

silwood

SILWOOD TECHNOLOGY LTD

Safyr Metadata Discovery Software

safyr[®]

Safyr Task Automation

Guide

SILWOOD TECHNOLOGY LIMITED

Safyr Task Automation Guide – Safyr 7.5

This product is subject to the license agreement and limited warranty accompanying the product. The product software may be used or copied only in accordance with the terms of this agreement.

Information in this document is subject to change without notice. No part of this manual may be reproduced, or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without the express written permission of Silwood Technology Ltd, or Authorised Silwood Technology Distributor.

© Copyright 2005-20 Silwood Technology Ltd. All rights reserved.

Table of Contents

Introduction.....	2
Overview of the Task Automation approach for Safyr	2
What Tasks can be Automated?	2
What does the Safyr Task Automation process actually mean?	2
How to create and use the infrastructure for Task Automation	3
Hardware and Software Environment	3
Building the Excel file for the Required Tasks	3
Building the Command file for the Required Tasks	4
Excel Property Settings for each Command Type.....	5
Extract Task	5
Subject Area Import Task.....	6
Subject Area Expand Task.....	7
Subject Area Export Task.....	8
Testing & Running Safyr Task Automation.....	9
Index	10

Introduction

Overview of the Safyr Task Automation Approach

This manual describes how to configure Safyr to achieve many of the day-to-day tasks required of the product without the user having to be present and (if desired) as a scheduled process.

Overview of the Task Automation approach for Safyr

Running Safyr unattended is achieved by using a command line option in Safyr. This command line mode uses a .cmd file to describe the Tasks to be automated, and the Command file in turn makes use of settings in an Excel spreadsheet to determine the 'variables' such as:

- Which Safyr repository the Task is to be run against
- For Export tasks, the various export options
- For Subject Area-related Tasks, the Subject Area involved

What Tasks can be Automated?

Three types of Tasks can be automated:

- Extraction of metadata from the source application (SAP, Salesforce, PeopleSoft...)
- Creation and Expansion of Subject Areas
- Export of Subject Areas (only some export formats supported)

What does the Safyr Task Automation process actually mean?

When Safyr is run with the Task Automation options, the program is still running as a 'foreground' Windows application. The PC on which Safyr is running needs to be active at the time(s) the Task(s) are run and will need access to any of the resources required to complete the Task successfully, such as Databases, Shared Folder and Application connections.

Task Automation with Safyr uses a command line option. In order to schedule the Tasks, a Scheduling program, such as the Windows Task Scheduler, will need to be employed.

How to create and use the infrastructure for Task Automation

Describes what is required to successfully use the Task Automation features

There are two main considerations when creating the infrastructure to enable Task Automation with Safyr:

- The hardware/software environment that will be used
- The Command and Spreadsheet files and setting that will control the Task Automation process

Hardware and Software Environment

The PC on which Safyr is running for the Task Automation process needs to have access to any of the resources required to complete the Task(s).

In particular, the Windows User account under which Safyr is being run needs permissions to access these resources. The recommended approach to achieving this is to run each of the required steps ‘manually’ (that is, using the normal Safyr GUI interface), using the same Windows User account that will be used during Task Automation, in order to ensure that the process can be run successfully before creating the automation process.

Building the Excel file for the Required Tasks

A sample Excel file is provided with the Safyr software. The file is called SafyrTaskAutomationSample.xlsx and is located in the ‘Doc’ sub folder of the Safyr installation folder.

The recommended approach is to take a copy of this file and place it in a new folder where the other Task Automation files will be stored.

The required cells for each Excel sheet are dependent on the type of Task being automated. The possible values for these are described in the following sections.

The example below can be used to describe the approach.

#	A	B	C
1	#CommandProperties		
2	PropertyName	PropertyValue	Description
3	RepositoryName	SAPBW-1	
4	CommandType	Extract	Type of the Command (limited to the values describe in this sample sheet)
5	MinimizeWindow	Yes	
6	CloseAfterCommand	Yes	
7	LogFileName	c:\temp\Safyr_SAP1- $\$DT\-Extract.txt	Option / $\$DT\$\text{}$ = current date time as 'yyyymmdd-hhmmss'
8	LogFileAppend	No	
9			
10	ExtractSkipTest	Yes	
11	ExtractDataMode	FromLoadFiles	Full ; To LoadFiles ; FromLoadFiles (support depends on source system type)
12	ExtractDetailedLog	c:\temp\Safyr_SAP1- $\$DT\-Extract.xml	Option / $\$DT\$\text{}$ = current date time as 'yyyymmdd-hhmmss'
13			

The main property values are:

Property	
RepositoryName	This specifies which Safyr Repository is the subject of the Task
CommandType	This can be Extract, SubjectAreaImport, SubjectAreaExpand or Export
MinimiseWindow	Is the Safyr application going to be minimised during execution
CloseAfterCommand	Should Safyr be closed after the Task has been completed?
LogFileName	The name and location of the log file that is written to show the progress of the Task

Building the Command file for the Required Tasks

A sample Command file is provided with the Safyr software. The file is called SafyrTaskAutomationSample.cmd and is located in the 'Doc' sub folder of the Safyr installation folder.

As with the Excel file, the recommended approach is to take a copy of this file and place it in a new folder where the other Task Automation files will be stored.

The example below can be used to describe the approach.

```

echo off
cls
set SafyrExe="X:\DP_PRJ\Safyr\Prog\Safyr.exe"

echo SAP1-Extract is running ...
%SafyrExe% /TaskAutomationFile="X:\DP_PRJ\Safyr\Docu\Manual\User\SafyrTaskAutomationSample.xlsx" /TaskAutomationCommand="SAP1-Extract"
if %ERRORLEVEL% GEQ 1 goto :FinishWithError

echo SAP1-Subject Area Import is running ...
%SafyrExe% /TaskAutomationFile="X:\DP_PRJ\Safyr\Docu\Manual\User\SafyrTaskAutomationSample.xlsx" /TaskAutomationCommand="SAP1-SubjectAreaImport"
if %ERRORLEVEL% GEQ 1 goto :FinishWithError

echo SAP1-Subject Area Expand is running ...
%SafyrExe% /TaskAutomationFile="X:\DP_PRJ\Safyr\Docu\Manual\User\SafyrTaskAutomationSample.xlsx" /TaskAutomationCommand="SAP1-SubjectAreaExpand"
if %ERRORLEVEL% GEQ 1 goto :FinishWithError

echo SAP1-Export-JSON is running ...
%SafyrExe% /TaskAutomationFile="X:\DP_PRJ\Safyr\Docu\Manual\User\SafyrTaskAutomationSample.xlsx" /TaskAutomationCommand="SAP1-Export-JSON"
if %ERRORLEVEL% GEQ 1 goto :FinishWithError

goto FinishSuccessful

:FinishWithError
echo Something failed, please check the result logs
pause
rem force exit of higher level command calls
exit /B 1

:FinishSuccessful
echo everything worked
pause
exit /B 0
    
```

The first step sets a location for the Safyr.exe program

The following steps then run:

- An Extract from SAP
- Creation of a Subject Area via the Excel Import method
- The Expansion of that Subject Area

- An Export to the JSON Data Catalog format

For each Task there are two Command Line options:

- /TaskAutomationFile The location of the Excel file containing the Task properties
- /TaskAutomationCommand The Sheet in the Excel file to be used

Running Safyr with command line options returns an ERRORLEVEL return code. In the example Command file shown, this is used to set the EXIT command *exitcode* to 0 if the Task has completed successfully and 1 if otherwise.

Excel Property Settings for each Command Type

The following sections describe the four types of Task and their Excel settings.

Extract Task

This Task type deals with the extraction of metadata from the chosen source system type. The Excel Properties are described below.

Property	
RepositoryName	This specifies which Safyr Repository is the subject of the Task
CommandType	This will be Extract for this Task type
MinimiseWindow	Is the Safyr application going to be minimised during execution – Yes/No
CloseAfterCommand	Should Safyr be closed after the Task has been completed? – Yes/No
LogFileName	The name and location of the log file that is written to show the progress of the Task. The parameter \$DT\$\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DT\$\$-Extract.txt
LogFileAppend	If the LogFileName already exists, Append the entries to that file – Yes/No
ExtractSkipTest	An Extract from the source application is normally performed with a 'Test' Extract first. This Property can be used to suppress the Test – Yes/No
ExtractDataMode	Extractions form SAP can be performed as one step, or in two steps using text files. Values can be Full, To LoadFiles,From LoadFiles
ExtractDetailedLog	The name and location of the detailed Safyr XML log file. The parameter \$DT\$\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DT\$\$-Extract.xml

Subject Area Import Task

This Task type will load Safyr Subjects areas using the Excel load method (see 'Appendix C – Using an Excel spreadsheet to load Subject Areas' in the Safyr User Guide). The Properties are described below.

Property	
RepositoryName	This specifies which Safyr Repository is the subject of the Task
CommandType	This will be SubjectAreaImport for this Task type
MinimiseWindow	Is the Safyr application going to be minimised during execution – Yes/No
CloseAfterCommand	Should Safyr be closed after the Task has been completed? – Yes/No
LogFileName	The name and location of the log file that is written to show the progress of the Task. The parameter \$DTS\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DTS\$-SubjectAreaImport.txt
LogFileAppend	If the LogFileName already exists, Append the entries to that file – Yes/No
SubjectAreaImportFile	The name of the Excel file that contains the Subject area import settings
SubjectAreaImportDetailedLog	The name and location of the detailed Safyr XML log file. The parameter \$DTS\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DTS\$-SubjectAreaImport.xml

Subject Area Expand Task

This Task type will Expand the specified Subject Area(s). See 'Expanding a Subject Area with related Parent or Child tables' in the Safyr User Guide for details of this feature. The Properties are described below.

Property	
RepositoryName	This specifies which Safyr Repository is the subject of the Task
CommandType	This will be SubjectAreaExpand for this Task type
MinimiseWindow	Is the Safyr application going to be minimised during execution – Yes/No
CloseAfterCommand	Should Safyr be closed after the Task has been completed? – Yes/No
LogFileName	The name and location of the log file that is written to show the progress of the Task. The parameter \$DTS\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DTS\$-Expand.txt
LogFileAppend	If the LogFileName already exists, Append the entries to that file – Yes/No
SubjectAreaExpandNames	Name or Names of the Subject areas to be the subject of the Expand
SubjectAreaExpandParentPKLevel	Number of levels to include those relationships where the primary key fields of the 'parent' table form part of the primary key of the child table
SubjectAreaExpandParentNonPKLevel	Number of levels to include Non-Identifying relationships. That is, those relationships where the primary key fields of the 'parent' table do not form part of the primary key of the child table
SubjectAreaExpandParentInclAssoc	This will include objects that are associated with the members of the Subject Area. This is different to being related by Primary/Foreign key.
SubjectAreaExpandChildLevel	Number of levels to include Child relationships
SubjectAreaExpandChildOnlyIdentifying	All child relationships or Identifying only child relationships. Yes/No
SubjectAreaExpandNoOfEntities	This will limit the number of Entities. '0' denotes no limit
SubjectAreaExpandToTablesWithData	Only include tables containing data: The set of tables resulting will be restricted to those that have a Row Count greater than zero. Yes/No

Subject Area Export Task

This Task type will Export the specified Subject Area(s). The properties will be slightly different depending on the 'target' tool (only a limited set of Export targets are available with this release). The Properties described below are for a JSON export.

Property	
RepositoryName	This specifies which Safyr Repository is the subject of the Task
CommandType	This will be Export for this Task type
MinimiseWindow	Is the Safyr application going to be minimised during execution – Yes/No
CloseAfterCommand	Should Safyr be closed after the Task has been completed? – Yes/No
LogFileName	The name and location of the log file that is written to show the progress of the Task. The parameter \$DT\$\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DT\$\$-Export.txt
LogFileAppend	If the LogFileName already exists, Append the entries to that file – Yes/No
ExpType	Data Catalog JSON
ExpSubjectAreas	Name or Names of the Subject areas to be Exported
ExpDetailedLog	The name and location of the detailed Safyr XML log file. The parameter \$DT\$\$ can be used in the name to insert a date/time string into the file name. e.g. c:\temp\Safyr_SAP1-\$DT\$\$-Export.xml
ExpLimitParentPKLevel	Number of levels to include those relationships where the primary key fields of the 'parent' table form part of the primary key of the child table
ExpLimitParentNonPKLevel	Number of levels to include Non-Identifying relationships. That is, those relationships where the primary key fields of the 'parent' table do not form part of the primary key of the child table
ExpLimitParentInclAssoc	This will include objects that are associated with the members of the Subject Area. This is different to being related by Primary/Foreign key.
ExpLimitChildLevel	Number of levels to include Child relationships
ExpLimitChildOnlyIdentifying	All child relationships or Identifying only child relationships. Yes/No
ExpLimitNoOfEntities	This will limit the number of Entities. '0' denotes no limit
ExpLimitToTablesWithData	Only include tables containing data: The set of tables resulting will be restricted to those that have a Row Count greater than zero. Yes/No
ExpLimitToMkFields	The set of fields exported for each table will be limited to the Marked Fields if this option is selected, plus the Primary Key fields of the table. Yes/No

Testing & Running Safyr Task Automation

After creating the Excel and Command files described in the previous chapter, the Task Automation process can be tested.

Running each of the steps to be automated in 'interactive' mode (i.e. not using Automation), is recommended first, in order to ensure that there are no obvious issues that might be encountered during the 'unattended' execution of Safyr.

This should be done using the same Windows user as that is to be used when running the 'unattended' Task(s).

Index

Command File for Task Automation, 4
Excel file for Task Automation, 3
Extract Task, 5
Hardware & Software Requirements, 3

Subject Area Expand Task, 7
Subject Area Export Task, 8
Subject Area Import Task, 6
Testing Task Automation, 9