
IRS DATA SYSTEM TRAINING MANUAL

November 12, 2010

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CONFIGURATION

When the IRS application is started for the first time, the system asks the user to select the site.

Site Configuration
Please select the site or health centre that corresponds to the one in which this PC will be used.
Select site
Migori

After submitting the Site Configuration form, logout and login as zepadmin. Proceed to "Admin" -> "Data Center Maintenance" -> Site Publishing" link and select the site from the "Site Publishing" dropdown and press the "Save" button.

Site to publish: Migori Save

More information is available in the "Site Configuration" section below.

HOME PAGE

The system displays the Home Page upon logging in to the system. Links on the top navigation strip (highlighted in red below) correspond to the six main forms from the initial specification document.

IRS
Rachuonyo [SOP Summary](#) [Mob Summary](#) [GPS](#) [Reports](#) [Config](#) [Admin](#) [Logout](#)

Search Click the calendar icon to select the date in order to view records entered or modified on that day.

Most recent records, sorted by date record last modified

Form	Division	Location	Sub-location	Village	Spray Date	Modified
Mobiliser Summary	Kabondo	East Kanyaluo	Kajiei	Vil 2	25 May 10 00:00	25 May 10 15:37
SOP Summary	Kabondo	East Kamagak	Kagwa	Vill1	25 May 10 00:00	25 May 10 15:37

The system displays the twenty most recently entered records in the listing below the Search row. The Navigation row at the bottom of the listing enables the user to view more records. To search for records, select the date using the calendar widget. Clicking the calendar icon (to the right of the Search title) causes the calendar widget to display. Click on the desired date to set the date. You may use the left and right arrows to change the month as well as the month and year dropdown.

IRS Rachuonyo

SOP Summary Mob Summary GPS Reports Config Admin Logout

Search 25/05/2010 Click the calendar icon to select the date in order to view records entered

Most recent records listed by date record last modified

Form	Division	Location	Sub-location	Village	
Mo May	Kabondo	East Kanyaluo	Kajiei	Vil 2	25 Ma
SO 2010	Kabondo	East Kamagak	Kagwa	Vill 1	25 Ma

Select Date

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

The Navigation row at the bottom of the listing enables the user to view more records.

Supervisor's Daily Record

Daily Spray Card

Supervisor's Daily Record

DATA ENTRY OVERVIEW

There are two main steps in entering data into the system:

- Enter the daily summary information.
- Enter the individual records.

For example, the original paper forms have a header section for Date, name, and location followed by a grid used for details about the day's spray activity. In the following screenshot, the red section outlines the header and the blue section outlines the detail records.

n.b. The form described below is currently not used in the system.

Daily Spray Card

District: Migori	Division: Div1	Location: Loc1	Sub-Location: SubLoc1	Village: erte
Sachets Received: 40	Full Sachets Returned: 0	Empty Sachets Returned: 0		
Spray Operator's Name: Robt Mico	Team Number: 23	Date: 2010-03-20	Mop up?:	

Create new Spray Card Record entry:

ID's			Status	Structure Details				Eligible Rooms		Mosquito nets			
Head of Household Name	Household ID	Structure ID	Sprayed	Total pop	Under five	Preg. Women	Reason	Found	Sprayed	Total	Preg women sleeping in	< 5 sleeping in	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	Submit							
Dervis	scderf	dsjkok	Yes	12	5	2		5	5	4	2	5	X
Germin	sderft	deswer	Yes	3	0	0		2	2	1	0	0	X
Wali	sdewer	dsjekw	Yes	5	2	0		3	3				X

The detail form is used to enter individual records about each day's work. Think of the detail form as a row in a spreadsheet. A listing of records that have already been entered about this particular spraying date is displayed below the detail form. This listing is primarily for verification during the data entry process; the report system will be used for formal reports.

The data entry process on the IRS data system should be relatively easy to learn. Daily record keeping works the same way for every form – enter the header and then the detail records.

FORMS

The following screenshots will display the Header and Record forms for each IRS form.

SOP SUMMARY

Header:

District: Rachuonyo ▼	Division: -- Select -- ▼	Location: -- Select -- ▼	Sub-Location: -- Select -- ▼	Village: <input type="text"/>
Date: Year / Month / Day <input type="text"/> / <input type="text"/> / <input type="text"/>		Team Leader Name: <input type="text"/>		

Records:

Spray Operator Name	Total H/Hs reached	Total # struct.	Eligible Structures								Eligible Rooms		Mosquito nets			Sachets					
			Sprayed				Unsprayed				Found	Sprayed	Total	Preg women sleep.	< 5 sleeping in	Rec'd	Ret.	Empt.	Used		
			Total spray	Total pop	<5	Preg women	Total pop	<5	Preg women	Reason											
<input type="text"/>	Submit																				
John Sprayer	55		4	2												20	18				X
Paul Ilo	25																				X

MOBILISER SUMMARY

Header:

District: Rachuonyo ▾	Division: -- Select -- ▾	Location: -- Select -- ▾	Sub-Location: -- Select -- ▾	Village: <input type="text"/>
Date: Year / Month / Day <input type="text"/> / <input type="text"/> / <input type="text"/>	No. of Mobs in Team: <input type="text"/>	Remarks: <input type="text"/>		

Records:

Mobiliser Name	Total # of Households reached (Mobilised and not mobilised)	Total # Eligible structures found	Households Mobilised	If not mobilised, why?					# Persons reached with IEC (sensitized)			IEC Materials:	
				Households not mobilised	Nobody Present	Adult not present	Refused	Other	Total #	Female	Male	# of brochures distributed	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Submit
Dave	33	55											X
Jimmy	45	77											X

VIEWING DAILY RECORDS

If the data entry operator needs to review previous records, she may access records by clicking a link on the left navigation strip to the desired form and viewing the list of daily records, outlined in red:

District: <input type="text"/>	Division: <input type="text"/>	Location: <input type="text"/>	Sub-Location: <input type="text"/>	Village: <input type="text"/>
Sachets Received: <input type="text"/>	Full Sachets Returned: <input type="text"/>	Empty Sachets Returned: <input type="text"/>		
Spray Operator's Name: <input type="text"/>	Team Number: <input type="text"/>	Date: Year / Month / Day <input type="text"/> / <input type="text"/> / <input type="text"/>	<input type="checkbox"/> Mop up?	

District	Division	Location	Sub-Location	Village	Sachets Received	Full Sachets Returned	Empty Sachets Returned	Spray Operator's Name	Team Number	Date	Mop up?	View
Migori	Div1	Loc1	SubLoc1	erte	40	0	0	Robt Mico	23	2010-03-20		
Migori	23	dskl			30	20	10	John smith	23	2010-03-25		
new1	nderkjsderk	jksderoifs	jkjsds jksdsoi	iosd cdjkjs	50	35	15	dromo	23	2010-03-22		
Nairobi	jkj	test								2010-03-27		

Clicking the “View” link on the right-most column will take the user to the individual records for that day’s form.

Team Number	Date	Mop up?	View
23	2010-03-20		
23	2010-03-25		
23	2010-03-22		

After clicking the “View” link the record page is displayed. The user may create a new record or view the list of completed records:

Daily Spray Card

District: Migori Division: Div1 Location: Loc1 Sub-Location: SubLoc1 Village: erte

Sachets Received: 40 Full Sachets Returned: 0 Empty Sachets Returned: 0

Spray Operator's Name: Robt Mico Team Number: 23 Date: 2010-03-20 Mop up?:

Create new Spray Card Record entry:

ID's			Status	Structure Details				Eligible Rooms		Mosquito nets				
Head of Household Name	Household ID	Structure ID	Sprayed	Total pop	Under five	Preg. Women	Reason	Found	Sprayed	Total	Preg women sleeping in	< 5 sleeping in		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Submit							
Dervis	sderf	dskok	Yes	12	5	2		5	5	4	2	5	X	
Germin	sderft	deswer	Yes	3	0	0		2	2	1	0	0	X	
Wall	sdewer	dskew	Yes	5	2	0		3	3				X	

This listing displays twenty most recent records. If more records are available, the system displays “Prev/Next” paging links to navigate records.

DELETING RECORDS

You may delete records by clicking the “X” on the right-most field.

Male	# of brochures distributed	
<input type="text"/>	<input type="text"/>	Submit
		
		X

You may delete the header if it has no records. The “X” will not appear if it has records.

Mobiliser Summary (X)

District: Ahero	Division: Nyando	Loc
Date: 2010-05-23	No. of Mobs in Team: 34	Ren

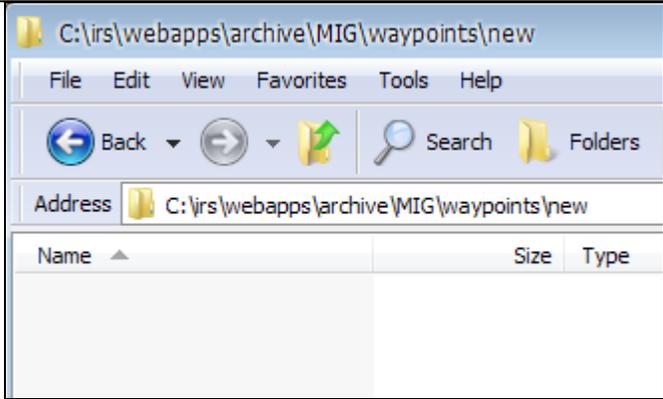
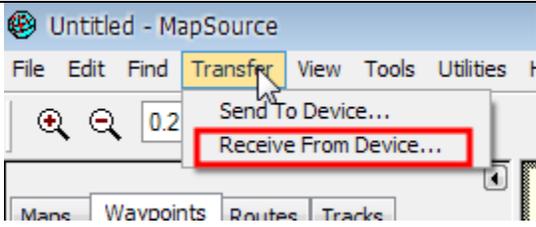
Create new Mobiliser Record entry:

Mobiliser Name	Total # of Households reached (Mobilised and not mobilised)	Total # Eligible structures found	Households Mobilised	Household not mobilised

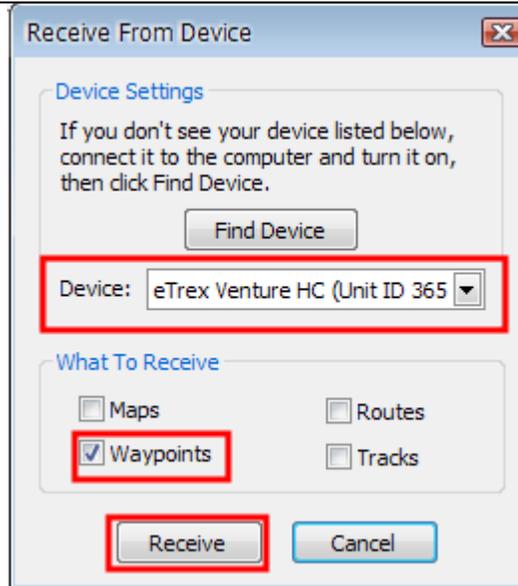
WAYPOINTS

Waypoints must first be downloaded from the GPS unit to the computer.

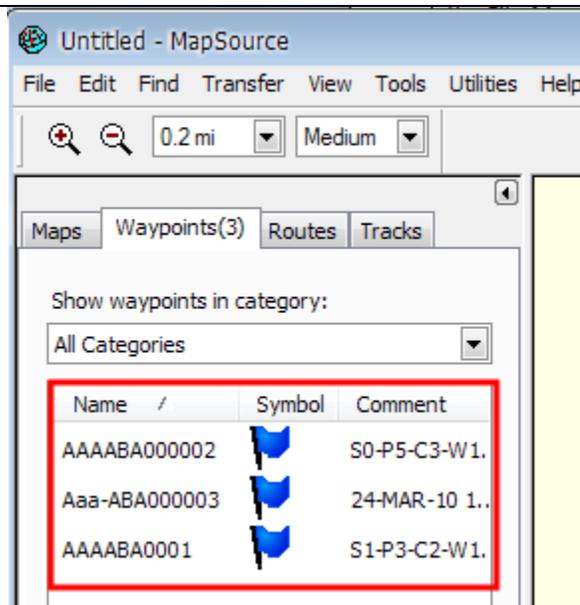
IMPORTING WAYPOINTS

<p>There should be a Shortcut on your computer’s desktop called “Shortcut to new waypoints.”</p>	
<p>When you double-click on this shortcut, it should open the File Manager to the waypoints\new directory on your hard drive. Save the waypoint files in this directory.</p>	
<p>Turn on the Garmin GPS unit and connect it to the computer using the USB cable. Open Mapsource (Start -> Garmin -> Mapsource) and from the Transfer menu item select “Receive from Device.”</p>	

After a few moments the GPS unit will display in the Device dropdown. Make sure that only the “Waypoints” checkbox is checked in the “What to receive” section. Click the “Receive” button.



Mapsource will confirm that the data was successfully received. You should see a list of waypoints in the Waypoints tab in Mapsource.



Go to the File menu bar and select “Save As...” Navigate to the waypoints\new directory mentioned previously. Save the file using the following format:

- ID of the GPS unit (“AAA”)
- Today’s date (“20100326”)
- .gpx file extension

Example: AAA-20100326.gpx

Select “GPS eXchange Format (*.gpx)” from the “Save as type” dropdown. **If you choose an incorrect format, the waypoints will not be imported.**



<p>Switch back to the IRS application. Click “Config” from the menu to access the Waypoints section, highlighted in red. Click “Import Waypoints” to import the new waypoints. It will move the files to an archive directory.</p>	<p>Configuration</p> <p>User</p> <ul style="list-style-type: none"> • Create and list Users <p>Waypoints</p> <ul style="list-style-type: none"> • List Waypoints • Import Waypoints 	
<p>If you try to import a file that was saved in an incorrect format, the system will display the following message. It will copy the incorrect file to the archive directory.</p>	<div style="border: 1px solid black; padding: 5px;"> <p>Message: Incorrect File Format for file: otieno.gdb. Be sure to save the file in the correct format: gpx java.lang.Exception: Incorrect File Format for file: otieno.gdb. Be sure to save the file in the correct format: gpx</p> </div>	

Confirm that the waypoints were imported successfully by viewing the list of waypoints, which appears automatically after an import. If the results are successful, delete the waypoints from the GPS. Press and hold the MENU/FIND key and select “Waypoints.” Click the MENU/FIND key again and select “Delete...” Click “All Symbols.” Click “Yes” to confirm that you would like to delete all waypoints.

LISTING WAYPOINTS

Click the “List Waypoints” link in the Waypoints section of the Configuration page.

Waypoints

To import waypoints, place the .gpx files generated from MapSource in C:\irs\webapps\archive\MIG\waypoints\new\ and press the following link:

- Import Waypoints

Waypoint Listing

<< Navigation >>

Household ID	Date	Time	Lat	Lon	Structures	Pop.	Children	Preg.	Nets total	Details
ZZ0003	2010-11-10	16:59:33	-1.078773	34.4938608	1	3	1	1	3	10-NOV-10 16:59:33 P3C1W1S1N3
ZZ0002	2010-11-10	16:55:33	-1.078773	34.4938608	2	6	1	1	4	10-NOV-10 16:55:33 P6C1W1S2N4
ZZ0001	2010-11-10	15:55:33	-1.078773	34.4938608	3	3	1	1	4	10-NOV-10 15:55:33 P3C1W1S3N4

<< Navigation >>

DELETING WAYPOINTS

This should only be done by Mappers on the Garmin GPS unit. This does not apply to the IRS application.

Click the **QUIT/PAGE key** (upper right button) to go to the Menu. Select the Find icon from the Menu. Press the **ROCKER/ENTER key** to select Find. Press Waypoints. If there are any waypoints, press the **MENU/FIND key** (lower left button) to access the context menu. Use the **ROCKER/ENTER key** to select “Delete...” Select “All Symbols.” Select “Yes” when asked “Do you want to delete...”

REPORTS

Reports are available using the “Report” link on the navigation strip. Only administrative reports are available; those reports are not intended for data analysis. Reporting for the IRS project is executed outside the IRS application using data exported to CSV into Excel provided by the Data Export link, which described in the “Data Export” section.

IRS Reports

Administrative Reports

- [Record Modification Listing](#) - provides staff name and time that a record has been modified
- [Query Builder](#) - ad-hoc query interface

DATA EXPORT

Data can be exported from the system into an XML format that may be imported into Excel. From the main Config link, view the Data Output section and click “Output .csv files.”

Data Output

Output data to .csv and synchronise with the Master server.

- [Output .csv files](#) - Outputs records to .csv and archives to a .zip.
- [Upload new records](#) - Synchronisation with Master Site

The system displays a confirmation message and the path to the files.

IRS
Rachuonyo

SOP Summary Mob Summary GPS

Success!

Reports are saved in C:\jrs\webapps\jrs\data\
Open the files in Excel.

In the file Explorer, right click on the file and select “Open with” Excel

Address: C:\jrs\webapps\jrs\data

Name	Size	Type	Date Modified
MobHeader.xml	2 KB	XML Document	5/25/2010 3:4
MobRecord.xml		Document	5/25/2010 3:4
SopRecord.xml		Document	5/25/2010 3:4
SopSummary.x		Document	5/25/2010 3:4

Open With options: Internet Explorer, Microsoft Office Excel, XML Editor

CREATING USER ACCOUNTS

Every user of the IRS system must have an account. To create an account, click the “Config” navigation link. Click the “Select and list Users” link.

User Data

Create new User Data record:

Username: *	Password: *	E-mail address:
<input type="text"/>	<input type="text"/>	<input type="text"/>
Forenames: *	Surname: *	
<input type="text"/>	<input type="text"/>	
Mobile phone:	Phone:	
<input type="text"/>	<input type="text"/>	

SITE CONFIGURATION

Each data entry site must be configured so that the master server may identify where the records originate. This may only be configured by logging in with the administrative account and clicking the "Config" navigation link. . Screenshot of Site Selection form:

Site Configuration

Please select the site or health centre that corresponds to the one in which this PC will be used.

Select site

Migori	<input type="button" value="Submit"/>
Migori	
Nyando	
Rachuonyo	
Site 4	

If the site synchronization capabilities are being used, you must also configure Site Publishing. Login as zepadmin and go to "Admin" -> "Data Centre Maintenance" and click the "Site Publishing" link. Make the selections highlighted in red. Choose the site that is being configured for the "Site to publish" and "Location" as "District PC."

Site Publishing

[Admin](#) : [Site Publishing](#) : [Site Subscriptions](#) : [Site Servers](#) : [Verify Remote Sync Process](#)

This server is currently publishing the site **Migori**.

If you want to share data from this application with other pc's or servers on your network, select this site from is the Master Server, check the Master Server checkbox.

If the site server has already been setup, pressing submit will create the publisher as well as attempt to create archive files. If there is a problem creating the directory structure, the system will display an alert.

Site to publish: Location: Master Server:

If you are configuring the Master pc at the RTI Nairobi office, use the following settings:

Site Publishing

Admin : Site Publishing : [Site Subscriptions](#) : [Site Servers](#) : [Verify Remote Sync Process](#)

This server is currently publishing the site **Master**.

If you want to share data from this application with other pc's or servers on your network, select this site from is the Master Server, check the Master Server checkbox.

If the site server has already been setup, pressing submit will create the publisher as well as attempt to create archive files. If there is a problem creating the directory structure, the system will display an alert.

Site to publish: Location: Master Server:

BACKUP, UPDATES, AND UPLOAD

The IRS database should be backed up at the end of every day to a memory stick or other appropriate media. Screenshot of backup menu, which is accessible from the “Config” menu:

Backup

This backup facility is used at sites where this application is running in standalone mode at the site, rather an being accessed from a remote server.
Click the following Backup link at the end of your day. Please be patient - this process takes a few minutes. This will create a new zip file in the backup directory. Copy the zip file to your memory stick.

- [Backup Database](#)
Backup directory: C:\irs\backup\

Updates

Use the following links when instructed to manually download an update to the application.

- [Initiate Download of updates](#)
- [Check progress of downloads](#)

Data Output

Output data to .csv and synchronise with the Master server.

- [Output .csv files](#) - Outputs records to .csv and archives to a .zip.
- [Upload new records](#) - Synchronisation with Master Site

If instructed, you may use the Updates section to initiate or view the progress of updates to the application.

In the Date Output section, click the “Upload new records” link at the end of your work day to upload your work to the server. The upload may take a few minutes – watch the progress bar in the lower-left corner of the application to track progress. If the upload is successful, the system will indicate the number of files uploaded:

IRS Nyando | [SOP Summary](#) | [Mob Summary](#) | [GPS](#)

Success!

Number of Records in Archive: 136; **Number of files uploaded: 1**

If the connection is not available the system will display the following message:

Error

java.net.UnknownHostException: ictedge.org

Pending files

File Name	Size	Modified
syncEvent_6a84a70b-4bf8-4e9f-bc75-b1f2ffb9dd0f.json	1 kB	11 Nov 2010 18:50:06
syncEvent_6a84a70b-4bf8-4e9f-bc75-b1f2ffb9dd0f.zip	3 kB	11 Nov 2010 18:50:06

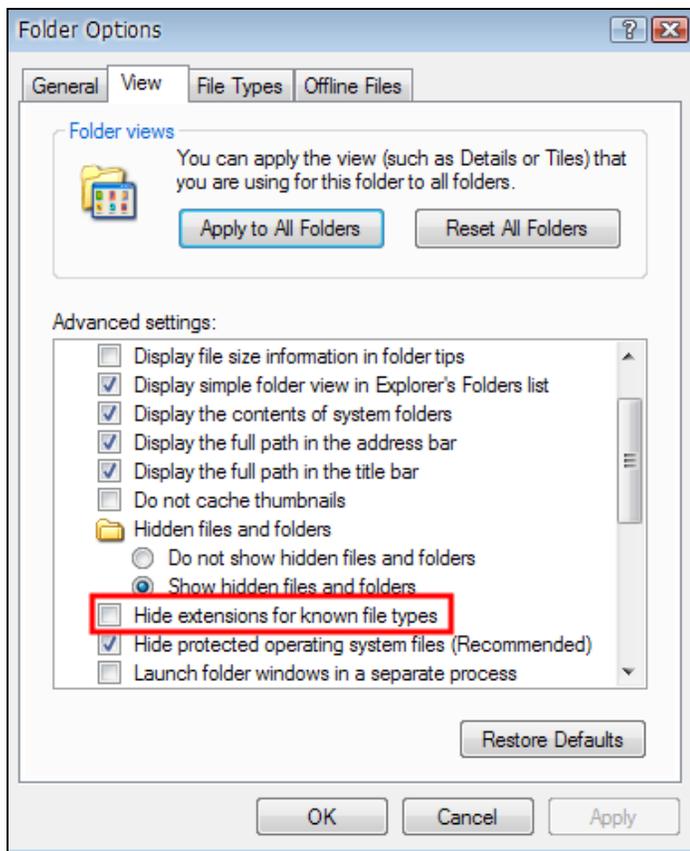
ADMINISTRATIVE TASKS

This section is for site administrators. The typical user may disregard this section.

RESTORING A BACKUP

The following instructions may only be performed by a user with Supervisor role.

Backup files are encrypted; therefore, they must be decrypted before they can be used. Place the backup in the backup directory. In the File Manager, go to "Tools" -> "Folder Options." Make sure that you are able to view file extensions by confirming that "Hide extensions for known file types" is unchecked.



Go to Form Admin in IRS and select "Data Centre." Click the link to "Decrypt file." Click the link to the file you wish to decrypt:

Decrypt file

Click a link on the following files in the backup directory to decrypt it.

File name
db-MIG-2010-11-10-182100062.enc.zip
db-MIG-2010-11-10-184551410.enc.zip
db-MIG-2010-11-10-184725098.enc.zip
db-MIG-2010-11-12-082822706.enc.zip
temp
webapp
zeprs

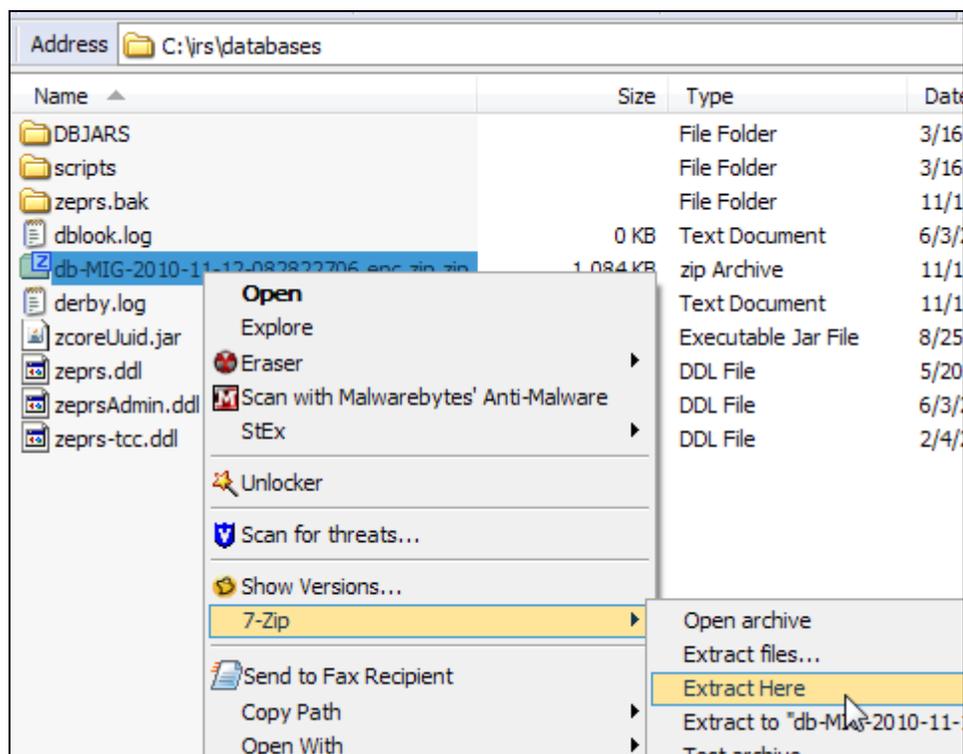
This will create a file with the same name with “.zip” appended to it.

Admin: Action Output Messages

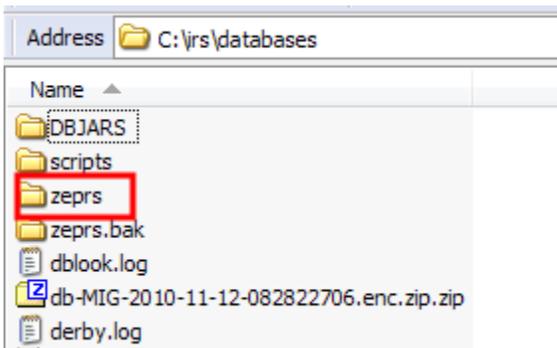
File decrypted to C:\irs\backup\db-MIG-2010-11-12-082822706.enc.zip.zip

Stop the IRS application. It will not let you replace the old database unless you stop it.

Copy this file to the databases directory. Rename the zeprs directory to “zeprs.bak” and right-click on the backup and extract to that directory so that it extracts the zeprs directory in the backup.



(Tip: Download and use 7-zip: <http://www.7-zip.org/> - it is much faster than the “Extract all...” that comes with Windows.) When the extraction is complete, you will see a zeprs directory:



Now you may re-start the IRS application and resume activities using the restored database.

RESETTING AN INSTANCE OF IRS

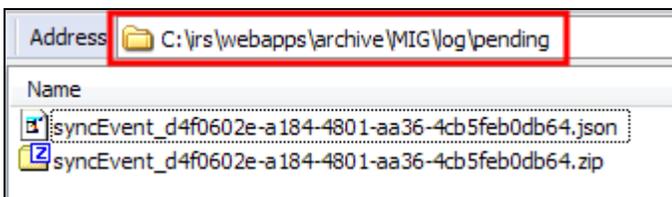
If you need to remove all of the records from an IRS instance, login as zepadmin and proceed to “Admin” -> “Deletions” and choose “All sites” and set the End Date to tomorrow by clicking the calendar icon:

Delete Records

Select Site and End date to delete records. This will not delete user accounts. To further limit date range, select Begin date. Careful!

Site	Begin Date	End Date	
All sites <input type="text"/>	<input type="text" value="4"/>	<input type="text" value="4"/> 12/11/2010	<input type="button" value="Submit"/>

Disconnect from the Internet – the next step will create an archive file for the deletions that you do not want to be uploaded to the server. When the deletion has concluded, go to “Config” and click “Upload new records.” Remember, you should not be connected to the Internet. Next, go to the archive directory and remove the archive files, which will be in the site’s pending directory. This will prevent the system from deleting records from the Master IRS instance.



At this point, there should be no records in the system.

Next Steps:

- Restart numbering of autogenerated id’s: Go to Admin -> Data Center Maintenance -> and click “Restart auto-generated id numbers in APP schema.”
- You may also wish to reduce the database size by compacting the database. Go to Admin -> Data Center Maintenance -> View or Compact Derby Database. It takes a few moments for the system to build the list of tables. Click the link to “Compact Database” if the value for any of the tables or indexes in “Estimated Space Saving” is high.

ADDING SITES TO MASTER SYNC

The Master IRS instance is able to automatically synchronize with sites because they are listed in a setting in the application.properties file, which is located at *IRS install dir*\webapps\irs\WEB-INF\classes\resources. This only needs to be done on the Master IRS instance. Add the three character site abbreviation to the list:

master.sites=NYA,RAC,MIG

The site abbreviation is available from the Config -> Edit Site listing:

Site Listing

Instructions: Double click each item to edit.

- The Site Name field should be a short name
- The Abbreviation field should be a short name directory in the archive filesystem with 3 characters.

Site name	Abbreviation
Master	MAS
Migori	MIG
Nyando	NYA
Rachuonyo	RAC
Site 4	SI4

For example, if you wanted to add "Site 4" to the list, add SI4 to the list:

master.sites=NYA,RAC,MIG,SI4

Do not put the Master site (MAS) in this list.

Restart the IRS application to enable the new site.