Eurosoft
computer reliability solutions

Core Advanced User Guide

Windows®-based Computer Diagnostic Software

Assuring Computer Service Reliability

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Overview

This document has been written to give information about advanced features and configuration available with Eurosoft CORE. The Eurosoft CORE component forms part of your Eurosoft product for command line and configuration file options. Your product should be consulted as appropriate to confirm if any optional settings within CORE have been made available.

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.

Table of Content

Command Line Options

You can use command line options with the application using CORE. The following is the list of options available:

Application.exe [/? | /AUTOBOOT | /R <filename>] [switches]

The application available column indicates if it is optional or mandatory Eurosoft CORE implemented. If it is optional please consult your application product as appropriate.

Option	Description
/?	Displays on screen a list of command line options that can be used. The Application will close after the options have been shown.
/ALOG	Append the Trace, Event and Result logs with previous sessions.
/CONFIG <filename>	Loads a user-specified diagnostic file. This file is used to configure some diagnostic groups, CORE and Application interface. This file must have the ".xml" file extension. This filename can optionally contain a relative or full file path. In terms of configuring the interface, see "Configuration File" for further details. In terms of configuring the groups, please refer to the Test Descriptions document. ***Note:*** *If Eurosoft_Config.xml is present in the Application directory then this will be loaded if the Config option is not used.*
/DIR *<path>*	Re-routes output event and log XML files from the Application 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.
/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.
/IDENTIFY	Provides system identifying information for licensing.
/LANG <Language>	Sets the language of the Diagnostics and Interface. The defined language should be created using the OPL option first.
/LIC <File>	Forces the use of the name license file
/MD	Memory Debug log. Eurosoft may request you to run this command line option to gain extra information on memory management issues. This will create the MemoryDebug.log file.
/NOSUPPORT	Suppress informative support messages.
/OPL <Language>	Outputs the default English language pack in the named folder.

/R *<filename>*	Loads and runs the specified script and then shuts down the application. Only groups required to run the script will be loaded. The script must have the .xml extension. This filename can optionally contain a relative or full file path. The shutdown behaviour can be changed using the STOPSCRIPT configuration option. For more information see 'Configuration File' section.
/SD	Sensor Debug log. Eurosoft may request that you run this command line option to gain extra information on hardware sensors. This will create the SensorDebug.log file.
/SXML	This option enables the creation of the sysinfo file when the application is shutdown. This file will contain system information from the groups loaded. This option will create the file of the classic log format witch 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.
/TD	Timing Debug log. Eurosoft may request that you run this command line option to gain extra information on timing issues. This will create the EDF_Timings.log file.
/TRACE	Enumeration Debug Log. Eurosoft may request that you run this command line option to gain extra information on initialisation. This will populate the Event log with additional enumeration information and will create the EDF_Trace.log file.

Note: *When using the /R option CORE 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>
```

Application Return Codes

CORE has several return codes that can be returned when the application is shut down, designed for use in automated or batch running scenarios. The following is a list of return codes provided by CORE. The first error set will be the return code.

Return Code	Meaning
0	No other return code event has returned.
1	General Failure. CORE has failed to run successfully.
2	Error. CORE has encountered a Major fault. The event log will contain more information on this error.
3	License Failure. CORE failed to run due to a license issue.
4	Test Failure. One or more of the tests that ran failed.
6	Eurosoft use only.
7	The program is closing to reboot the system into UEFI.

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 the application 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 CORE can be run in an automated fashion.

Note: *The NOTIFY configuration 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 the application 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 <AppTitle>_Results.xml. Where the <AppTitle> is application specific.

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="2023-05-30T13:43:17+01:00" group="5611" test="302" device="1" message="7" lapcount="1" pferror="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
Diagnostic Temperature Error	0010

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 /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 /SXML filename 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 within CORE can be customised as required. The image files used for CORE can be found in the Interface\Icons directory.

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

Package Customisation

Reducing Execution time:

The CORE 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 the application and the less information is gathered for any system information reports.

Reducing the size of the 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 xtra*<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 your application before customising your package for testing. Further details maybe requested from Eurosoft.*

Components that can be removed:

File	Customise	Comment
PDF.dll	No	PDF Functionality removed. This includes the user guide and test description information on the main interface.
EDF\<platform>\<Group>	No	Removes functionality on groups.
EDF\Help\Test_Descriptions.pdf	Yes	Consult Eurosoft to create languages.
EDF\Help*.xml	Yes	Consult 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 configuration option.
EDF\Xtra\GPUEngine EDF\<platform>\Xtra\GPUEngine	No	Removes functionality for GPUEngine tests.
EDF\<platform>\Xtra\GPU	No	Removes functionality for CUDA and OpenCL tests.

Configuration File XML Specification

Eurosoft CORE 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 CORE is run. When any tag value is empty then the option is considered not used.

Eurosoft_<id>

This is the tag that CORE reads, where the number should be the Application ID ranging from 1 to 15. The sub entities of this tag should contain the required settings.

ALOG

The ALOG tag operates the same as the /ALG command line option. This tag will take priority over the options entered on the command line. This tag should be deleted if the command line is used.

DATABASE_<id>

The Database tag is used for situations where System Information XML is required to be the same over different versions of the diagnostics. This should not be used unless required.

DebugSensor

The DebugSensor tag operates the same as the /DS command line option. This tag will take priority over the options entered on the command line. This tag should be deleted if the command line is used.

DebugMemory

The DebugMemory tag operates the same as the /DM command line option. This tag will take priority over the options entered on the command line. This tag should be deleted if the command line is used.

DebugTiming

The DebugTiming tag operates the same as the /DT command line option. This tag will take priority over the options entered on the command line. This tag should be deleted if the command line is used.

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. This tag should be deleted if the command line is used.

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. This tag should be deleted if the command line is used.

FactoryTestOrder

The FactoryTestOrder tag controls the automatic re-ordering of interactive tests from any test script or selection run. This tag must be one of the following options.

Option	Description
0	Default. No re-ordering will occur.
1	All interactive tests will be run at the start of each lap before all remaining non interactive tests are run.
2	All interactive tests will be run at the start of the first lap before all remaining non interactive tests. In subsequent laps, these interactive tests will be skipped.
3	All interactive tests will be run at the end of each lap after all remaining non interactive tests are run.
4	All interactive tests will be run at the end of the first lap after all remaining non interactive tests. In subsequent laps, these interactive tests will be skipped.

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 must be used for the system information log to be created.*

FilenameScore

This tag defines the filename for the Score XML file used in the section 'Scoring'. 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.

Home

This element is used to create links to scripts on your system. 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 to be used by the application to list pre-configured test scripts and has three main attributes the Path, Description and Title.

The Path attribute specifies the script file. If a script file is specified, then the file must exist on your system. A relative or full path can be used with scripts.

The Title must exist, while the Time and Description attributes are optional and may be used for test scripts to specify an estimate for the runtime.

```
<Home>
        <Script Path="ScriptQ.xml" Title="Quick test script" Description="The standard quick test script." Time="10 Minutes"></Script>
</Home>
```

InteractiveTimeout

In the case where the Application 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, the application 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

This option allows the selection of a license file outside of the default filename.

LOG

Sets the filename of the Report to be created when the application closes. The report file created will be a Full Report with Test Results and Device information.

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.

NOTIFY

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.

The window and sound remain until there is user interaction.

The window image and sound can be customised by modifying the 'Notify<result>' files in the Interface directory.

ReportTitle

This option sets the title used in the PDF report. Using the Log configuration option or other PDF report options within your application to use this setting. If not set an application defined default will be used.

RESULTSTORE

This option sets the directory used for the storage of results. By default this is in the sub directory /Results.

RXSL

This option chooses the XSL style sheet that should be used with the results file. This will add the xml-stylesheet tag to the top of the file referencing the chosen style sheet.
NOTE: *There is no validation performed on the XSL file used or the filename itself.*

ScriptFile

This option works the same as the /R command line option to set an automatic test script to run on startup. This will result in an error if /R is used as well.

SilentSkip

This option when set will suppress any skipped results from the result logs. By default this option is disabled.

STOPSCRIPT

This tag controls stopping after a script is set on the command line using /R. The stopscript option should be one of the following options:

Option	Description
0	The application will shut down after testing is complete
1	The application will not shut down after the tests are complete.
2	The application will not shut down only if a test fails.

SUPPORT

The option enables the creation of a Support file pack when the application is shutdown. This file can be sent to Eurosoft for assistance if required. Manual support file creation is application specific.

SuppressSupport

The SuppressSupport tag operates the same as the /SuppressSupport command line option. This tag will take priority over the options entered on the command line. This tag should be deleted if the command line is used.

SXML

This option enables the creation of the sysinfo file when the application is shutdown. This file will contain system information from the groups loaded.

This tag should be deleted if the command line is used.

SXSL

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. This is only used with the SXML 1 configuration file option.

NOTE: *There is no validation performed on the XSL file used or the filename itself.*

Title

This tag defines the Title used across the product. This will change the name of the windows displayed by the interface.

Trace

The Trace tag operates the same as the /Trace command line option. This tag will take priority over the options entered on the command line. This tag should be deleted if the command line is used.

TPF

This tag defines the TPF (Technician Perspicuity Factor) to use for the interface. This setting is used to control the workflow of the technician where the lower the setting, the more opportunity for exploratory testing outside of a fixed workflow is available. The level indicates the quality of insight and judgement of the operator. The setting must be one of the following:

Value	Meaning
0	No functionality is restricted and all advanced features are available. This level is most appropriate for operators who are configuring test scripts for basic technicians and advanced technicians who have no restriction on their workflow.
1	Intermediate features are available such as basic log information. Advanced features such as script creation may be unavailable. This level is most appropriate for operators who are allowed to interpret a result from an individual test combined with any system information available.
2	Only basic features are available. This level is most appropriate for those operators who only view the results on the interface and perform a fixed workflow depending on that result.

NOTE: *Actual functionality available is application specific, the user should consult the application as appropriate.*

UEFITOM

The UEFITOM (UEFI Test Order Mode) tag controls the automatic re-ordering of UEFI tests from any test script or selection run. This tag must be one of the following options.

Option	Description
0	Default. No re-ordering will occur.
1	All UEFI tests will be run at the start of each lap before all remaining tests are run. The system will restart into UEFI once per lap.
2	All UEFI tests will be run at the start of the first lap before all remaining tests. In subsequent laps, these tests will be skipped. The system will restart into UEFI once per test script.
3	All UEFI tests will be run at the end of each lap after all remaining tests are run. The system will restart into UEFI once per lap.
4	All UEFI tests will be run at the end of the first lap after all remaining tests. In subsequent laps, these tests will be skipped. The system will restart into UEFI once per test script.

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 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.

Feature: Application Optional in terms of the interface displaying and requesting parameters. It is mandatory for the output report.

```
<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="NNNNNONNNNNonnnnn" 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>
```

FlatSubDevices

The FlatsubDevices tag will show sub device attributes within the Sysinfo xml log within the device attributes when set TRUE. When set FALSE the attributes will not be in the device attributes.

ShowSubDevices

The ShowSubDevices tag will show sub devices attributes within components under each Sysinfo xml log device when present. If set FALSE the sub device component tag will not be shown within the device tags.

ShowDefaultDevices

The ShowDefaultDevices tag will show the 'default' devices within the Sysinfo xml log, used to show the device attributes for devices not present on the system. When set to FALSE then the devices will not appear in the log if not present in the system.

LOADR

The LOADR tag specifies the UEFI results file to import into the PCCW results on startup.

Session

The Session tag when set to TRUE allows the PCCW results session to be reset.

GatherGrpInfoB4Test

The GatherGrpInfoB4Test tag when set to TRUE will gather group and device system information during initialization of the diagnostics. If set FALSE then the information will be gathered before creation of any logs or reports requiring it.

SystemScore

The SystemScore tag specifies the filename of the System Score config file. When present the Score functionality will be enabled.

QRCodes

The QRCodes tag specifies the URL format used to create the QR code to show for any test failure results depending on the application's handling. The following fields will be automatically populated for each error if present in the URL.

Field	Description
%group%	Diagnostic Group ID
%device%	Device ID
%test%	Test ID
%stamp%	Result Timestamp
%job%	Job ID – User Defined Field 0
%result%	Test result
%errcode%	Test result error code
%extracode%	Test result extra information

User Defined Fields and Dynamic Filenames

User Defined Fields are fully customisable fields that may be shown within the application and will be written at the top of the standard report. These may also be shown in the Start-up Dialog if user interaction is required. The application will need to be consulted on operation as 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
Application 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 event log.*

Environment Variable Field

The Environment variable field is used to specify a Windows® environment variable that the application 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. CORE 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. This exclusion also includes using an automatic test script to remove the group being loaded.

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".

Start Field

The Start field is the time that CORE 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 Start field, please refer to the Start field section for an example.

Special Field

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

ID	Description
1	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, 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. i.e "?:G100X1"

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
3	Operating System
4	Operating System Platform

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.

App defined fields

These fields specify additional functions that can be applied to the pdf report output file.

ID	Description
Report_PrefixPages	Add a customised PDF to the standard PDF report as a prefix. File should be named Report_prefix.pdf and reside in the Interface directory.
Report_SuffixPages	Add a customised PDF to the standard PDF report as a suffix. File should be named Suffix_prefix.pdf and reside in the Interface directory.
Report_PrefixFooter	Set to 1 or 0 to turn on or off the inclusion of the footer on your Prefix footer.
Report_SuffixFooter	Set to 1 or 0 to turn on or off the inclusion of the footer on your Suffix footer.
Report_PrefixHeight	The height as a percentage that the prefix page should take of the page. Set to 0 for it to be a separate page.
Report_SuffixHeight	The height as a percentage that the suffix page should take of the page. Set to 0 for it to be a separate page.
Report_Header_Image	Add a company logo to the report as a header. Recommend the file be 595 by 35 pixels. File should be named Report_Header.jpg and reside in the Interface directory.
Report_Include_Os	Set to 1 or 0 to turn on or off the inclusion of the operating system group information from group 681X such as Installed programs, Installed drivers and OS details.
Report_OrderByResult	Set to 1 or 0 to turn on or off the sorting of the results, firstly Failures, Secondly Pass, Lastly Not Available.

Report_Include_Fail_Trouble	Set to a 1 or 0 to turn on or off the inclusion of failure troubleshooting details in the report.
Report_Include_NotAvail_Trouble	Set to a 1 or 0 to turn on or off the inclusion of N/A not available troubleshooting details in the report.
Report_Colour_PageText	Default colour is black for the page text.
Report_Colour_Borders	Default colour is black for the cell borders.
Report_Colour_DefaultCell	Default colour is white for these description cells.
Report_Colour_DefaultCellText	Default colour is black text for these description cells.
Report_Colour_TitleCell	Default colour is grey for these label cells.
Report_Colour_TitleCellText	Default colour is black text for these label cells.
Report_Colour_HeadingCell	Default colour is black for the sub heading background.
Report_Colour_HeadingCellText	Default colour is white text for the sub title heading text.
Report_Colour_HeadingPage	Default colour is black for the main title heading background.
Report_Colour_HeadingPageText	Default colour is white text for the main title heading text.

Event Log XML Specification

The application event log is created on start-up and is named <Title>.xml. This file contains logs of application events such as group initialisation.

EuroEvents Tag

Attribute	Mandatory	Type	Range
XML_VERSION	YES	String	N/A - Fixed at Version 1.2
Version	YES	String	Application Version

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 XML_VERSION="1.2" Version="UI 3.5.0.0 API 11.5.0.0">
	<Info Description="Initialised Parallel Port Tests (group 200)."/>
	<Error Description="Error: Unable to validate &amp;quot;4&amp;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 can be configured using the FilenameResults tag of the configuration file. See 'Configuration File' for more information.

EuroLog Tag

Attribute	Mandatory	Type	Range
XML_VERSION	YES	String	N/A - Fixed at Version 2.2
Version	YES	String	Application Version

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
pferror	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. It contains the following attributes.

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 message 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"?>
<XML_VERSION="2.2" Version="UI 3.5.0.0 API 11.5.0.0" Application="Pc-Check Windows">
	<LogEvent datetime="2013-10-29T11:45:25+01:00" group="2601" test="304"
device="1" message="2" lapcount="1" pferror="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" pferror="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
XML_VERSION	YES	String	N/A – Fixed at 3.0
RunType	YES	String	"Duration|Lapcount"
RunCount	YES	Integer	1-9999
StopOnFail	NO	Boolean	0-1

ScriptInfo Tag

The ScriptInfo Tag is an optional tag that can be used in the root of the XML script to specify the Name, Duration and Description of the script. This can be used by some interfaces to provide more information when selecting tests.

Attribute	Mandatory	Type	Range
Name	YES	String	N/A
Desc	NO	String	N/A
Time	NO	String	N/A

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

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

```
<?xml version="1.0" encoding="UTF-8"?>
<Script XML_VERSION=”3.0” RunType="LapCount" RunCount="1" StopOnFail="0">
<ScriptInfo Name="Quick Test" Desc="Eurosoft Quick test script" Time="5 mins"/>
<Group Group="260X" GroupName="Hard Disk">
        <Device Device="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 the application is run with the SXML command line option or SXML 1 configuration option, the system information is collected and output into the System Information.

System Profile Tag

Attribute	Mandatory	Type	Range
XML_VERSION	YES	String	N/A - Fixed at Version 1.4

Eurosoft Tag

This is a sub Tag of the SystemProfile tag and defines a diagnostic group. The Group attribute specifies the Group's ID.

Component

This is a sub tag of the Eurosoft tag and defines a device within a group. The ID attribute specifies the Device ID. The DeviceCode attribute specifies the device type code.

This tag can be defined within Component tags. In this case the component represents a sub device.

Attribute Tag

This is a sub tag of the Component ta. The Attribute ID is the unique identifier for the attribute within the group. The name attribute is the device attribute name. The value attribute is the device attribute value.

Example File

```
<?xml version="1.0" encoding="UTF-16" ?>
<SystemProfile XML_VERSION="1.4" Version="UI 3.5.0.0 API 11.5.0.0">
	<Eurosoft Group="2">
		<Component ID="0" DeviceCode="0" DeviceType="I">
			<Attribute ID="0" Name="Tester" Value="Engineer32"></Attribute>
			<Attribute ID="1" Name="Machine" Value="Machine32"></Attribute>
		</Component>
	</Eurosoft>
	<Eurosoft Group="201">
		<Component ID="1" DeviceCode="17" DeviceType="T">
			<Attribute ID="5242881" Name="Device" Value="0"></Attribute>
			<Attribute ID="5242883" Name="PNPDeviceID" Value="NULL"></Attribute>
			<Attribute ID="5242884" Name="DeviceID" Value="NULL"></Attribute>
			<Attribute ID="1" Name="BaseIOAddress" Value="0"></Attribute>
		</Component>
	</Eurosoft>
</SystemProfile>
```

XML Style Sheet

Included in the 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.*

Scoring

The scoring functionality of the CORE allows the application to produce a system score value using test results, device attributes and operator facing questions. The scoring configuration file specification is given below.

Each Attribute, Test or Question will add to or subtract from score and can be configured to allow the different criteria to affect the score by variable amounts.

The score value for both passing and failing can be positive or negative and can handle decimal point values.

Scoring Configuration

The scoring configuration file defines the Attributes, Tests and Questions that will be used to produce the score. It is up to the one configuring this file to determine the upper and lower bounds of the score as this can depend on many factors depending on the configuration.

SystemScore

The SystemScore tag is the root tag for all other tags.

Attributes

The Attributes tag is used to define a device attribute to score by. This tag does not have any sub tags and has the following attributes.

Attribute	Mandatory	Notes
Group	Yes	Group ID of the attribute, ended with an X. Such as 100X.
Device	Yes	Device ID of the attribute. If 0 then the score will be added for every device with a valid attribute.
Attribute	Yes	Attribute ID of the attribute.
PassValue	Yes	The value added to the score if a valid attribute is found.
FailValue	No	The value added to the score if a valid attribute is not found.
ScoreType	Yes	The validation criteria for the attribute.
TestSting	No	The validation string used to validate the attribute.
ScorePerDevice	No	If set to True, the score is added per device when the device is set to 0. If set to False, the score is added only once.

The Score Type can be one of the following values.

Score Type	Description
Present	The attribute is valid if it is present and not Null
Greater	The attribute is valid if it is greater than the specified test string
Less	The attribute is valid if it is less than the specified test string
True	The attribute is valid if it is 'True' or '1'

Tests

The Tests tag is used to define a test to score by. This tag does not have any sub tags and has the following attributes. Note: The tests specified are not run by default and it is recommended to use a test script to run the required tests.

Attribute	Mandatory	Notes
Group	Yes	Group ID of the test, ended with an X. Such as 100X.
Device	Yes	Device ID of the test. If 0 then the score will be added for every device with a test result.
Test	Yes	Test ID for the test.
PassValue	Yes	The value added to the score if the test passes
NotAvailValue	No	The value added to the score if the test is not available
FailValue	No	The value added to the score if the test fails
ScorePerDevice	No	If set to True, the score is added per device when the device is set to 0. If set to False, the score is added only once.

Questions

The Questions tag is used to define an operator question to score by. This tag has the following attributes.

Attribute	Mandatory	Notes
Question	Yes	The text to be shown for the question.
QuestionType	Yes	The method for the operator to answer the question.
LowerRange	No	The lower range of the answer if valid.
UpperRange	No	The upper range of the answer if valid.
LowerScore	No	The lower score at the lowest range.
UpperScore	No	The upper score at the upper range.
PassValue	Yes	The value added to the score if a valid attribute is found.
FailValue	No	The value added to the score if a valid attribute is not found.
ScoreType	Yes	The validation criteria for the attribute.
TestSting	No	The validation string used to validate the attribute.
ScorePerDevice	No	If set to True, the score is added per device when the device is set to 0. If set to False, the score is added only once.

The QuestionType can be one of the following values.

Question Type	Description
YesNo	The answer is given as a yes/no. The UpperScore and LowerScore specifies the value of the yes or no.
Range	The answer is given as a range. The UpperScore and LowerScore specifies the values from the UpperRange and LowerRanges.
List	The answer is given out of a range of answers, defined by Answers sub tags.

Answer

The Answer tag is a sub tag of the Questions tag and is used to define the possible options for the List question type. This tag has no sub tags and has the following attributes.

Attribute	Mandatory	Notes
Answer	Yes	The text to be shown for the answer option.
Score	Yes	The value added to the total score if the answer is chosen.

Example File

```
<?xml version="1.0"?>
<SystemScore>
 <Attributes Group="100X" Device="0" Attribute="1" PassValue="1.00" ScoreType="Greater" TestString="4" />
 <Attributes Group="100X" Device="0" Attribute="1" PassValue="1.00" ScoreType="Greater" TestString="8" />
 <Attributes Group="100X" Device="0" Attribute="1" PassValue="1.00" ScoreType="Greater" TestString="12" />
 <Attributes Group="100X" Device="0" Attribute="1" PassValue="1.00" ScoreType="Greater" TestString="16" />
 <Attributes Group="100X" Device="0" Attribute="1" PassValue="1.00" ScoreType="Greater" TestString="20" />
 <Tests Group="100X" Device="0" Test="312" PassValue="0.00" NotAvailValue="-1.00" FailValue="-1.00" />
 <Questions Question="What condition is the case in?" QuestionType="List">
    <Answer Score="2.00" Answer="Prefect Condition" />
    <Answer Score="0.00" Answer="Used" />
    <Answer Score="-3.00" Answer="Heavy damage." />
 </Questions>
 <Questions Question="Does the system come with a box?" QuestionType="YesNo" UpperScore="2.00" />
 <Questions Question="How many HDMI Ports are there?" QuestionType="Range" UpperRange="10"
UpperScore="5.00" />
</SystemScore>
```

Scoring Results

When the application produces a system score, a Scoring Results file will be created with a breakdown of the score. The name of this file can be overwritten with the FilenameScore config file option. It has the following format.

EurosoftServiceReport

The EurosoftServiceReport tag is the root tag for all other tags.

SoftwareDetails

The SoftwareDetails tag reports the software that the score was produced with. It contains the following sub tags.

Tag	Description
Vendor	The vendor of the software. This should be "Eurosoft (UK) Ltd"
Name	The name of the application.
Version	The version of the application.
Build	The build date of the application.
Checksum	A checksum of the above values. Contact Eurosoft for more information.

LogTime

The LogTime tag reports the date and time that the log was created. It has no attributes or sub tags.

Score

The Score tag is the tag that contains a breakdown of the system score and how it was produced. It has no attributes and contains the following sub tags.

Tag	Description
SystemScore	The overall score the system has based on all the configured criteria and results/responses.
AttributeScore	The tag containing all attribute scoring criteria and the result.
TestScore	The tag containing all test scoring criteria and the result.
QuestionScore	The tag containing all question scoring criteria and the result.
Checksum	A checksum of the above values. Contact Eurosoft for more information.

Attribute

The Attribute tag is a sub tag of the AttributeScore and contains information about each device attribute that is checked for score. It has the following Attributes and no sub tags. The text in the tag is the score.

Attribute	Mandatory	Notes
Group	Yes	The attribute's Group ID.
Device	Yes	The attribute's Device ID.
Attrib	Yes	The attribute ID.
AttribTest	Yes	The attribute's test string.
Value	Yes	The actual device attribute value.

Test

The Test tag is a sub tag of the TestScore and contains information about each test result that is checked for score. It has the following attributes and no sub tags. The text in the tag is the score.

Attribute	Mandatory	Notes
Group	Yes	The test's Group ID.
Device	Yes	The test's Device ID.
Test	Yes	The Test ID.
Result	Yes	The test result.

Question

The Question tag is a sub tag of the QuestionScore and contains information about each question and response from the operator and the score this has produced. It has the following attributes and no sub tags. The text in the tag is the score.

Attribute	Mandatory	Notes
Question	Yes	The question text.
Reply	Yes	The selected response.

Example File

```
<?xml version="1.0" encoding="utf-8"?>
<EurosoftServiceReport>
  <SoftwareDetails>
    <Vendor>Eurosoft (UK) Ltd</Vendor>
    <Name>Pc-Check Windows Diagnostics</Name>
    <Version>3.5.0.0</Version>
    <Build>20/09/2023 10:36:30</Build>
    <Checksum>3FCCBB2E6646351EFBB5E3D130315021</Checksum>
  </SoftwareDetails>
  <LogTime>2023-09-20T16:46:03</LogTime>
  <Score>
    <SystemScore>19.00</SystemScore>
    <AttributeScore>
      <Attribute Group="1001" Device="0" Attribute="1" AttribTest="4" Value="15.81 GB">1.00</Attribute>
      <Attribute Group="1001" Device="0" Attribute="1" AttribTest="8" Value="15.81 GB">1.00</Attribute>
      <Attribute Group="1001" Device="0" Attribute="1" AttribTest="12" Value="15.81 GB">1.00</Attribute>
      <Attribute Group="1001" Device="0" Attribute="1" AttribTest="16" Value="15.81 GB">0.00</Attribute>
      <Attribute Group="1001" Device="0" Attribute="1" AttribTest="20" Value="15.81 GB">0.00</Attribute>
      <Checksum>B2ABBCF41F4B30EE17D6E5DD73E185A3</Checksum>
    </AttributeScore>
    <TestScore>
      <Test Group="5501" Device="0" Test="313" Result="Pass">1.00</Test>
      <Test Group="6811" Device="0" Test="303" Result="Fail">-1.00</Test>
      <Checksum>67875317C30E63D58D1324FAD6335C56</Checksum>
    </TestScore>
    <QuestionScore>
      <Question Question="What condition is the case in?" Reply="Used">0.00</Question>
      <Question Question="Does the system come with a box?" Reply="Yes">2.00</Question>
      <Question Question="How many HDMI Ports are there?" Reply="0">0.00</Question>
      <Checksum>99035286AE9EF7201B27F64066363CD1</Checksum>
    </QuestionScore>
    <Checksum>D95F04988EE25BC2D9DF14E88BF1ACFE</Checksum>
  </Score>
</EurosoftServiceReport>
```

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Note: Windows PE contains a security feature that will cause end user's systems to reboot without prior notification to the end user after 72 hours of continuous use.