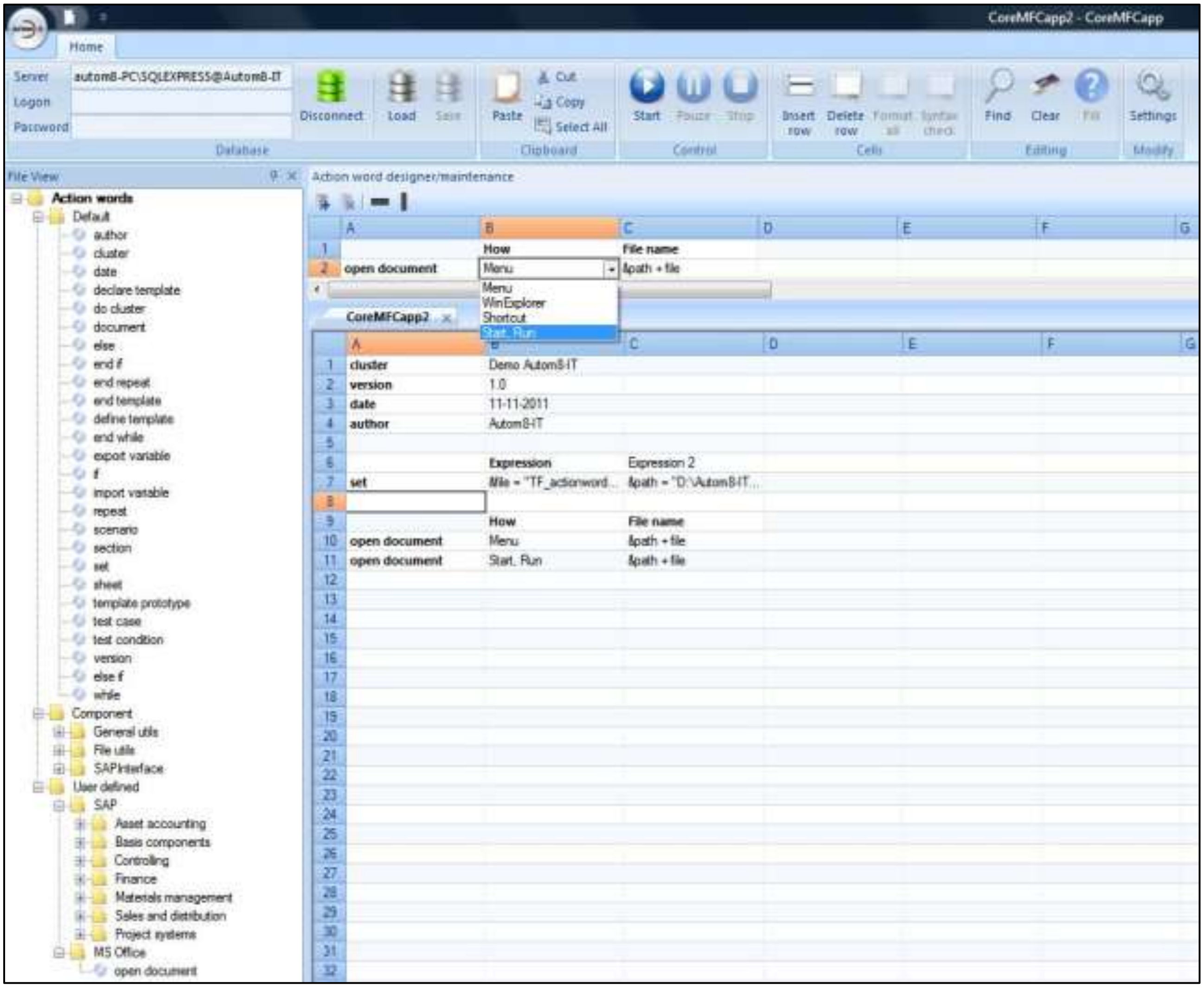
Test automation with Autom8-IT

1 Introduction

Autom8 and Improve Testing (Autom8-IT) is our central test application. Using Autom8-IT results in automation and improvement of software testing. It improves and accelerates the main software testing disciplines, test analysis and test automation. This section is a high level summary of the Autom8-IT user interface. The next sections discuss respectively Autom8-IT test analysis and Autom8-IT test automation via a simple example. When you have little knowledge of the usage of keywords we recommend to first read this document.

The screenshot below shows the main test application window which consists of three panes and a menu bar. The left-hand pane lists a tree of keyword categories 📁 and keywords ⚙. The three highest categories are Default, Component and User defined. By "dragging & dropping" keywords from the keyword category onto the test script editor - the main grid - test scripts can be easily and quickly generated. The "keyword design and maintenance" pane just below the menu bar gives the test analyst the opportunity to manipulate the content of keywords in the "User defined" category when keywords do not yet exist or miss a (default) parameter (value).



Server: autom8-PC\SQLEXPRESS@Autom8-IT
Logon:
Password:

- Action words
  - Default
    - author
    - cluster
    - date
    - declare template
    - do cluster
    - document
    - else
    - end if
    - end repeat
    - end template
    - define template
    - end while
    - export variable
    - if
    - import variable
    - repeat
    - scenario
    - section
    - set
    - sheet
    - template prototype
    - test case
    - test condition
    - version
    - else if
    - while
  - Component
    - General utils
    - File utils
    - SAPInterface
  - User defined
    - SAP
      - Asset accounting
      - Basis components
      - Controlling
      - Finance
      - Materials management
      - Sales and distribution
      - Project systems
    - MS Office
      - open document

	A	B	C	D	E	F	G
1		How	File name				
2	open document	Menu	&path + file				

Menu
WinExplorer
Shortcut
Start, Run

	A	B	C	D	E	F	G
1	cluster	Demo Autom8-IT					
2	version	1.0					
3	date	11-11-2011					
4	author	Autom8-IT					
5							
6		Expression	Expression 2				
7	set	&file = "TF_actionword...	&path = "D:\Autom8-IT...				
8							
9		How	File name				
10	open document	Menu	&path + file				
11	open document	Start, Run	&path + file				
12							
13							
14							
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17							
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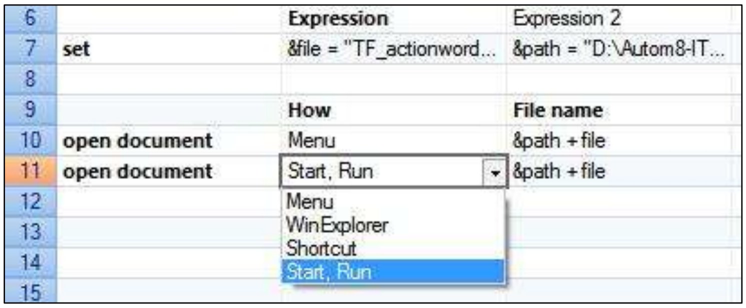
2 Automation test analysis

The test analysis document describes an easy example of software testing using keywords. We have embedded the development and the reusability of keywords in Autom8-IT. This implies that there is no need to re-invent the same keywords on a new project or within the same company or even within the same test script. This saves time to meet deadlines, reduces resources and improves quality, because many test functions can be easily re-used.

In order to explain the user interface we fall back on the simple example. The System Under Test (SUT) is a desktop with a Windows operating system with MS-Word. A requirement of the system is: “MS-word must open a *.doc-file”. A test analyst starts writing a test script by entering the header data of the test script, e.g. the name of the test script, the version number, the date and the name of the test analyst. These keywords belong to the "Default" keyword category. Then the test analyst declares and assigns the variables "file" and "path" (at row 7 in the figure in the previous section), which is expected to be used more than once in this test script. The test analyst then assigns a new subcategory "MS Office" to the "User defined" category; see the figure in the previous section. The test analyst starts the design of the "open document" keyword in the "keyword design and maintenance view". The combo box in the figure at the previous page in column B of the editor shows the multiple pre-defined test values to choose from. In order to use the keyword in the test script the test analyst must insert the keyword into the MS Office category.

After the design of the keyword it can be re-used in the test scripts whenever you need it by dragging & dropping it from the keyword category tree onto the test script editor. What is left is selecting the correct test values and/or entering test data in the grid.

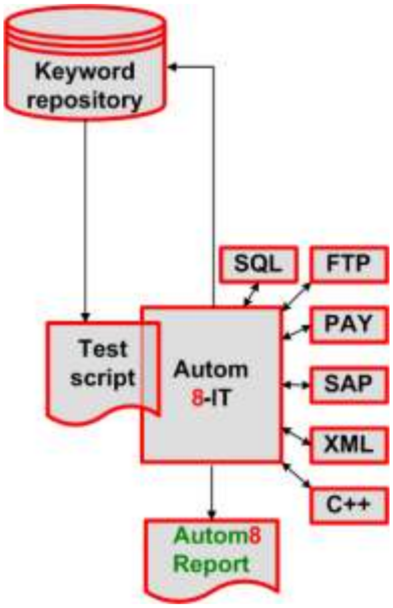


6		Expression	Expression 2
7	set	&file = "TF_actionword...	&path = "D:\Autom8-IT...
8			
9		How	File name
10	open document	Menu	&path + file
11	open document	Start, Run	&path + file
12		Menu	
13		WinExplorer	
14		Shortcut	
15		Start, Run	

3 Automation test automation

Test automation is nothing more nothing less than that after pressing the "Start"-button, Autom8-IT runs a given test script and reports the results. The failed and passed test cases in the report give insight into the quality of the system under test. Depending on the uniqueness of the keywords in the test script some programming needs to be done before arriving at this stage.

The amount of programming can be reduced considerably when portable plug-ins are used. These are test components, such as SQL, FTP, PAY, etc. in the right-hand figure, closely embedded to the central test application Autom8-IT. They make testing of the platform and/or technique their name correspond to possible. These plug-ins are the result of a library, a framework, a template and/or a combination and are often accompanied with a set of keywords.


Keyword repository
SQL
FTP
PAY
Test script
Autom 8-IT
SAP
XML
C++
Autom8 Report