

Sierra DNA

Mark Noble

9/12/2014

What is Sierra DNA?

- Direct (read only) database access to Sierra Database
- Requires the use of special tools to connect
- Requires special permissions
- Use SQL to retrieve data from the database

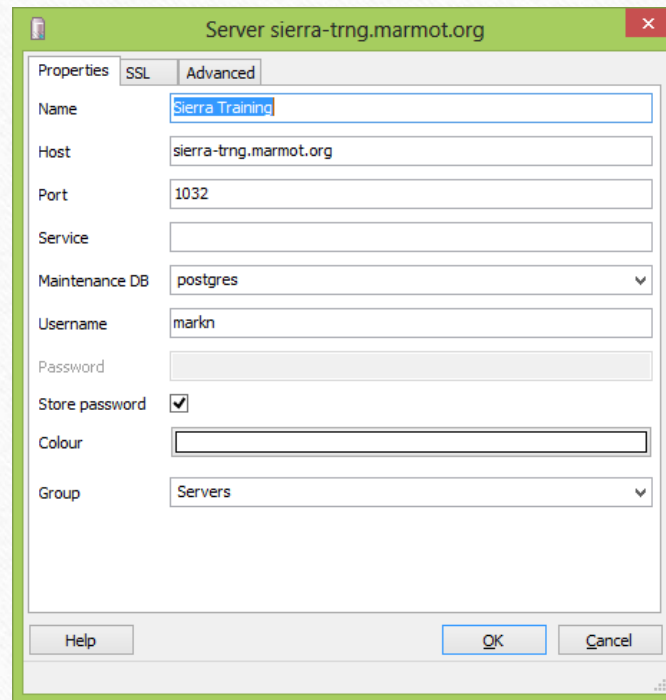
What can I do with Sierra DNA?

- Write custom reports that don't exist within Decision Center
- Answer questions that can't be done within Create Lists
- Write custom applications that require access to Sierra data

How do I connect?

- Two servers sierra-trng, sierra-db
 - Host sierra-trng.marmot.org or sierra-db.marmot.org
 - Port 1032
 - Username (your name from Sierra)
 - Password (your password from Sierra)
- Always practice and test queries on sierra-trng first

pgAdmin (SQL only) connection



Download from: <http://www.pgadmin.org/download/>

Holy cow, there are a lot of tables in the database!

- You can get information on what each table is by looking at the documentation:

<http://techdocs.iii.com/sierradna>

- Switching to ERD View shows relationships between the tables

Our first query

Goal find a list of all users that are not from our library that have one of our titles checked out and overdue.

Step 1 – get a list of users not from our library

```
SELECT
```

```
patron_record.record_id, home_library_code
```

```
FROM sierra_view.patron_record
```

```
WHERE home_library_code NOT LIKE 'mvea%'
```

```
LIMIT 50
```


Step 2 – Get a list of books checked out from our location

```
SELECT
checkout_gmt, overdue_count, item_status_code, item_record.record_id
FROM sierra_view.checkout
INNER JOIN sierra_view.item_record ON item_record_id = item_record.id
WHERE location_code like 'mvea%'
LIMIT 50
```

Step 3 - Limit to only books that are overdue

```
SELECT
```

```
checkout_gmt, overdue_count, item_status_code, item_record.record_id
```

```
FROM sierra_view.checkout
```

```
INNER JOIN sierra_view.item_record ON item_record_id = item_record.id
```

```
WHERE location_code like 'mvea%' AND overdue_count >= 1
```

```
LIMIT 50
```

Step 4 - Join the two queries together

SELECT

checkout_gmt, overdue_count, item_status_code, item_record.record_id,
patron_record.record_id, home_library_code

FROM sierra_view.checkout

INNER JOIN sierra_view.item_record ON item_record_id = item_record.id

INNER JOIN sierra_view.patron_record ON patron_record_id = patron_record.id

WHERE location_code like 'mvea%' AND overdue_count >= 1 AND home_library_code
NOT like 'mvea%'

LIMIT 50

Step 5 – add patron barcode and item barcode

SELECT

Patron_view.barcode, home_library_code, checkout_gmt, overdue_count, item_view.barcode,
item_status_code

FROM sierra_view.checkout

INNER JOIN sierra_view.item_view ON item_record_id = item_view.id

INNER JOIN sierra_view.patron_view ON patron_record_id = patron_view.id

WHERE location_code like 'mvea%' AND overdue_count >= 1 AND home_library_code
NOT like 'mvea%'

LIMIT 50

Step 6 – add patron name

SELECT

patron_view.barcode, last_name, home_library_code, checkout_gmt, overdue_count, item_view.barcode,
item_status_code

FROM sierra_view.checkout

INNER JOIN sierra_view.item_view ON item_record_id = item_view.id

INNER JOIN sierra_view.patron_view ON checkout.patron_record_id = patron_view.id

INNER JOIN sierra_view.patron_record_fullname on checkout.patron_record_id =
patron_record_fullname.patron_record_id

WHERE location_code like 'mvea%' AND overdue_count >= 1 AND home_library_code NOT like 'mvea%'

LIMIT 50

Step 7 – remove limits

SELECT

patron_view.barcode, last_name, home_library_code, checkout_gmt, overdue_count,
item_view.barcode, item_status_code

FROM sierra_view.checkout

INNER JOIN sierra_view.item_view ON item_record_id = item_view.id

INNER JOIN sierra_view.patron_view ON checkout.patron_record_id = patron_view.id

INNER JOIN sierra_view.patron_record_fullname on checkout.patron_record_id =
patron_record_fullname.patron_record_id

WHERE location_code like 'mvea%' AND overdue_count >= 1 AND home_library_code NOT
like 'mvea%'

Creating a report in Jaspersoft Studio

- You can create simple (or complex reports) with Jaspersoft Studio.
- Same base program used to design receipts, etc in Sierra
- Cheat Sheets are a great way to get a head start on building the reports.

Step 1 - Connecting to the database

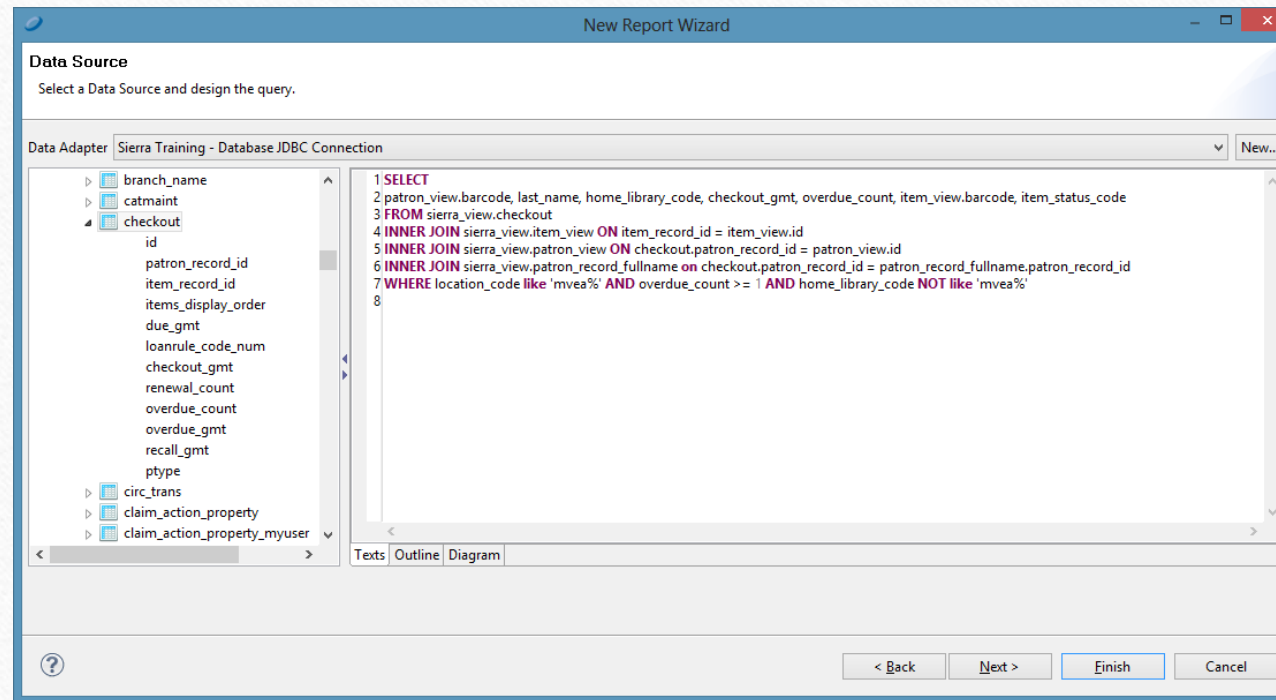
The screenshot shows the 'Data Adapter Wizard' window with the 'Database Location' tab selected. The 'Name' field contains 'Sierra Training'. The 'JDBC Driver' dropdown is set to 'org.postgresql.Driver'. The 'JDBC Url' field contains 'jdbc:postgresql://sierra-trng.marmot.org:1032/iii'. The 'Username' field contains 'markn' and the 'Password' field is masked with dots. An attention message states: 'Attention! Passwords are saved in clear text'. At the bottom, the 'Test' button is highlighted.

Property	Value
ssl	prefer
sslfactory	org.postgresql.ssl.NonValida...

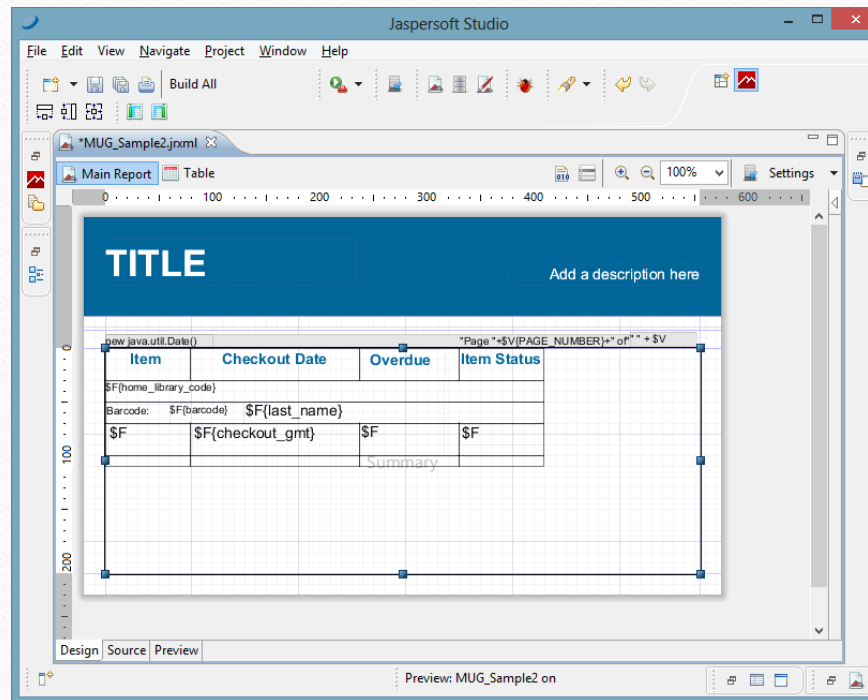
The screenshot shows the 'Data Adapter Wizard' window with the 'Connection Properties' tab selected. The 'Name' field contains 'Sierra Training'. A table lists connection properties: 'ssl' with value 'prefer' and 'sslfactory' with value 'org.postgresql.ssl.NonValida...'. 'Add' and 'Delete' buttons are to the right of the table. At the bottom, the 'Test' button is highlighted.

Download from: <http://community.jaspersoft.com/project/jaspersoft-studio/releases>

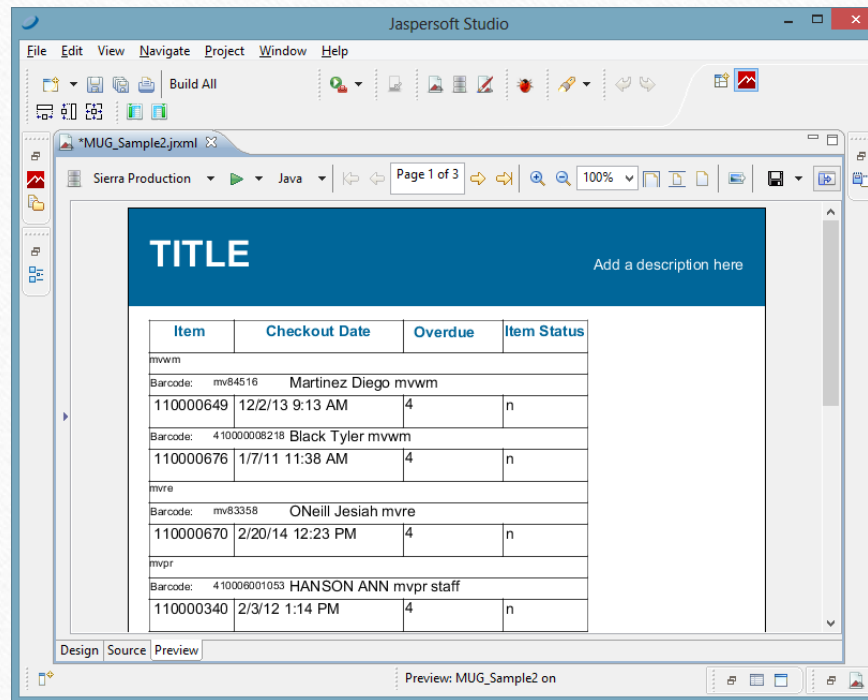
Step 2 – Define the data you want to use for the report



Step 3 – Add fields to the report



Step 4 – Format and Print the Report



What should I watch out for?

- Session timeouts
- Long running queries

Tips for success

- Build queries iteratively, start small and then add additional information and limits to the query.
- Limit the number of rows returned while testing for better performance
- Limit the fields returned for better performance
- In general querying tables with `_view` in the name will be slower than the regular table. I.e. `patron_view` will be slower than `patron_record`
- Returning smaller result sets will generally be faster.

Ok, I'm ready to go, what's next?

- Ask for Sierra DNA permissions in sierra-trng first
- Sit down with Mark one on one so we can “certify” you for production use. This can be over WebEx
- After you are “certified” we will give you permissions to use Sierra DNA in production.

Wow this is cool, but I don't wanna go there!

No problem. If you have a query you want Marmot to develop for you, we are happy to help out. Just file a helpdesk ticket.

We can either build and run the query and send you data or just build the query for you to use on your own.

I'm also happy to do the first few with you via WebEx until you get a feel for it.

Want More?

- If people are interested, there is information stored within VuFind that could be exposed in a similar manner. Either via direct SQL information or API.