

## BR\_Logging – Logging Services

Robin Lamacraft 2017-07-04

### SCOPE

This module must be used to operate with Log Records created by HRE. Log Records come in several forms depending on their likely later use. They can be plain text files, encoded text files (e.g. JSON, XML, etc) or database tables. Log Records are records of a sequence of actions and their outcomes.

NOTE: Logs are only created in the current Application Language.

### ACTIONS

Depending on the Project Logging Settings, logs will be created. There are many types of logs that will be supported:

- Importing – item by item trace
- Exporting – item by item trace
- Data Change Logging – per database commit action
- Utility Change Preview – Suggested change by change
- Global Error and Warning Messages – All error and warning notifications
- All uses of help and reminder features
- Keyboard navigation sequences.

On a log enabling request for a particular type of logging, enable listeners to monitor the appropriate action in modules.

On a log disabling request for a particular type of logging, disable listeners that were monitoring the appropriate action in modules.

On a log content management request for a particular type of logging, provide tools to:

- Truncate, Purge, Rename or Delete a log file or database table
- View, search, transform a log into another format
- Transmit a log to another location for analysis
- Use certain types of logs to provide usage statistics
- Use certain types of logs to assist in data recovery.

### USED BY

Any modules that can create errors or its operations are being monitored.

### DATA CONTROLLED BY THIS MODULE

#### 1. Log Type Definition Table – one record per Log Type Definition

SQL FIELD NAME	SQL FIELD TYPE	NOTES
HRE COMMON FIELDS FIRST		HRE_ID is LogTypeDefn_ID
LABEL_ID	INT8 NOT NULL	Label HRE ID for translated label of this Log Type
ALL	INT	0 = All action types, 1= Only TARGET ID
TARGET_ID	INT8 NOT NULL	HRE_ID of key object type being monitored
LOG_ENCODING	INT8 NOT NULL	HRE_ID of Encoding method
USES_FILE	INT	0 = Uses HRE table, 1= Uses external file

The PRIMARY INDEX of this table is the HRE\_ID. (LogTypeDefn)

#### 2. Log Control Table – one record per Log

SQL FIELD NAME	SQL FIELD TYPE	NOTES
HRE COMMON FIELDS FIRST		HRE_ID is LogTypeDefn_ID
LABEL_ID	INT8 NOT NULL	Label HRE ID for translated label of this Log
LOG_DEFN_ID	INT8 NOT NULL	HRE_ID of Log Type Definition
FILE ID	INT8	HRE_ID of File Path
SKIP	INT4	Don't save first SKIP # of entries (default 0)
STOP	INT4	Don't save entries after STOP # of entries (default 10,000)
LAST	INT4	Only save the LAST # of entries

The PRIMARY INDEX of this table is the HRE\_ID. (Log)

NOTE: The actual log file is an external encoded text file. The choice of encoding determines the ease of which that log file can be used for particular purposes.

#### REQUIRED SERVICES

1. BR\_EncodedString *To encode log into the desired format*
2. BR\_EntityLink *To link tables*
3. BR\_FieldTranslation *To log in the display language*
4. BR\_Substitution *To substitute variable in log content.*

#### APPLICATION PROGRAMMING INTERFACE (API)

1. To define the Logging type definitions
2. To select and edit a Logging request
3. To start a logging process to a nominated file or HRE table
4. To terminate a logging process
5. To view a log file or logging table.

#### WARNING CONDITIONS

1. Need details of the condition that raised the warning, example message and possible next steps.

#### ERROR CONDITIONS

1. Need to record the condition that raised the error, example message and possible next steps.