**Generic Companion Configuration Manual**

**Introduction**

The Generic Companion is a piece of software written to detect changes in any database and to output them, subject to certain rules, in a comma separated values (.csv) file. It is an evolution of the ADT companion whose initial design was coupled to the ADT database and its use case and rules.

The Generic Companion attempts to provide a one-size fits all solution to the following use case. The extent to which it succeeds remains to be seen.

* All or certain changes to all or certain records in a given database need to be tracked and logged
* The records to be tracked have no timestamps associated with them, making it difficult to know if and when they change
* The records to be tracked may be subject to certain quantity limits and collation rules
* The records to be tracked may need to be linked in some logical way before being logged
* It should be fairly easy to change the format in which records are output without necessarily tinkering with the main codebase

**Configuration**

The strength of the Generic Companion lies in its isolation of context specific information from the main codebase. As such, it provides to configuration points for the various context specific information it needs, namely;

1. The record\_sources.xml file
2. The openemrconnect.properties file

The record\_sources.xml File

This file contains the record sources where the records to be tracked are stored. A record source essentially mirrors a database table or view. The following elements can be specified for every record source.

|  |  |  |
| --- | --- | --- |
| **Element** | **Value range** | **Meaning** |
| Relationship | Master, one, many, none | This element specifies information to be used in linking records from different record sources for output. This is achieved in conjunction with the primary and foreign key columns elements. |
| Order | Positive integers | Specifies the order in which the record sources will be interrogated for changes |
| Table name | Any legal table or view name for the targeted RDBMS | Specifies the table or view for which to track changes |
| Primary key columns | A list of primary key columns | Specifies the primary key columns of the table specified above. The name must be a legal column name for the targeted database. For some RDBMS e.g. MS Access, quoting a non-string column name (i.e. ‘column\_name’) in an SQL statement invalidates the statement. To counter this problem, set the quote element for integer primary keys to false. |
| Foreign key columns | A list of foreign key columns | This element must be configured exactly like primary key columns element. The only difference is that it should refer to foreign key columns in the table instead. |
| Cumulate | True or false | If true, this attribute tells the extractor that once it detects a change in this record source, it should output the entire change history subject to the limit specified in the limit element. Otherwise only the detected changes are logged. |
| Limit | Any integer | If this value is negative, no limit is imposed on the number of changes to be logged. All detected changes are logged. Otherwise, the changes to be logged are limited to the specified number. |
| Columns | A list of legal column names for the targeted RDDBMS | This specifies a list of the specific columns to be tracked for this record source. |

The openemrconnect.properties File

This file supports the configuration of 3 main sets of information as specified in the table below.

|  |  |  |
| --- | --- | --- |
| **Setting** | **Value range** | **Meaning** |
| *Database Connection Parameters (Specified separately for the shadow and source databases)* | | |
| Url | String | Database url |
| Driver | String | Database driver |
| Database | String | Database name |
| Username | String | Database username |
| Password | String | Database password |
| *Site information* | | |
| Name | String | Site name |
| Code | String | Site code |
| System | String | The system for which this is the companion |
| *Extractor settings* | | |
| Name | String | The name of this companion instance |
| Snooze | Positive long | How long the companion sleeps before polling for database changes again |
| Lookback | Long | How far back in time the companion looks for database changes |
| Siteinfo | True or false | True if site information must be included in the .csv output and false otherwise. |

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