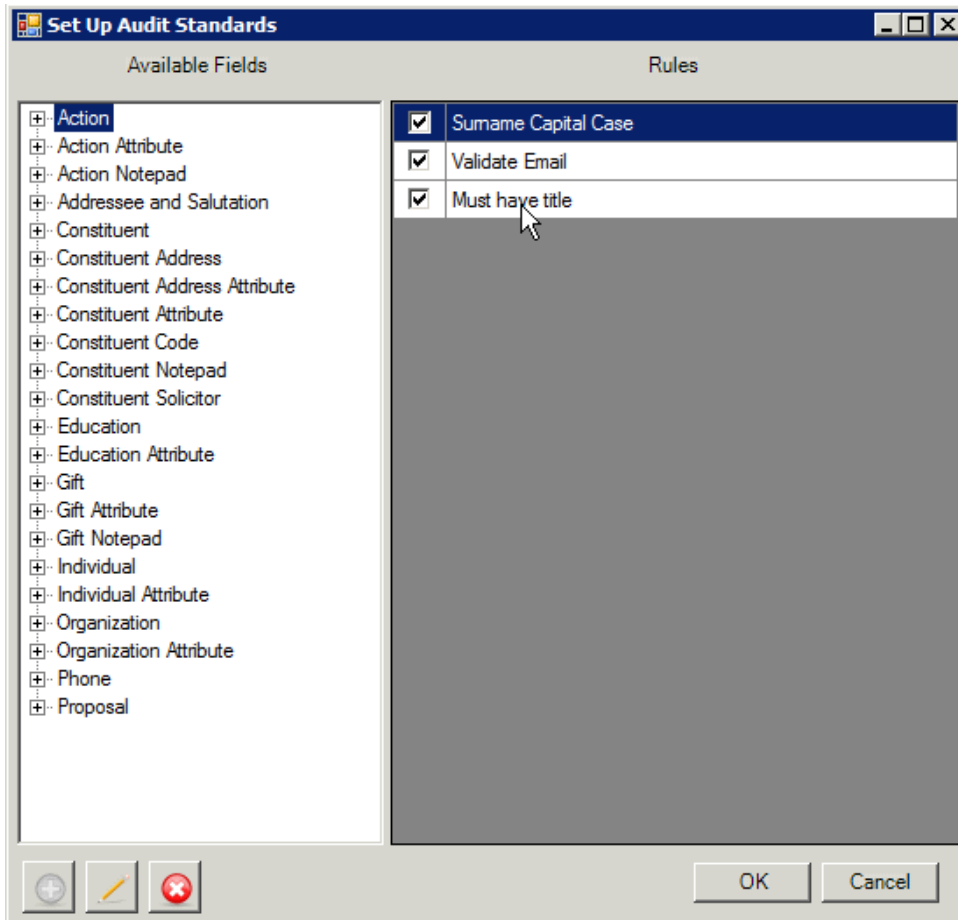
### Standards Audit

You can see in the above screenshots the 'apply standards audit' button. This means you can apply a set of pre-defined rules to your search in order to very clearly see the changes that have been made that do not meet your internal guidelines on entering/editing data.

Before you run the standards audit you need to define your rules. If you press the main ZD logo, the 'about' screen appears, in the bottom left click on 'advanced' and select 'Setup Audit Standards'.



Firstly choose the area to be audited e.g. 'Surname', click on the + button to add it to the list and double click to open up and set the rule properties, if you have chosen a field with multiple options (e.g. Phone) you can then drill down further to apply the rule to one type (e.g. email address).



*For text fields* you can choose from any of the below regular expressions

- First letter should be upper case
- Must be UPPER CASE
- Must be lower case
- Validate email address
- Must be blank
- Must not be blank

**Standard Rule** [X]

Enabled

This rule will act on Surname fields on the Constituent area

Rule Name  
[Empty text box]

Description  
[Empty text box]

If available, this rule will only act on the type below:  
[Empty dropdown]

Rule

- First letter should be upper case
- Must be UPPER CASE
- Must be lower case
- Validate as an email address
- Must be blank
- Must NOT be blank
- Create your own rule using regular expressions [?](#)

[A-Z].\*\$

Error Display

Error Message to Display  
[Empty text box]

Text [Black swatch] Background [White swatch]

OK Cancel

Alternatively you can create your own rule using regular expressions, if you are not familiar with regular expressions there is help available via a link in the plug-in.

*For numeric fields* there will be different regular expression options based on the field chosen.

**Standard Rule** [X]

Enabled

This rule will act on Amount fields on the Gift area

Rule Name

Description

If available, this rule will only act on the type below:

Rule

Amount

Error Display

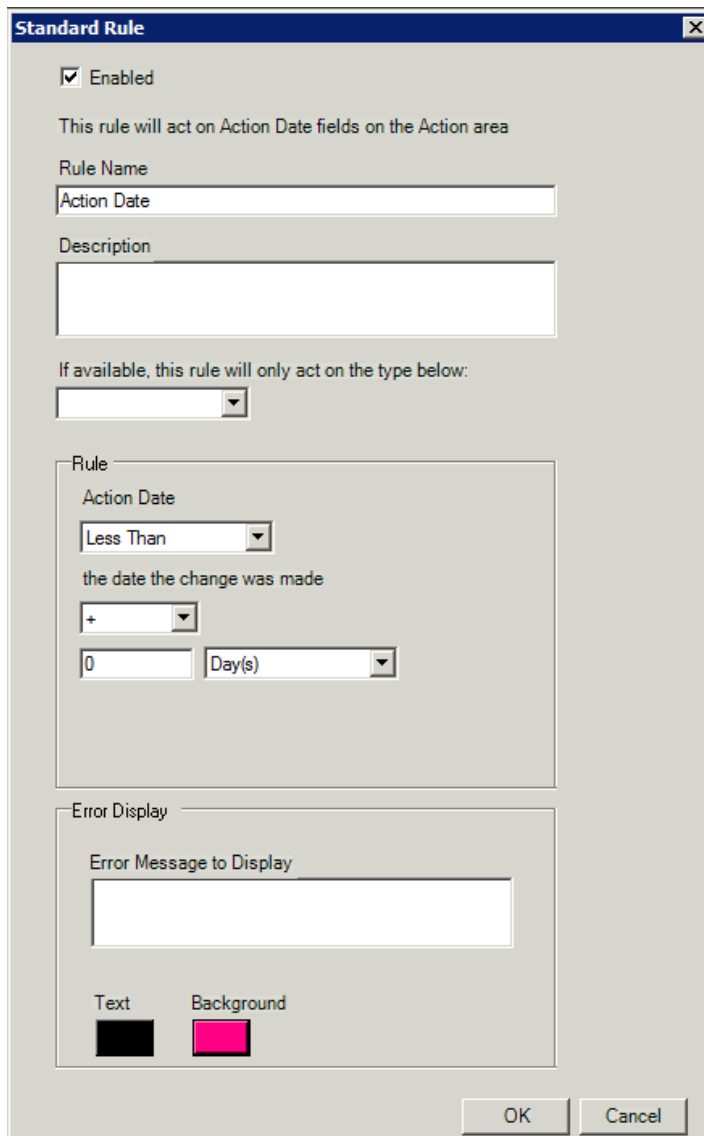
Error Message to Display

Text

Background

OK Cancel

*For date fields* you can choose between dates to be added before, on or after the date of change.



The image shows a 'Standard Rule' dialog box with the following fields and options:

- Enabled
- This rule will act on Action Date fields on the Action area
- Rule Name:
- Description:
- If available, this rule will only act on the type below:
- Rule:
  - Action Date:
  - Operator:
  - Condition: the date the change was made
  - Sign:
  - Value:
- Error Display:
  - Error Message to Display:
  - Text:
  - Background:
- Buttons: OK, Cancel

For all types of rule you can choose a background and a text colour, these will highlight your broken rules in the Audit Trail viewer so you can quickly distinguish between the different errors that have been made.

Run the audit, then click the 'apply standards audit' button (this will only apply to the records shown) and you can clearly see the colour-coded errors on the screen.

Standard Error	Transaction Id	Date Changed	Record Type	Field Name	Old Value	New Value	Changed By	Constituent Name	Import Id
Surname Capital	22	7/12/2011 11:21...	Constituent	Surname	Shap	shap	Supervisor	Monica sharp...	00001-07...
	22	7/12/2011 11:21...	Constituent	Primary Addressee	Mrs Sharp	Mrs sharp	Supervisor	Monica sharp...	00001-07...
	22	7/12/2011 11:21...	Constituent	Name	Monica Sharp	Monica sharp	Supervisor	Monica sharp...	00001-07...
Validate Sms	22	7/12/2011 11:21...	Phone	Phone type		Email	Supervisor	Monica sharp...	00001-51...
	22	7/12/2011 11:21...	Phone	Phone number		monica sharp...	Supervisor	Monica sharp...	00001-51...
	22	7/12/2011 11:21...	Phone	Do Not Share		No	Supervisor	Monica sharp...	00001-51...
	22	7/12/2011 11:21...	Phone	Do Not Contact		No	Supervisor	Monica sharp...	00001-51...
	23	7/12/2011 11:22...	Constituent	Auto display ann...		No	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	ID		217	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	First Name		Lewis	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Constituent is an ...		No	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Key Indicator		2	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Surname		Richards	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Mental status		Single	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Organisation Mal...		No	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Primary Addresse...		No	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Primary Salutatio...		No	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Receipt type		One receipt p...	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Gender		Unknown	Supervisor	Lewis Richar...	00001-59...
	23	7/12/2011 11:22...	Constituent	Constituent is a c...		No	Supervisor	Lewis Richar...	00001-59...

Please note that when setting up your audit rules the fields available will be dependant on data within your audit trail. Therefore, fields that have not been added or changed since installation may not be available immediately. These fields will build up over time or, alternatively, you can go in and make a change to a field to which you wish to add a standard audit.

### Other Functionality

The Audit Trail Viewer also contains some other functionality

If you press the main ZD logo, the about screen appears:



By pressing the advanced button a menu appears. From here you are able to register the application. You can also clean up the temporary data store in the database. This is not the actual audit itself but rather values that are stored as you open and close records. Depending on the actions performed by the user these values can build up. It is recommended that this operation is run regularly depending on the volume of transactions going through the database.

## Global Audit Trail

Unfortunately it is not possible to audit changes made through The Raiser's Edge global change and global delete modules. The events that the Audit Trail captures when a record is changed do not happen during the global change and delete processes so the Audit Trail is unable to capture those changes directly.

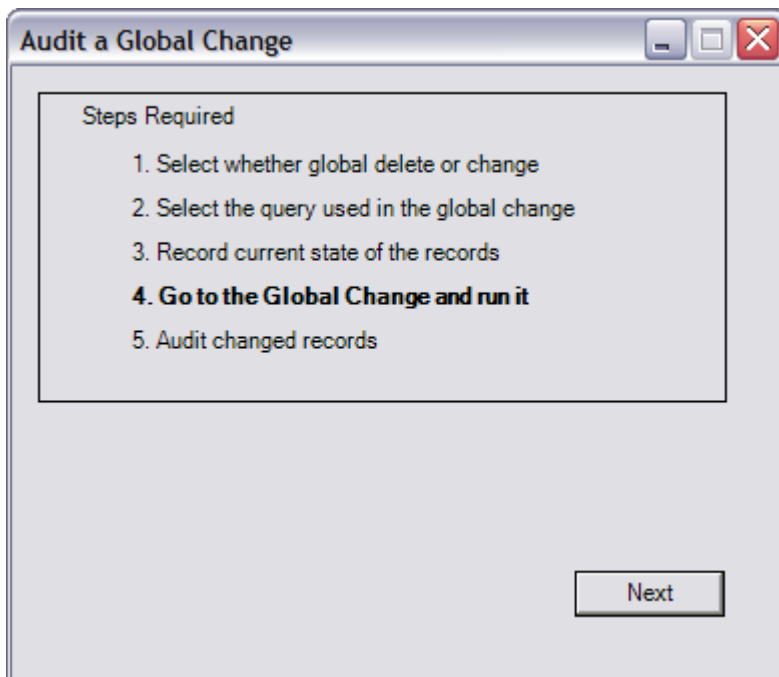
The Global Audit Trail plug-in allows the user to specify a query of records that are due to be changed or deleted. The process stores the before values. You perform the global change in The Raiser's Edge and then come back to the Global Audit Trail plug-in to capture the changes that have been made.

This is shown below in sequence:

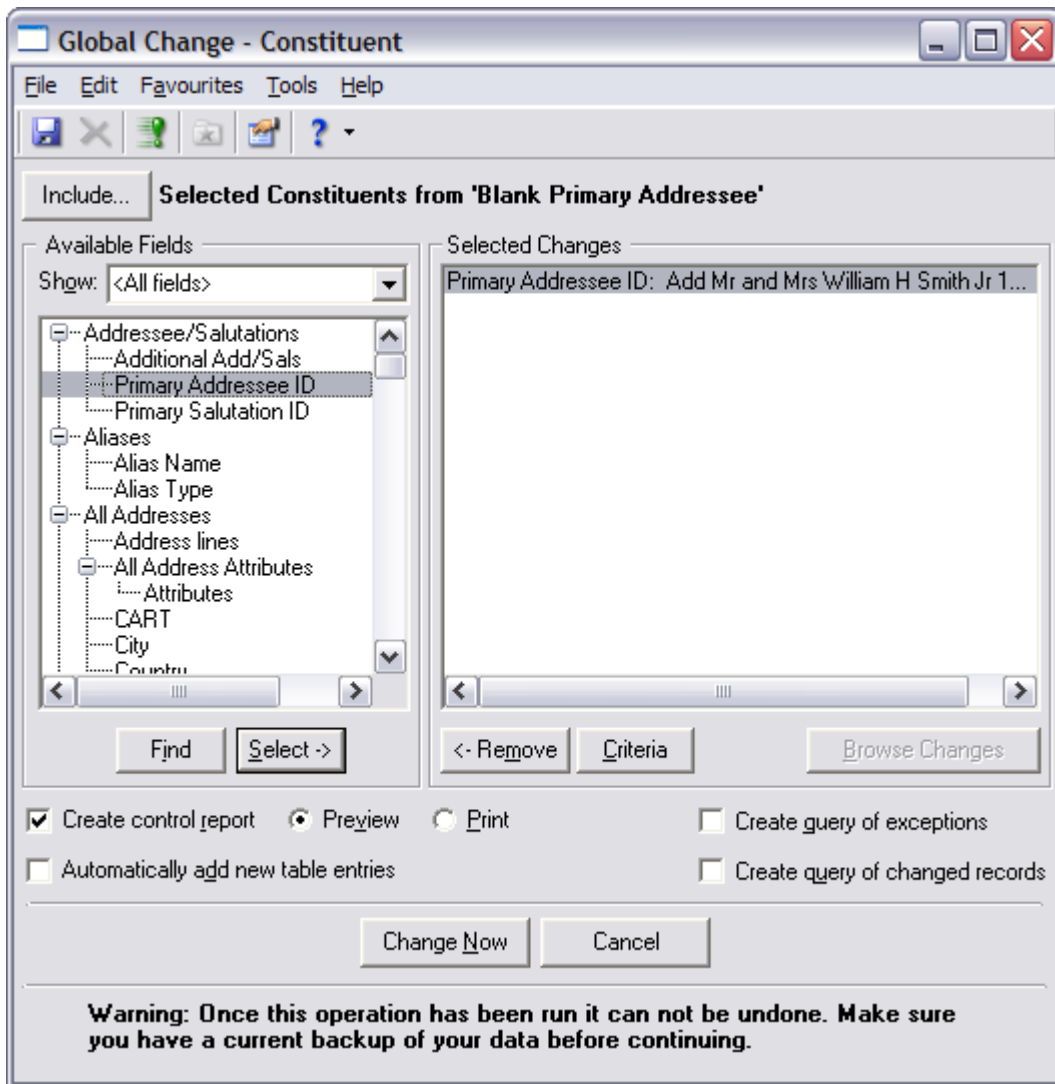




Note that step three can take some time depending on the numbers being changed.



At this stage we go to The Raiser's Edge and using the same query we perform the global change or global delete. Leave the Global Audit Trail window open as otherwise the audit will not work.



Then once that has completed we go back to the Global Audit Trail plug-in and complete the last step.



Again depending on the size of the query this may take a while to run.



The process is now complete with any changes having been audited.

# Appendix A

## Feature Comparison

Feature	Free	Basic	Professional
<b>What is Audited?</b>			
New Records		✓	✓
Updates		✓	✓
Deletions	✓	✓	✓
Imports		✓	✓
Gift Batch		✓	✓
Global Change (via plug-in)		✓	✓
<b>Constituent Audit</b>			
Constituent Biographical	✓	✓	✓
Constituent Addresses and phones	✓	✓	✓
Constituent Address Attributes	✓	✓	✓
Constituent Attributes	✓	✓	✓
Constituent Notepads			✓
Constituent Codes			✓
Additional Addressee and Salutations			✓
Proposals			✓
Proposal Attributes			✓
Proposal Solicitors/Canvassers			✓
<b>Gift Audit</b>			
Gift Count	✓		
Gift Information			✓
Gift Attributes			✓
Soft Credits			✓
Gift Notepads			✓
<b>Action Audit</b>			✓
Action Count	✓		
Action Information			✓
Action Attributes			✓
Action Notepads			✓
<b>Relationship Audit</b>			
Individual/Organisation/Education/Solicitor			✓

(Canvassar) Information			
Individual/Organisation/Education Attributes			✓
<b>Participant Audit</b>			
Participant Information			✓
Participant Attributes			✓
<b>Miscellaneous</b>			
Audit in Log File	✓		
Searchable Audit Viewer Plug-in		✓	✓
Global Change Processing Plug-in		✓	✓
Standards Audit			✓

## Appendix B

### SQL Installation Script

The following script is run by the Audit Trail Server Installer. It adds the user specified in the setup and then creates the tables for the application.

```
IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id = OBJECT_ID(N'[dbo].[zd_Audit]') AND type in (N'U'))
BEGIN
```

```
CREATE TABLE [dbo].[zd_Audit](
    [id] [int] IDENTITY(1,1) NOT NULL,
    [TransactionId] [int] NULL,
    [SysId] [int] NOT NULL,
    [SysIdType] [int] NOT NULL,
    [UserChangedId] [int] NOT NULL,
    [RecordType] [varchar](255) NOT NULL,
    [FieldName] [varchar](255) NOT NULL,
    [OldValue] [varchar](255) NULL,
    [NewValue] [varchar](255) NULL,
    [ImportId] [varchar](255) NULL,
    [DateChanged] [datetime] NOT NULL,
    [ConSysId] [int] NULL,
    [ConstituentDescr] [varchar](255) NOT NULL
CONSTRAINT [PK_zd_Audit] PRIMARY KEY CLUSTERED
(
    [id] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]
```

END

GO

```
IF NOT EXISTS (SELECT * FROM dbo.sysobjects WHERE id = OBJECT_ID(N'[ZD_AUDIT_SaveTimestamp]') AND
type = 'D')
```

```
BEGIN
```

```
ALTER TABLE [dbo].[zd_Audit] ADD CONSTRAINT [ZD_AUDIT_SaveTimestamp] DEFAULT (getutcdate())
FOR [DateChanged]
END
```

GO

```
IF NOT EXISTS (SELECT * FROM sys.objects WHERE object_id = OBJECT_ID(N'[dbo].[zd_AuditTransactions]')
AND type in (N'U'))
BEGIN
```

```
CREATE TABLE [dbo].[zd_AuditTransactions](
    [Id] [int] IDENTITY(1,1) NOT NULL,
    [dummy] [varchar](50) NULL,
CONSTRAINT [PK_zd_AuditTransactions] PRIMARY KEY CLUSTERED
(
    [Id] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF, ALLOW_ROW_LOCKS = ON,
ALLOW_PAGE_LOCKS = ON) ON [PRIMARY]
) ON [PRIMARY]
```

END

GO

```
if not exists (select * from master.dbo.syslogins where loginname = N'MY_USERNAME')
```

```
BEGIN
```

```
declare @logindb nvarchar(132), @loginlang nvarchar(132) select @logindb = N'MY_DATABASE',
@loginlang = N'us_english'
```

```

        if @logindb is null or not exists (select * from master.dbo.sysdatabases where name =
@logindb)

            select @logindb = N'master'
            if @loginlang is null or (not exists (select * from master.dbo.syslanguages where name
= @loginlang) and @loginlang <> N'us_english')
                select @loginlang = @@language

            exec sp_addlogin N'MY_USERNAME', 'MY_PASSWORD', @logindb, @loginlang
END
GO

if not exists (select * from dbo.sysusers where name = N'MY_USERNAME' and uid < 16382)
    EXEC sp_grantdbaccess N'MY_USERNAME', N'MY_USERNAME'
GO

IF DATABASE_PRINCIPAL_ID('db_zd_audit') IS NULL
BEGIN
CREATE ROLE [db_zd_audit] AUTHORIZATION [dbo]
END
GO

grant INSERT, UPDATE, SELECT, DELETE on zd_audit to [db_zd_audit]
grant INSERT, UPDATE, SELECT, DELETE on zd_audittransactions to [db_zd_audit]
grant SELECT on Users to [db_zd_audit]

exec sp_addrolemember N'db_zd_audit', N'MY_USERNAME'
GO

```