

EchoBook User Manual

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1 Getting Started

1.1 Installing Our System – UNFINISHED (Still a Proof of Concept)

As system is still in proof of concept stage this aspect is not ready for users with non-technical background, the following steps provided are for the proof-of-concept deployment designed by Karlis Jaunslavietis.

1.1.1 About

The following sections describe a proof-of-concept offline deployment method on Linux servers; this has been tested only on 64-bit Ubuntu 18.04, but should, in theory, work on any 32-bit or 64-bit Linux machine with Bash available.

1.1.2 EchoBook Deployment

To deploy the main EchoBook system that hosts the user interface and backend, the following actions must be taken (steps 1 - 3 require npm to be installed and an internet connection):

- 1) Ensure that all production dependencies are included in the bundleDependencies list of package.json, like so:

```
"bundleDependencies": [  
  "@sailshq/connect-redis",  
  "@sailshq/lodash",  
  "@sailshq/socket.io-redis",  
  "ajv",  
  "browserify-fs",  
  "grunt-browserify",  
  "moment",  
  "node-excel-export",  
  "papaparse",  
  "sails",  
  "sails-hook-apianalytics",  
  "sails-hook-organics",  
  "sails-hook-orm",  
  "sails-hook-sockets",  
  "sails-mysql",  
  "stream",  
  "underscore",  
  "vue-bootstrap-datetimepicker",  
  "vuejs-paginate",  
  "grunt",  
  "sails-hook-grunt"  
],
```

- 2) Install all dependencies in the current directory using the command `npm install --no-bin-links`
- 3) Bundle the project itself, along with all its dependencies, using the command `npm pack`
- 4) Copy the generated archive to the Deployment/echobook folder. After, the folder can be transferred to any portable storage medium, such as a USB drive that will be taken to the customer's site.
- 5) On the target server, run script `install_echobook.sh` (ensure that the correct archive name is set within the script). This installs NodeJS & npm on the server from the binaries included in the Dependencies folder, as well as unpacks EchoBook
- 6) To run EchoBook, run script `launch_echobook.sh`. This checks for any missing configuration parameters (such as database hostname) and, if missing, prompts the user to enter them before continuing.

1.1.3 Database Deployment

The target server should have MySQL server pre-installed; this was not automated as no specific MySQL version is required and, during installation, the user is likely to want to be able to adjust the configuration themselves.

Once the MySQL server is installed, the user should create a new database and run the init.sql script inside the database; this creates the required tables and inserts a single user with Superadmin privileges (username: superadmin, password: password). This password should be changed at the first opportunity.

1.1.4 Coordinator Service Deployment

To deploy the coordinator service, the following actions must be taken (steps 1-3 require an internet connection and Python 3, pip and virtualenv):

- 1) From the coordinator service folder, install the dependencies by running the command `pip install -r requirements.txt`
- 2) Create a Python 3 virtual environment by running the command `virtualenv env --python=python3`. This will contain a python 3 installation and all the required dependencies.
- 3) Bundle the project itself, along with all its dependencies, using the command `tar -czvf coordinator-service.tar.gz *` (any other archiving software can be used too)
- 4) Copy the generated archive to the Deployment/coordinator folder. After, the folder can be transferred to any portable storage medium, such as a USB drive that will be taken to the customer's site.
- 5) On the target server, run script `install_coordinator.sh` (ensure that the correct archive name is set within the script). This unpacks the archive.
- 6) Ensure that the correct configuration parameters are set in `config.py` (these are described in section 5.1). The coordinator service can then be launched by running the command `launch_coordinator.sh`, which uses the virtual environment to run the service.

1.2 Getting on the System - UNFINISHED

Given that all the steps in 1.1 have been completed, using the values defined by `lauch_echobook.sh` you should now be able to open Your browser of choice (excluding Internet Explorer and Edge) and then navigate to localhost to get to the system.

1.3 Getting an Account

If you don't have an account then your project coordinator can make accounts to use with the system, if you require an account please talk with them to get one setup with the permissions you require (see [section 1.4](#) for explanation on available permissions).

If you are the project coordinator you will have been given access to **the super admin account**, this account is to make you are admin account only, **it should not be used as an everyday account**, it is there for recovery purposes in the case all other admins lose access to their account, be that through forgot passwords or deletion of account.

1.4 Account Permissions Explained

1.4.1 Read

This allows the user to read all data on the system (minus information only viewable to an admin such as other user information / activity) without being able to edit any of it or make new entries.

1.4.2 Create

Includes all from **Read** but users can now create new records for birds, nest sites and RFID rings. They can also edit the entries that they made but not any others.

1.4.3 Edit

Includes all from **Create** but they can now edit any entry they want, no longer limited to just the ones made by them.

1.4.4 Export

Includes all from **Read** but now has access to exporting to excel spreadsheet functionality in the Birds Table Page (see [section 4](#)).

1.4.5 Admin

Includes all from **Edit** and **Export** with the addition of being able to create, delete and edit Users, and to view User Activity on the system.

1.4.6 Super Admin

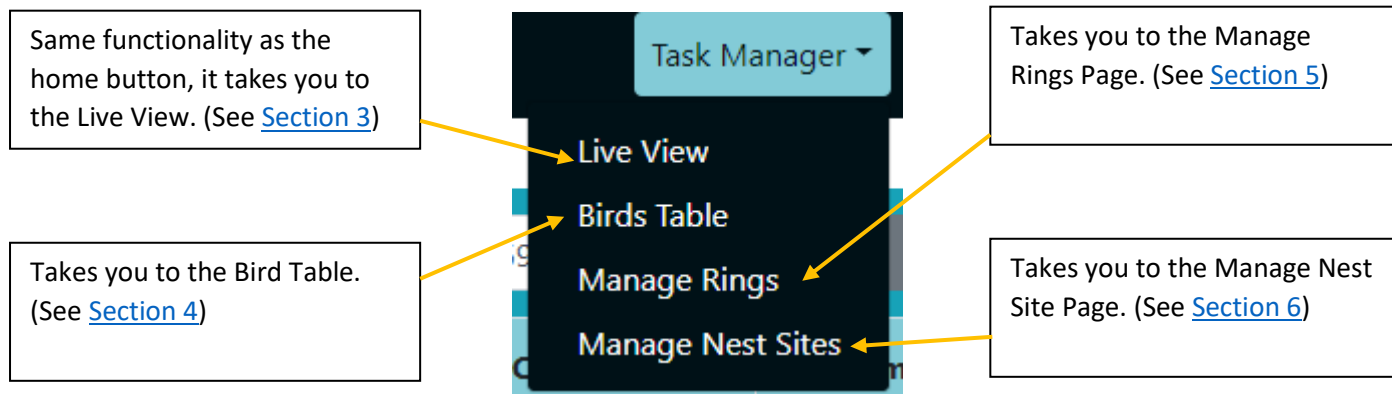
Includes all from **Admin** with the addition that this account cannot be deleted by any others, there should only be one of these at any given time as it is designed to be a recovery account not an everyday use one.

2 Navigation

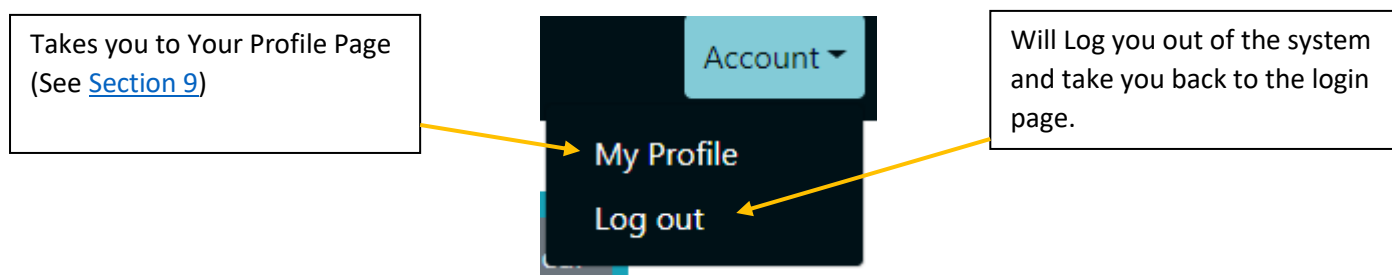
2.1 For Most Users

Once you are logged in, at the top of the page, on the right, you will see 2 menu items allowing navigation throughout the system and on the left a home button to return you back to the starting screen (Live View).

2.1.1 Task Manager

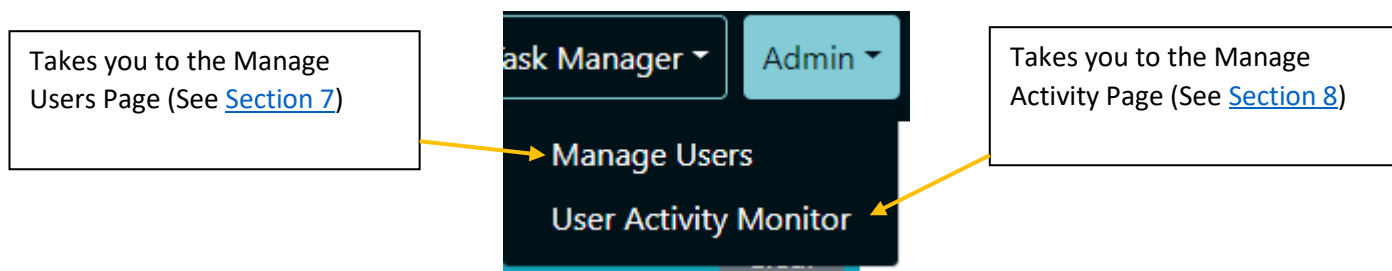


2.1.2 Account



2.2 For Admins

In addition to the above navigation options Admins have one extra menu item on the right side as shown below:



3 Live View

3.1 Summary

This page will display the visits to feeders by birds wearing the RFID rings, it will display visits only for that day and will reset at midnight. As the name suggests, this will update live, so when a new visit is found you will see a notification and you will have the option to refresh to see it. The following section will breakdown the page and how to navigate it.

3.2 Page Explained

common between tables: pages contain this filter bar that will allow you to filter down field to see just what you want, in live view you can search by bird name and you can set the start and end time to show visits from to clear filters just press the button.

The screenshot shows the 'Live View' page. At the top is a dark navigation bar with a 'Home' button, the title 'Live View', and 'Task Manager' and 'Account' dropdown menus. Below this is a teal filter bar with the text 'Filter by...' followed by a 'Bird Name' input field, a time range from '00:00' to '23:59', and a 'Clear' button. Below the filter bar is a table with four columns: 'Bird Name', 'Left Ring Colour', 'Right Ring Colour', and 'Visit Time'. The table contains five rows of data for birds named byran, dale, jerrylee, winna, and bronson. At the bottom is a dark pagination bar with 'Prev', '1', '2' (selected), '3', '...', '7', and 'Next' buttons. It also shows 'Showing 5 entries out of 31', 'last refresh: 13:24:50', a 'Refresh' button, and a 'Show 5 entries' dropdown.

Bird Name	Left Ring Colour	Right Ring Colour	Visit Time
byran	violet, green: stripe	green: solid	7:12 am
dale	maroon, green: stripe	crimson, green: stripe	7:06 am
jerrylee	green, cyan: stripe	orange: solid	6:45 am
winna	aquamarine, green: stripe	indigo, green: stripe	6:30 am
bronson	puce: solid	khaki: solid	6:12 am

common between tables: pages in the page bar to switch to different pages, and an option to select how many rows to display per page if steps of (5, 10, 15, 20, 25, 30, All)

When new visits are found this part of the page will update to reflect this fact, and the refresh button will become available to click and fetch these new visits.

1 new visits found, refresh page to see.

Refresh

4 Bird Table

4.1 Summary

This page can be thought of as your digital studbook, it is here where you will be able to access all information stored on the birds. You can pick and choose what columns you want to see, how you want to filter each column and you can export your onscreen view in to the excel spreadsheet that you have grown accustom to. The following section will breakdown the page and how to navigate it.

4.2 Page Explained

Export will download an excel spreadsheet of all the currently selected columns, the filters will not be carried over, but this can be done through excel through the top bar -> editing -> sort & filter -> filter. Then all columns will have filter buttons added to use.

Columns can be sorted using the arrows next to column names. Clicking on a bird will open a popup view showing all the data on that bird in a more easily readable form than scrolling along the table row. From there you can also edit data on the bird, pressing the register button will also open a similar view, except all entries will be blank for you to fill in.

View Bird - bronson

Main Information	More Information
Bird Name: bronson	Where Laid: novigrad
Last Seen Date: 23/03/2019	Lay Date: 18/10/2018
Age: 3 months, 2 days	Where Hatched: novigrad
NFC Ring ID: gg486	Hatch Date: 21/12/2018
Stud ID: 574443	Where Fledged: novigrad
New Stud ID: 53vnx3	Fledge Date: 27/12/2018
Right Ring ID: khaki: solid	Incubation Days: 12
Left Ring ID: puce: solid	Where Released: novigrad
Group Name:	Release Date: 15/02/2019
Gender: male	Current Breeding Site: temeria
Is breeder?: yes	Distance To Hopper: 3.14
Status: missing	Previous Breeding Site:
Condition: bit a researcher, it was funny.	Notes: curabitur at ipsum ac tellus semper interdum. mauris ullamcorper purus sit amet nulla.
+ Condition History	Created by: Seth Editor
	Created on: 06/01/2019

Birds Table

Register New Bird More Fields Export Clear Filters

Filter by... Bird Name Gender Stud ID Mother Father Status Breeder current Breeding Previous Breedin

Bird Name ^	Gender ^	Breeder ^	Stud ID ^	Mother ^	Father ^	Age ^	Current Breeding Site ^	Distance To Hopper (km)	Previous Breeding Site ^
ardra	female	yes	004459	veronika	byran	2 months, 19 days			
bronson	male	yes	574443	reyna	byran	3 months, 2 days	temeria	3.14	
byran	unknown	unknown	262988	veronika	cullin	2 years, 16 days	novigrad	1.23	novigrad
chev	male	yes	027587	reyna	byran	2 months, 21 days			
coretta	female	no	313997	reyna	cullin	2 months, 19 days			
cullin	male	no	089424	reyna	byran	2 months, 27 days	kaer morhen	1	oxenfurt
dale	unknown	unknown	317794	reyna	cullin	3 months	kronos	12	
dani	male	yes	597383	reyna	cullin	2 months, 5 days			
de	unknown	unknown	810303	reyna	byran	2 months, 13 days			
dehlia	unknown	unknown	499013	veronika	byran	2 months, 5 days			
elli	female	no	874850	kathe	jernlee	3 months, 4 days			

Prev 1 2 Next Showing 15 entries out of 30 Show 15 entries

Pressing the More Fields buttons will open a popup (see below) allowing you to select exactly which columns you want to see.

Select Columns to View

Bird Identity Data

☒ Name
☐ System ID
☒ Gender
☒ Is Breeder
☐ Last Seen Date
☒ Stud ID
☐ New Stud ID
☐ Has NFC Ring
☐ NFC Ring Printed ID
☐ Left Ring ID
☐ Right Ring ID
☐ Created By

Bird Parentage Data

☒ Mother
☐ Mother Stud ID
☒ Father
☐ Father Stud ID
☐ Second Father
☐ Second Father Stud ID

Bird Status Data

☐ Status
☐ Condition
☐ Note
☒ Age

Bird Creation Data

☐ Lay Date
☐ Laid Where
☐ Hatch Date
☐ Hatched Where
☐ Incubation Days
☐ Fledge Date
☐ Fledged Where
☐ Release Date
☐ Released Where

Nest Site Data

Current Breeding Site

☒ Name
☒ Distance to Hopper (km)
☐ Description
☐ Coordinates

Previous Breeding Site

☒ Name
☐ Distance to Hopper (km)
☐ Description
☐ Coordinates

Cancel

Save & Close

Reset To Default

Select All

Showing 20 entries out of 30

5 Manage Rings

5.1 Summary

Here you will be able to see all the RFID rings currently registered in the system and you can import new rings using the csv file that would be shipped with batch of rings. The following section will breakdown the page and how to navigate it.

5.2 Page Explained

Home

Manage Rings

Task

Filter by... Printed Ring ID

Printed Ring ID ^	Ring colour v ^	System ID v ^	Assigned v ^	Assigned to Bird v ^	Assign
ah714	green, red : stripe	03e7000000688	Yes	giusto	01/01/1970
ay656	green, yellow : stripe	585a0971f66faf	No	-	-
ba104	blue, red : stripe	58534971f66faa	Yes	veronika	01/01/1970
bl107	yellow, red : stripe	585a0971f66fc9	No	-	-
bu764	green, red : stripe	112233445b6677	No	-	-

Import RFID tags from CSV

Choose file No file chosen

Import

Unassigned rings can be deleted by pressing the dustbin icon, each column can be sorted ascending / descending (i.e. alphabetical / numerical)

From here you can upload the csv file containing the new rings, text will above the import indicating that the file has been validated and how many rings will be imported when the import button is pressed.

Prev 1 2 3 ... 12 Next

Showing 5 entries out of 60

Show 5 entries

6 Manage Nest Sites









6.1 Summary

In this part of the system you can see the registered nest (breeding sites) and edit / add nest sites. The following section will breakdown the page and how to navigate it.

6.2 Page Explained

[Home](#)Manage Nest SitesTask ManagerAdminAccount

Add New

Nestsite ID ^	Description ^	Coordinates ^	Distance to hoppers (km) ^	Occupied by (male)	Occupied by (female / unknown)	Actions
kaer morhen	The last remaining stronghold of some very powerful birds, rumoured to have eyes similar to cats.	57.5522, -24.3484	1	cullin	None	 
kronos	A turbulent atmosphere and extremes of both warm and frigid weather.	52.5522, -23.3484	12	None	None	 
novigrad	The capital of the forest, the cradle of culture	57.5522, -20.3484	1.23	None	Byran	 
oxenfurt	Located on the	57.5522, -21.3484	0.11	cullin	tandi	 

Prev12Next

Showing 5 entries out of 9

Show5entries

Create nestsite

Nestsite name

Nest Site Description

Distance to hoppers (km)

Longitude

Latitude

Create

When selecting add new or edit a popup form will show (see left). As with the rings you can also delete nest sites and columns can be sorted using the arrows next to column names.

7 User Management

7.1 Summary

This is an Admin only part of the system, in which admins can add, remove, and edit users on the system. The following section will breakdown the page and how to navigate it.

7.2 Page Explained

When selecting add new or edit a popup form will show (see right). As with the other tables you can delete users provided it is not the super admin and it is not your own account. Columns can be sorted using the arrows next to column names.

Register new user ✕

Full Name

Username

Password

Confirm Password

Privileges

☐ Read ☐ Create ☐ Edit ☐ Export ☐ Admin

Create

Home **Manage Users** Task Manager Admin Account

Register New User

Filter by... Full Name Clear

Editing or deleting a user will cause them to be logged out instantly, without a chance to save their work

Full name ▾ ▴	Username ▴	Privileges	Actions
Vince Admin	admin	<ul style="list-style-type: none">ReadCreateEditExportAdmin	
Bayley Creator	creator	<ul style="list-style-type: none">ReadCreate	
Seth Editor	editor	<ul style="list-style-type: none">ReadCreateEdit	
Alexa Exporter	exporter	<ul style="list-style-type: none">Read	

Prev 1 2 Next Showing 5 entries out of 6 Show 5 entries

8 User Activity Monitor

8.1 Summary

Another admin only section, here the admins can view all interactions that the users make with the system, if someone edits data, deletes a bird, etc then this is the place to see who done it, and what exactly what changed. The following section will breakdown the page and how to navigate it.

8.2 Page Explained

User Activity Monitor						
Filter by...	Username	2019/02/22 14:52<	2019/03/22 14:52>	Action	Old Data	New Data Clear
Date ▾	User ▾ ^	Action ▾ ^		Data		
22/03/2019, 14:47:58	Vince Admin (admin)	Imported RFID tags				
22/03/2019, 14:45:50	Vince Admin (admin)	Deleted a RFID tag				
22/03/2019, 14:40:50	Vince Admin (admin)	Deleted a RFID tag				
22/03/2019, 14:04:51	Vince Admin (admin)	Edited user account				
22/03/2019, 13:43:45	Vince Admin (admin)	Edited user account				
14/03/2019, 12:15:58	Vince Admin (admin)	Deleted a RFID tag				
14/03/2019, 11:34:45	Roman Superadmin (superadmin)	Created new user account				

View Data

X

New data

updatedAt: 1553263491169,

fullName: Seth Creator

Old data

fullName: Bayley Creator

If you want to see exactly what has been changed you can press the eye icon and you will see a popup showing the new data and the old data.

9 My Profile

9.1 Summary

This simple page will allow you to change your name and password in the system. The following section will breakdown the page and how to navigate it.

9.2 Page Explained

The screenshot shows the 'My Profile' page within an 'Account Overview' dashboard. The page is divided into two main sections: 'Personal information' and 'Password'. The 'Personal information' section displays the user's name as 'Alexa Exporter', username as 'exporter', registration date as '15/03/2019', and privileges as 'Read' and 'Export'. An 'Edit profile' button is located to the right of this section. The 'Password' section shows a 'Password:' label followed by a masked password '*****'. A 'Change password' button is located to the right of this section. A text box on the right side of the page explains that users can change their full name and password on this page, but their permissions cannot be changed and a new username requires a new account. Yellow arrows point from the text box to the 'Edit profile' and 'Change password' buttons, and to the name and password fields.

On this page you can change your Full name (in this current release, username cannot be changed for accountability tracking of changes, if you want a new username you will need a new account). Your permissions can not be changed either, this can only be done by your project coordinator or any other person with admin access. You can also change your password here.

10 Error Recovery - UNFINISHED

10.1 Common Solution

For most random issues, a refresh of the page should be all that's needed to get going again, for more special cases see the following sections for help.

10.2 No Data from Feeders