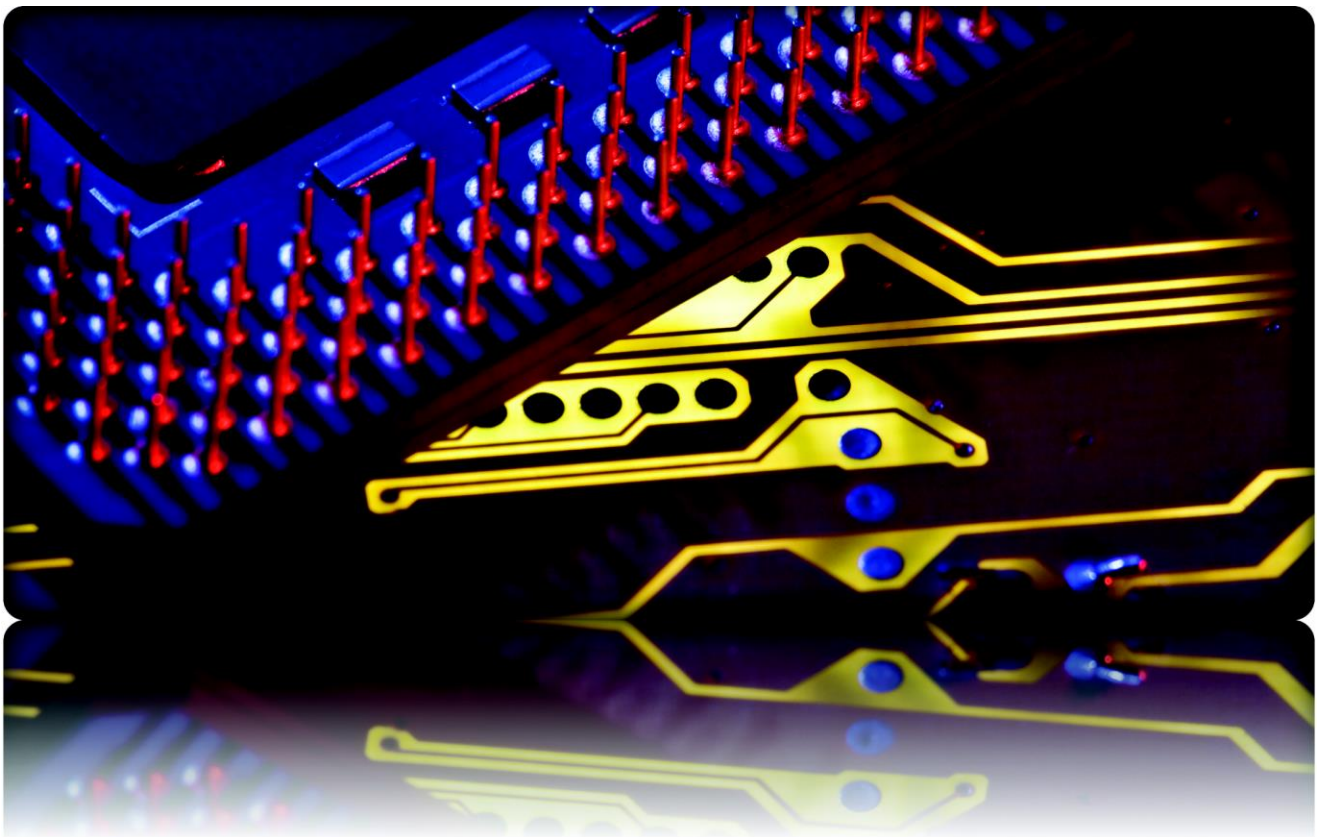




QA+WIN™

Windows®-based Computer Diagnostic Software



**Assuring Computer
Service Reliability**

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Overview

It is assumed readers are familiar with QA+Win operation and have read the QA+Win User Guide. This document has been written to give information about advanced features and configuration available with the QA+Win interface.

All XML input and output files must conform to the standard as defined at
<http://www.w3.org/TR/REC-xml/>

Examples of XML output may not exactly match your output for this version. They are only supplied as syntactical examples.

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Command Line Options

You can use command line options with QA+Win. Following is the list of options available with QA+Win:

QA+Win.exe [/? | /AUTOBOOT | /R <filename>] [switches]

Option	Description
/?	Displays a list of command line options that can be used. QA+Win will close after the options have been shown.
/AUTOBOOT	Gives a general product introduction and allows the creation of media. This option can be used alone or with /DIR only. The Splash.dll must be present for this option. Please follow the onscreen instructions.
/BLOCK	This option is used to control license BIOS locking. Please contact Eurosoft for more information regarding this feature.
/DF <filename>	<p>Loads a user-specified diagnostic file. This file is used to configure some diagnostic groups and the QA+Win interface. If the specified diagnostic file does not exist or does not contain any configuration, the configuration will be saved to the file when QA+Win closes.</p> <p>In terms of configuring the interface, see "Configuration File" for further details.</p> <p>In terms of configuring the groups, please refer to the Test Descriptions document.</p> <p>Note: If EDF_CFG.xml is present in the QA+Win directory then this file is used instead of the file specified with /DF.</p> <p>Note: In order to use the same configuration and layout on a different system, both the diagnostic file .xml and .qac files will need to be copied.</p>
/DIR <path>	Re-routes output event and log XML files from the QA+Win directory to another directory. Useful when on read only media. If necessary the directory is created. If files exist these will be overwritten without error.
/ED	<p>Enumeration Debug Log. Eurosoft may request that you run this command line option to gain extra information on initialisation.</p> <p>This will populate the Event log with additional enumeration information and will create the EDF_Trace.log file.</p>

/FACTORY	Runs the tests in non-interactive mode. This mode will not prompt the user for test items such as whether or not loopback plugs are installed.
/LCFG	The options locks the configuration file blocking writes when the QA+Win is started or ending. An alternative to this option is to set your configuration file as read only.
/LIC	Please contact Eurosoft for more information regarding this feature.
/LOG <filename>	<p>Sets the filename of the Report to be created when QA+Win closes. A .pdf file extension should be used and will create the Full Report with Test Results and Device information.</p> <p>If a path is specified then this is used to redirect the created file, otherwise the QA+Win directory is used.</p>
/NOTIFY	<p>This option enables the Test Result notification window and sound when any series of tests complete. The sound output entirely relies on system configuration and capability of operation. We recommend that audio loopbacks are unplugged before the tests complete.</p> <p>The window and sound remain until there is user interaction.</p> <p>The window image and sound can be customised by modifying the 'Notify<result>' files in the Interface directory.</p>
/OPL	This option is for Eurosoft use only.
/PDF <000000>	The option is the command line equivalent of the PDF tag 6 bit binary string from the 'Configuration File XML Specification' section.
/R <filename>	Loads and runs the specified script and then shuts down QA+Win. Only groups required to run the script will be loaded. The script must have the .xml extension.
/RXSL <Style Sheet>	This option chooses the XSL style sheet that should be used with the QA+Win results file. This will add the xml-stylesheet tag to the top of the file referencing the chosen style sheet.
/SUPPORT	The option enables the creation of a Support file pack when QA+Win is shutdown. This file can be sent to Eurosoft for assistance if required. The support file can be manually created through the General Settings window if desired.

/SXML [options]	<p>This option enables the creation of the sysinfo file when QA+Win is shutdown. This file will contain system information from the groups loaded.</p> <p>If the option is blank or 1, the classic log format is produced which is documented in the appendix. The filename can be configured for this option using the configuration file. For more information see the 'Configuration File' section.</p> <p>The following additional options are available:</p> <p>A PCA (PC-Check\Aggregator) Combined Log, with an option of 2, 4 or 5.</p> <p>A PCA Log with no PC Check log files, with an option of 3.</p> <p>Please contact Eurosoft for assistance with using these additional options.</p> <p>Note: <i>If the SXML mode used on the command line is different to the one used in the configuration file, the configuration file will be rejected.</i></p>
/SXSL <Style Sheet>	<p>This option chooses the XSL style sheet that should be used with the Sysinfo file. This will add the xml-stylesheet tag to the top of the file referencing the chosen style sheet.</p> <p>This option also enables the creation of the sysinfo file in the same way as /SXML 1.</p>
/VXML	<p>Please contact Eurosoft for more assistance using this option.</p>

Note: When using the /R option QA+Win will only load the groups included in the Test script and will close automatically upon test completion.

Note: Should you wish to load a group but not run any tests for it, (i.e. to get system information for devices in the group) then simply add the group to the Custom Test Script without any tests associated with it as in the example below.

```
<?xml version="1.0" encoding="UTF-8"?>
<Script RunType ="LapCount" RunCount="1" StopOnFail="0" >
  <Group Group="1000" GroupName="Memory">
  </Group>
  <Group Group="5500" GroupName="Processor">
  </Group>
</Script>
```

Note: If Windows on Windows(WOW) is not available i.e Window PE you may have to execute the 64bit application diagx64.exe directly. Executing the incorrect diag.exe application will result in an undefined return code as the application will not run.

Note: When running with the /R or any output log option, the splashscreen 'close' button will be disabled. The /R script option will additionally disable the main application 'close'. This is to prevent the application from being interactively closed because forced functionality is set.

Return Codes

QA+Win has a number of return codes that are returned when the application is shut down, designed for use in automated or batch running scenarios. The following is a list of return codes that QA+Win uses. The first error set will be the return code.

Code	Use
0	No other return code event has returned.
1	General Failure. QA+Win failed to run successfully.
2	Error. QA+Win has encountered a Major fault. The event log will contain more information on this error.
3	License Failure. QA+Win failed to run due to a license issue.
4	Test Failure. One or more of the tests that ran failed.
5 and 6	Eurosoft use only.

Interactive Test Panes

Most Interactive Tests will create an Interactive Test Pane when the test is started. You can use the command line option `/FACTORY` to run QA+Win and its tests in non-interactive mode.

When this option is set, the interactive tests are skipped, returning the Not Available result. It is a convenient way to run a test script that contains interactive tests without requiring input from the user. In this mode all test accessories must be inserted. If the test accessory is not inserted the result will be FAIL or NOT AVAILABLE dependent on the test. The result codes are explained in greater detail in the test descriptions document.

Messages and prompts are also suppressed or added with timeouts to ensure that QA+Win can be run in an automated fashion.

Note: *The `/NOTIFY` option does not have any timeout and will remain until user interaction occurs to ensure the overall result is seen. The notify window must be closed before QA+Win will close when running using the `/R` option.*

Result Log

This will log information on your testing session in the log file, named by default as <Title>_Results.xml. If the application title has not been changed this will be QA+Winx64_Results.xml on 64 bit systems or QA+Winx86_Results.xml on 32 bit systems.

The log file contains the following information:

- Test Summary - a list of the modules tested and whether the module passed or failed. This does not include individual tests run. If one test in a module fails, the report lists failed for the entire module.
- Date and time the test started or completed
- Group number
- Test number
- Device number
- Test started
- Pass or fail information
- Additional test information, such as retries.

For more information on the XML format can be found in the section 'Results XML Log'. The log file is created when the first test is started.

Note: The results log, /LOG and /SXML filenames can be dynamically configured using the configuration file. Information on dynamic filenames can be found in the 'Dynamic Fields' section.

Error Codes and Extra Information

This section gives detailed information on the error code and extra information associated with this code. This currently applies to the results XML log description string and the error code and extra information with the status results window.

An example XML log entry is defined below for explanation.

```
<LogEvent datetime="2014-05-30T13:43:17+01:00" group="5611" test="302" device="1"
message="7" lapcount="1" pfferror="0000000000000000" pffile="" groupname="Audio Group"
testname="Audio Connection" devicename="Audio System" description="NOT AVAILABLE -
0x10/014-0081 - 0008000000020002"/>
```

The general format of an error code is defined below:

0x<diagnostic group error code>/<extra information code>-<diagnostic error instance>

i.e 0x10/014-0081 would state

0x10	The count of jacks did not change
014	Detected jacks before and after testing (AUDIO specific). All of the diagnostic extra information codes are documented at the front of the test descriptions document.
0081	The error instance specifically within the group, in this case this is required if the error occurs multiple times. This is useful for Eurosoft in order to better support a test not passing.

The extra information is split into 2 sections the top 16 bits is the type of extra information and the bottom 48 bits is the actual extra information itself.

No extra information	0000
Coverage in KB	0001
Coverage in MB	0002
Coverage in percent	0004
Diagnostic Group Error	0008

i.e 0008000000020002 would state

0008	Diagnostic Group Error
000000020002	2 jacks were found before and after testing

Note: In the case of a diagnostic group error as above the extra information is entirely diagnostic group and error specific and has no fixed format available. Assistance should be sought from Eurosoft if the extra information is not immediately evident using the extra information code.

System Information Log

If the /LOG option has been used when QA+Win was started then a log will be created on closing the program. Further information can be found in the 'Command Line options' section.

This option can only be used with a .pdf file extension, and a PDF Report will be created containing the results of the tests that have run.

If the /SXML option has been used then the system information is output into the Sysinfo.xml file. The format of this file can be found in the 'XML Specification' section. Further information can be found in the 'Command Line options' section.

Note: *The /LOG and /SXML filenames can be dynamically configured using the configuration file. Information on dynamic filenames can be found in the 'Dynamic Fields' section.*

Icon Customisation

The images used for the icons and buttons on QA+Win can be customised as required. The bitmap files used for the interface can be found in the Interface\Icons directory and the files used for each group's treeview logo can be found in the EDF\Xtra\<Group Number> directory

A custom license is required to change these icons and button images. If these files are changed without a valid license, then the images will not be used.

Note: *The image format and dimensions must be kept the same when replacing the existing images in these directories.*

Note: *These images are transparent, to make a pixel transparent the RGB colour FF00FF should be used.*

Package Customisation

Reducing Execution time:

The amount of QA+Win execution time can be reduced by removing unwanted diagnostic groups. E.g. if the parallel port group is not required 20X.dll can be removed. The more groups that are removed the quicker the time will be to execute QA+Win and the less information is gathered for any system information reports.

Reducing the size of the QA+Win package:

By removing groups this also has the advantage of reducing the size of the package for copying either over a network or onto media which has a reduced size. If a group is not required the extra\<group number> should be removed as well as the root group component file.

It is possible by removing the relevant platform directories and file content to produce only the relevant platform required to be supported.

Note: *It is recommended to back-up QA+Win before customising your package for testing. Further details maybe requested from Eurosoft.*

QA+Win Components that can be removed:

File	Customise	Comment
QA+Win.ico	Yes	Main icon file used across interface. A Custom licence is required. This should be 32 by 32 pixels.
PDF.dll	No	PDF Functionality removed. This includes the user guide and test description information on the main interface.
Splash.dll	No	Splash screen. Removal disables Autoboot and disables the splash screen on start-up.
Splash.bmp	Yes	Customisable bitmap for splash background. A Custom licence is required. The file must be 640 by 480 pixels.
Template_Report.pdf	Yes	Customisable header for non-service style PDF reports.
ServiceReportHeader.jpg	Yes	Customisable header for service style PDF reports. The file must be 595 by 35 pixels.

EDF\<platform>\<Group>	No	Removes functionality on groups.
EDF\Help\Test_Descriptions.pdf	Yes	See Eurosoft to create languages.
EDF\Xtra\<file>	No	Removes certain diagnostic group functionality. All components can be removed if necessary. Please consult Eurosoft for more assistance.
Interface\Notify<result>.jpg/.wav	Yes	Sound and image files for the /NOTIFY command line.

Configuration File XML Specification

QA+Win reads entities from the specified configuration file for determining how some features of the interface will operate. These entities are automatically updated depending on how QA+Win is run. When any tag value is empty then the option is considered not used.

Eurosoft_1

This is the tag that QA+Win reads, where 1 represents the QA+Win interface group. The sub entities of this tag should contain the required settings.

Config

The interface layout is controlled by this tag.

The tag contains the QA+Win Configuration (.qac) file that is used to save and restore the layout. If the file is not present, it is created and filled with the QA+Win layout on shutdown.

E.g QA+Win /DF \Interface\EDF_CFG.xml will create an EDF_CFG.qac file, the EDF_CFG.XML file will also be updated with the relevant Eurosoft_1 tag information. Both files should be copied to a target machine to copy the interface layout.

Note: The content of the .qac should not be modified.

Note: Clearing this tag's path attribute will ensure the interface does not use a QA+Win configuration. Any changes made to the interface will not be saved.

DIR

The DIR tag operates the same as the /DIR command line option. This tag will take priority over the options entered on the command line.

DOCKTEST

The DOCKTEST tag controls where the interactive test window is positioned during tests. A value of 1 will move the interactive test window to within the main document area. The default of 0 means it is shown center screen and will disable and darken the main interface for the duration of the test.

FACTORY

The FACTORY tag operates the same as the /FACTORY command line option. This tag will take priority over the options entered on the command line.

FilenameResults

This tag defines the filename for the results XML log file used in the section 'Result Log'. This filename must be relative and be of the .xml file type. The filename may be pure text or may use the dynamic fields specified in the 'Dynamic Fields' section.

FilenameSysinfo

This tag defines the filename for the Sysinfo.xml XML log file used in the section 'System Information Log'. This filename must be relative and be of the .xml file type. The filename may be pure text or may use the dynamic fields specified in the 'Dynamic Fields' section.

Note: The option SXML 1 or 5 must be used for the system information log to be created.

HLOG

This tag represents the history log option. When enabled no whitespace is removed from the start and end of the diagnostic group attributes which are output to any logs and reports.

Home

This element is used to create links to scripts on your system or weblinks that can be opened by the user. These are shown as a list in the Homepage window of the interface. It contains the Script tag which is explained below.

Script

This tag contains the list of scripts and weblinks to be used by the homepage and has three main attributes the Path, Description and Title.

The Path attribute specifies either the script file or a URL. If a script file is specified, then the file must exist on your system. A relative or full path can be used with scripts. If a weblink is specified, the URL should start "http://".

The Title and Description must exist and will appear in the entry's row. The Time attribute is optional and may be used for test scripts to specify an estimate for the runtime.

```
<Home>
  <Script Path="QA+WinQ.xml" Title="Quick test script" Description="The standard quick test script." Time="10 Minutes"></Script>
  <Script Path="http://www.eurosoft-uk.com/index.html" Title="Eurosoft home page" Description="Weblink to the Eurosoft homepage." Time=""></Script>
</Home>
```

InteractiveTimeout

In the case where QA+Win is in interactive mode, the InteractiveTimeout tag allows a timeout for all interactive tests and windows to be configured. If the duration of an interactive test or message exceeds the timeout time, the interface and diagnostics will change to non-interactive mode. This timeout is in minutes.

To return to interactive mode after the timeout occurs, QA+Win will need to be restarted. If this is not set or no configuration file is used, the timeout is set to an hour. A value of 0 will disable the timeout entirely.

LIC

The LIC tag operates the same as the /LIC command line option. This tag will take priority over the options entered on the command line.

LOG

The LOG tag operates the same as the /LOG command line option. This tag will take priority over the options entered on the command line. This filename must be relative and be of the .pdf file type. The filename may be pure text or may use the dynamic fields specified in the 'Dynamic Fields' section.

MEDIAWNDCTRL

The tag controls the handling for the Media Testing advanced window. When set, the window will take focus for the duration of any tests that use it.

Note: *This will not recreate the window if it has been closed.*

MTID

This tag controls displaying the Test and Group numeric Identifiers in the main treeview.

NOTIFY

This tag operates the same as the /NOTIFY command line option. This tag will take priority over the options entered on the command line.

OUTSYSINFO

The OUTSYSINFO tag is the control for the General Settings -> Output system information option. This overall control is disabled when using the /NOSYS command line option or PDF tag bit 3 in the configuration file.

PDF

This tag defines advanced settings that can be applied to the pdf results log. The Settings attribute is controlled by binary settings. The following table gives the bit positions from the right most bit and the meaning of each setting.

Bit position	Description
1	Enables the result reference third column in the standard report. The content of the column is dependent on bit 6.
2	Enables a minimalistic report, where much of the text is removed to minimize file size.
3	Enables a prompt when saving a report to choose if system information should be included or not.
4	Enables the service style report, where the report style has been changed to include benchmarking graphs and a system information summary at the beginning.
	This is a fixed style report and should not be used with bits 1,2 and 6.

5	Use blue theme for the service style report.
6	Disables the CompTIA within the standard report. The CompTIA will either be in the third column if bit 1 is set or immediately after the test result.

The Title attribute if set defines the title that will be put at the top of the PDF report. If this is blank, the default text is used.

Note: When creating any reports in conjunction with setting a test script system information will not be output for any missing diagnostic groups in the script.

Note: When creating a Service Style report with system information disabled, information will still gather for groups in the main header.

Note: The service style report "Total Test Time" is the execution time from the first test until the last test. The service style report detailed results per test only contains the last result. Therefore the duration is also for the last time the test was run.

PDFDISPLAY

This setting controls displaying the PDF summary after the tests in the test configuration window have been executed. If set to 1 then QA+Win will display the pdf summary otherwise it will not.

RFC1766

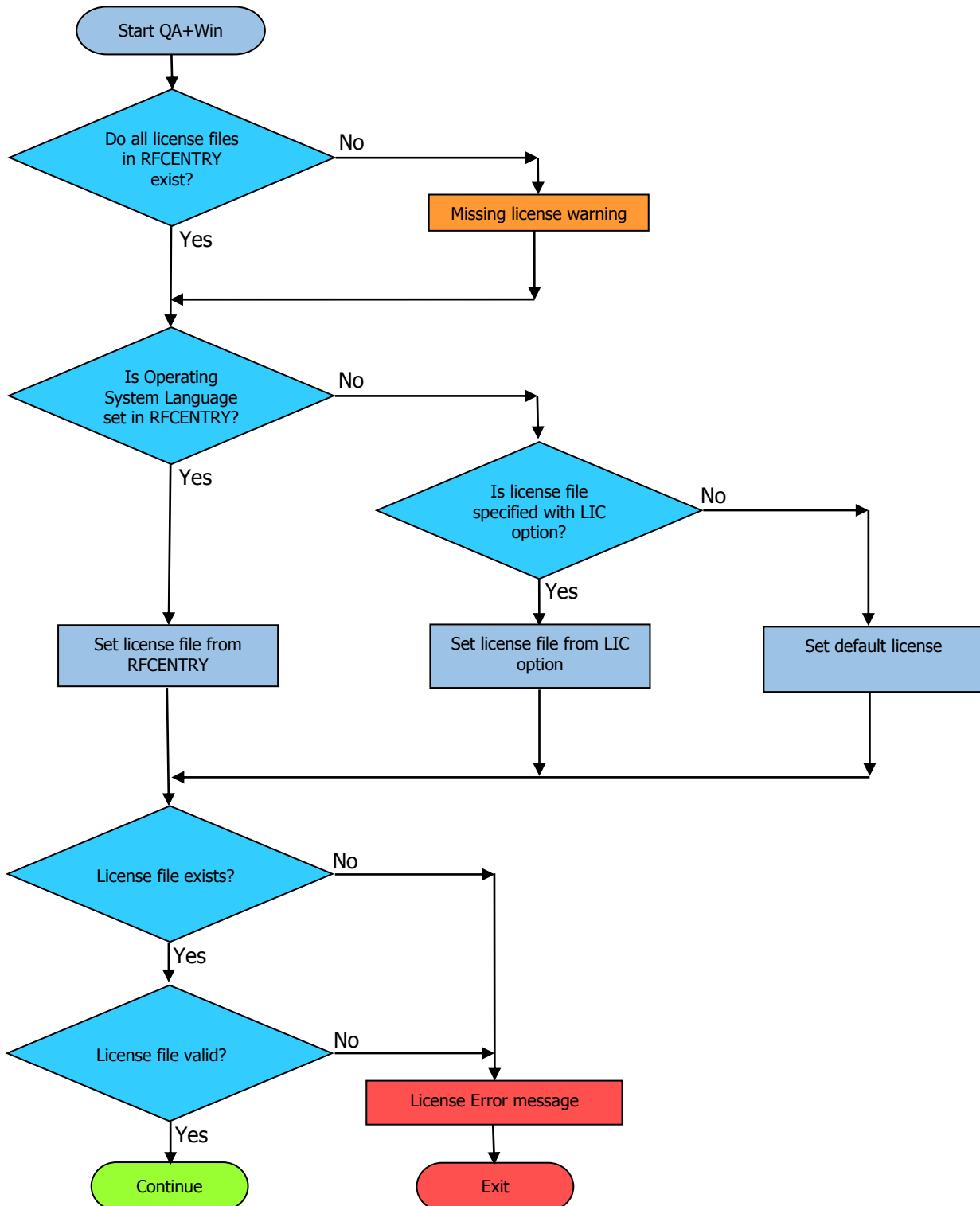
This element contains the entities that specify the license file list used to select the license file to use dependent on the system locale.

RFCENTRY

The RFCENTRY tag contains the RFC1766 language id and the license file path to use on this language. This tag defines the license file to use for each Language ID. If no match is found for the current language id, then the default license file is used either defined in the LIC attribute value or default within the product.

```
<RFC1766>
  <RFCENTRY Lang="en-gb" File="QA+Win_en-gb.lf"></RFCENTRY>
  <RFCENTRY Lang="zh-cn" File="QA+Win_zh-cn.lf"></RFCENTRY>
</RFC1766>
```

The following flow chart defines the license file set.



RXSL

The tag operates the same as the /RXSL command line option. This attribute value will take priority over the options entered on the command line.

SCRIPTDEFAULT

This tag is used to control the removal of non-testable items from the Test Configuration pane while a script is loaded. If set to the default value, which is 0, any groups, devices or tests that cannot be tested will not be inserted.

STOPSCRIPT

This tag controls stopping after a script is set on the command line. If set to 1 then QA+Win will not close once the test script specified with /R has completed. An option of 2 will cause QA+Win NOT to exit on a script Failure.

SUPPORT

This tag operates the same as the /SUPPORT command line option. This tag will take priority over the options entered on the command line.

SXML

This tag operates the same as the /SXML command line option.

Note: *If the SXML mode used on the command line is different to the one used in the configuration file, the configuration file will be rejected.*

SYS_MEDIA_DIR

This tag is used in conjunction with /SXML 2, 3, 4 and 5 as the output directory on the removable media.

SXSL

This tag operates the same as the /SXSL command line option. This tag take priority over the options entered on the command line.

Title

This tag defines the Title used across the product. This will change the name of the windows displayed by the interface. A Custom license is required for this feature.

TitlePage

This tag sets a HTML file that will be shown as a title page on the interface. This setting will take a full or relative path for a file on the system.

UserDefinedFields

This element contains the User Defined Fields specified in the 'Dynamic Fields' section. The UserDefinedFields tag also configures the title that will be used for the user defined fields entry box.

UserDefinedField

This tag is used to define a user defined field.

The User Defined field will only be valid if it contains a valid ID and Name. The Name attribute will be used as the label for the entry box on the QA+Win interface and must be less than 16 characters. The ID attribute must be between 0 and 5.

The optional Value attribute sets the start value of the user defined field. This attribute can use the defined fields in the section 'Defined Fields'.

The optional Mask attribute sets the mask to use to validate the user defined field. If a field is found to be invalid then the user will be prompted to enter a valid value from the start-up dialog. The format of the mask can be found in the 'User Defined Field' section.

The optional MaskExample attribute allows an example of a valid value to be entered to show the user what is expected. This attribute value must pass validation against the mask to be used.

The Locked attribute, when set to 1, will stop the user from being able to change the value from its start value. If a mask is set and the value fails validation, the user defined field will only be editable from the start-up dialog.

```
<UserDefinedFields Title="User Params">
  <UserDefinedField ID="0" Name="Tester" Value=":W1:" MaskExample="" Mask=""
  Locked="1"/>
  <UserDefinedField ID="1" Name="Time" Value=":QHM:" MaskExample="" Mask=""
  Locked="1"/>
  <UserDefinedField ID="2" Name="OS" Value=":EOS:" MaskExample="" Mask=""
  Locked="0"/>
  <UserDefinedField ID="3" Name="Order Number" Value="12345-12347"
  MaskExample="11111-11111-11111" Mask="NNNNNONNNNNNonnnnn" Locked="0"/>
  <UserDefinedField ID="4" Name="Memory Size" Value=":G100X1:" MaskExample=""
  Mask="" Locked="0"/>
  <UserDefinedField ID="5" Name="MAC Address" Value=":G221X5242885:"
  MaskExample="A1:B2:C3:D4:E5:F6" Mask="XX#XX#XX#XX#XX#XX" Locked="1"/>
</UserDefinedFields>
```

User Defined Fields and Dynamic Filenames

User Defined Fields are fully customisable fields that will be shown at the top of the Test Configuration pane and are written at the top of the standard report. These will also be shown in the Start-up Dialog if user interaction is required. The user defined field syntax is used to create Dynamic Filenames. The User Defined Fields are specified in the configuration file.

The user defined fields provide a way to add additional information from a variety of sources such as user input, device attributes and environment variables. These fields can be validated and used to customise the standard report and output filenames.

Dynamic Filenames are customisable filenames for the Report, Results log and System information log.

These fields change depending on user input and system information to allow for machine dependent information to be used. For example, a user defined field can be set to contain the amount of system memory, to display in the top of the PDF report.

The user defined field syntax is specified using colon characters, and are listed below. Some fields cannot be used within the User Defined Fields configuration and are marked in the table.

Field Name	Field Format	User Defined Field Compatible
Environment Variable	:E<Variable Name>:	Yes
Group Attribute	:G<GroupID><AttributeID>:	Yes
QA+Win Start	:Q<Format>:	Yes
Report Time	:R<Format>:	No
Special	:S<FieldID>:	No
User Defined	:D<FieldID>:	No
Windows	:W<FieldID>:	Yes

Note: If any errors are encountered while processing the dynamic fields the errors will be logged in the QA+Win event log.

Environment Variable Field

The Environment variable field is used to specify a Windows® environment variable that QA+Win will read and use. The Environment variable is read once at start-up only.

For example, to use the environment variable OS, the field :EOS: should be entered into the configuration file. Where used on a Windows® NT machine, this will automatically be populated with the value "Windows_NT"

Group Attribute Field

The Group attribute field is used to specify an attribute that will be used. QA+Win will gather the group information for the specified group at start-up in order to retrieve the attribute. If the attribute cannot be found for device 1, then the text NULL will be used instead.

The group ID used for this field must use the platform independent ID as used in the Test Descriptions manual.

For example, to use attribute 1 of the 1000 Memory group, the field :G100X1: should be entered into the configuration file. This will automatically gather group 1000's system information on initialisation and will be populated with the value for attribute 1. For example on a machine with 1gb of system memory this will be populated with "1 gb".

QA+Win Start Field

The QA+Win Start field is the time that QA+Win was started. This field contains a formatter that specifies how the time will be used. The formatter is made of any combination of the following characters.

Character	Description
d	Integer day of the month
m	Integer month
y	Last 2 digits of year
Y	Year in full
H	Hour in 24 hour format
h	Hour in 12 hour format
M	Minute
S	Second
p	AM/PM
U	Week number
A	Weekday name
B	Month name

NOTE: Any characters used for the formatter that are not in the table will be ignored.

NOTE: To add characters between different parts of a date, multiple fields will need to be defined.

For example, to get the data in YYYY-MM-DD format, the fields would need to be specified as ":QY:-:Qm:-:Qd:". This will give "2014-10-10" on the 10th of October, 2014.

Report Time Field

The report time field is the time that the PDF report specified with the LOG option is created. If the report has not yet been created, the date and time will be zeroed according to the formatter.

The formatter is in the same format as for the QA+Win Start field, please refer to the QA+Win Start field section for an example.

Special Field

The field specifies a type that may change during the running of QA+Win. The ID must be from the table below.

ID	Description
1	QA+Win Title. This is the same title used on the interface if the title has been customised.
2	Overall test result – This is the overall test result that will be shown on the Service style report.

For example, to use the overall test result, the field :S2: should be used. If the test has not run, this will be populated with "NotRun", and will be updated as the overall test result changes.

User Defined Field

The ID must be a number between 0 and 5, specifying the field to use.

The start value specified in the configuration file for a user defined field may use the Environment, Group, QA+Win Start time and Windows fields. If the start value begins with a question mark '?' character then the start-up entry window will be shown to allow user entry at start-up.

The user defined fields can be configured with an optional mask. The mask will be used to validate the start value and any invalid fields will need to be corrected within the start-up dialog. The mask length will limit the length of text that can be entered for the field's value and must be made up of any combination of the following characters.

Character	Meaning
N	Any number
n	Any optional number
A	Any letter
a	Any optional letter
X	Any letter or number
x	Any optional letter or number
O	Any character
o	Any optional character
#	Any optional character. This character will be excluded from the filename output.

For more information on configuring User Defined Fields please refer to the 'Configuration File' section.

For example, to use the first user defined field for a filename, the field :D0: should be used. This will contain the same value as entered and shown in the test configuration and top of the standard report.

Windows Field

This field specifies a Windows® specific value that is retrieved at start-up. The ID must be from the table below.

ID	Description
1	Current user Username
2	Machine name

For example, to use the machine name, the field :W2: should be used. This will be populated with the machine name. For example, with a machine named "EurosoftMachine1" then the value will be populated with "EurosoftMachine1" too.

Event Log XML Specification

The application event log is created on QA+Win start-up and is named QA+Winx64.xml on 64 bit systems and QA+Winx86.xml on 32 bit systems. This file contains logs of application events such as group initialisation.

EuroEvents Tag

There are no fields associated with this tag.

Info Tag

Attribute	Mandatory	Type	Range
Description	YES	String	XML String Type

Error Tag

Attribute	Mandatory	Type	Range
Description	YES	String	XML String Type

```
<?xml version="1.0"?>
<EuroEvents Version="10.8.0.0">
  <Info Description="Initialised Parallel Port Tests (group 200)."/>
  <Error Description="Error: Unable to validate &quot;4&quot;;. The line 2 was skipped
and the default value was used."/>
</EuroEvents>
```

Result Log XML Specification

The test related start, result and information events are logged into the Results log. This file is named <Application Title>_Results.xml by default. This will be QA+Winx64_Results.xml on a 64 bit system and QA+Winx86_Results.xml on a 32 bit system. This can be configured using the FilenameResults tag of the configuration file. See 'Configuration File' for more information.

EuroLog Tag

This tag contains the Version attribute that states the version of QA+Win the log has been produced by.

LogEvent Tag

This is a subtag of Eurolog.

Attribute	Mandatory	Type	Range
DateTime	YES	[-]CCYY-MM-DDThh:mm:ss[Z](+ -)hh:mm]	ISO 8601
Group	YES	Integer	1-9999
GroupName	NO	String	N/A
Test	YES	Integer	1-9999
TestName	NO	String	N/A
Device	YES	Integer	1-9999
DeviceName	NO	String	N/A
Message	YES	See msg table below (Integer)	2-18
LapCount	YES	Integer	1-999
Description	NO	String	See note below
perror	YES	String	N/A
pfile	YES	String	N/A

Note: The description attribute is not mandatory but if it is populated additional information may be provided. In these cases the string takes the format for an error <x>-<y>-<z> where y is the specific diagnostic group error code and z contains extra information. Detailed information on the format of these codes can be found in 'Advanced Options – Error Codes and Extra Information' section.

Message Table

Integer Value	Meaning
2	Test Start
3	Test Passed
4	Test Skipped
5	Test Failed
6	Test Aborted
7	Test Not Available

LogInfo Tag

This is a subtag of Eurolog.

Attribute	Mandatory	Type	Range
DateTime	YES	[-]CCYY-MM-DDThh:mm:ss[Z](+ -)hh:mm]	ISO 8601
Group	YES	Integer	1-9999
Test	YES	Integer	1-9999
Device	YES	Integer	1-9999
Message	YES	Integer	See msg table below (Integer)
extra	YES	Integer	Content depends on Message
Description	NO	String	N/A

Message Table

Integer Value	Meaning
0	Media Read Failed – extra contains location in hexadecimal
1	Drive Failure – Extra contains the hardware IDs for the failed driver
2	Windows® Event Failed – Extra contains the failed windows® event ID

```
<?xml version="1.0"?>
<EuroLog Version="10.6.0.0">
  <LogEvent datetime="2013-10-29T11:45:25+01:00" group="2601" test="304"
device="1" message="2" lapcount="1" pfferror="0000000000000000" pffile=""
groupname="Hard Disk" testname="S.M.A.R.T. Status" devicename="Hard Disk 0"
description="2601 - 1 - 304"/>
  <LogEvent datetime="2013-10-29T11:45:25+01:00" group="2601" test="304"
device="1" message="3" lapcount="1" pfferror="0000000000000000" pffile=""
groupname="Hard Disk" testname="S.M.A.R.T. Status" devicename="Hard Disk 0"
description="PASSED - 0000000000000000"/>
</EuroLog>
```

Script XML Specification

Introduction

Device Attributes and all other mandatory sub attributes are only such if the Device Element is used.

Tag and Attribute values

Script Tag

Attribute	Mandatory	Type	Range
RunType	YES	String	"Duration Lapcount"
RunCount	YES	Integer	1-9999
StopOnFail	NO	Boolean	0-1

Group Tag

Attribute	Mandatory	Type	Range
Group	YES	Integer	1-9999
GroupName	NO	String	N/A

Device Tag

This is a subtag of Group. A value of 0 indicates all devices within the group.

Attribute	Mandatory	Type	Range
Device	YES	Integer	0-9999
SkipOnFail	NO	Boolean	0-1

Test Tag

This is a sub tag of Device.

Attribute	Mandatory	Type	Range
Test	YES	Integer	1-9999
TestName	NO	String	N/A

TestParams Tag

This is a mandatory tag that must be present in all scripts. It has no values.

TestParam Tag

This is an optional sub tag of test. The tests run in order sequence and for these to take effect they must be setup beforehand. See the Test Descriptions document for more details.

Attribute	Mandatory	Type	Range
ID	YES	Integer	1-9999
Name	NO	String	N/A
Value	YES	Multi	Type depends on test param ID

Example Test Script

Typical example of text script:

```
<?xml version="1.0" encoding="UTF-8"?>
<Script RunType="LapCount" RunCount="1" StopOnFail="0">
  <Group Group="260X" GroupName="Hard Disk">
    <Device Device="0" SkipOnFail="0">
      <Test Test="303" TestName="Linear Read">
        <TestParams>
          <TestParam ID="1" Name="Duration" Value="60"></TestParam>
          <TestParam ID="2" Name="Coverage" Value="100"></TestParam>
          <TestParam ID="3" Name="MaximumErrors"
Value="1"></TestParam>
        </TestParams>
      </Test>
    </Device>
  </Group>
</Script>
```

System Information Log XML Specification

When QA+Win is run with the /log option, the system information is collected and output into the System Information Log or Full Report, depending on the file extension given.

System Profile Tag

There are no fields associated with this Tag.

Device Tag

This is a sub Tag of the SystemProfile tag, and is named in the format "Eurosoft_<device's group number>".

There are no fields associated with this tag.

Sub Device Tag

This is an optional sub tag of the Device Tag, and is named in the format "Device<sub device id>".

There are no fields associated with this tag.

Attribute Tag

This is a sub tag of the Device tag, and is named as the attribute's title as shown in QA+Win. The ID of these entities corresponds with the attribute ID as seen in the interface. The value between the tags is the attribute's value.

Note: Spaces will not appear in the tags and will be replaced by '_'.

```
<?xml version="1.0" encoding="UTF-16" ?>
<SystemProfile>
  <Eurosoft_2600>
    <DeviceID ID="5242885">\\.\PHYSICALDRIVE0</DeviceID>
    <BusType ID="1">ATA</BusType>
    <Capacity ID="2">298 GB</Capacity>
    <Description ID="3">Volume0</Description>
    <Device ID="5242880">1</Device>
  </Eurosoft_2600>
  <Eurosoft_3100>
    <Device ID="5242880">1</Device>
    <DeviceID ID="5242885">1003</DeviceID>
    <VendorID ID="3">157C</VendorID>
    <DeviceDescription ID="5">Eurosoft Diagnostic Device</DeviceDescription>
    <VendorName ID="1">(Standard system devices)</VendorName>
    <DeviceName ID="2">USB Input Device</DeviceName>
    <USB_speed ID="4">NULL</USB_speed>
  </Eurosoft_3100>
</SystemProfile>
```

XML Style Sheet

Included in the QA+Win interface directory are two style sheets that gives an example of how the results xml file and Sysinfo.xml can be interpreted and formatted. The /RXSL and /SXSL command line options can be used to select the style sheet that should be used for these files.

These style sheets are an example of the potential functionality only and therefore are not directly supported by Eurosoft.

The style sheets are commented in relevant places to assist the user understanding the XSL code. These comments are only supplied in English.

Note: *The /LOG and /SXML filenames can be dynamically configured using the configuration file. Information on dynamic filenames can be found in the 'Dynamic Fields' section.*

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