Enterprise Analyzer 3.5 Update 2

Release Notes

Contents

Enterprise Analyzer Release Notes - Version 3.5.2

These release notes contain a summary of the major features of Enterprise Analyzer Version 3.5 Update 2, as well as late-breaking information about the product.

Before using Enterprise Analyzer, please read the *Getting Started* manual located in the online help, or the Documentation subfolder under the product installation folder, to gain an understanding of the user interface and tool metaphor. For more detail on the behavior, usage and limitations of Enterprise Analyzer, please refer to the online help and additional user manuals.

What's New

Configuration and Licensing Changes

Enterprise Analyzer is now licensed as the Developer Client and Analyst Client. The license that is applied determines the view seen by the user. The new Developer Client license only allows access to Enterprise Analyzer workspace build and maintenance features. This allows a workspace to be created and used in EA Web without needing to install Enterprise Analyzer on the client machine. The Analyst Client provides access to the full suite of analysis features of Enterprise Analyzer. Business Rule Manager is still licensed separately.

Enterprise Analyzer Product Enhancements

Enterprise Analyzer product enhancements listed below include an easy way to build a workspace with a new wizard, more relevant information in the browser to view important relationships quicker without extra steps, advanced searches (Clipper) in the web client interface, and other features and improvements to help you understand your applications faster.

Workspace Build Wizard

A new Workspace Build Wizard has been added to speed up and simplify the process of creating a small single user workspace. Complete folders and subfolders can be added and categorized in a single action. Missing files are identified and can be added during the creation process to ensure the workspace is complete. This provides increased productivity with a simplified Windows interface that is available to all users.

Note: The wizard creates workspaces that use SQL Server Express only and is not intended to be used in an enterprise multi-user environment.

Navigation of Object Relationships in the Search Tree

The Repository Browser in EA now shows relationships between source objects while skipping internal relationships that may not be of interest to you as a user. This gives you access to the important information about your source files with fewer mouse clicks.

Double-clicking a related object that has a line number shown will open the source with the line highlighted to show the line where the relationship originated.

This feature currently works with all programs (COBOL files, PL/I files, Natural files, etc.), JCL files, data files and tables, and all include type files. Line numbers will not be shown for all objects or relationships. This feature will continue to be enhanced with support for more types in the future.

EA Web Enhancements

Available as part of Analyst or Developer Client the EA Web application allows users to search the repository without needing to install Enterprise Analyzer on the client machine. Significant enhancements have been made to add to the analysis capabilities available from the Web browser.

Using the EA Web application and these new features enables:

- Speedy rollout across multiple browsers and devices
- Easy access to advanced search and query based analysis tooling
- Little or no training required to get started

Code Search

Queries available and developed within the Analyst Client are now available from the new **Code Search** tab. Analyst Client users retain the management and authoring responsibilities for the queries but Developer Client users can now execute and use the results for day to day development and maintenance activity.

Navigation of object relationships in the search tree

The enhanced browser relationship views mentioned above are also now available in EA Web with a new tree view for the objects returned from search results. You can continue to expand nodes for related objects to see their relationships and run queries or generate diagrams for any object shown.

Go to source - direct access to points of interest (POI) in application source

Results of analysis sometimes make a lot more sense when viewed in the context of the application source. From a new **Go to source** menu option, a user can go directly to the Point of Interest (POI) within the source listed in the code search result set.

Export search results to XML

Results returned to the EA Web application can be exported to XML format. This can then be converted and/or consumed by third party tooling as required.

Change Analyzer

The Change Analyzer tool has been enhanced in 3.5.2 to give improved performance, improved accuracy, and improved usability.

The depth of synonyms search has increased significantly to offer a greater number of potential impacts.

The performance of Change Analyzer has been improved, from three times faster for small workspaces to up to ten times faster with large and/or common used variables, e.g. SQLCODE.

Soon after the initial release of EA 3.5.2 an update will be released to include additional trace information to offer improvements to the way in which impacts are presented.

The Impact trace facility now shows a trace between the seed and the synonym found. This can be used to understand why this item was added to the list of synonyms found. This is very similar to the representation of impacts in Revolve. The trace provides a more informative description regarding the connection between the two elements such as "is a child of", "is a parent of", "was moved from", "was moved to" etc.

IMS Administrator Tool

A new administrator tool for investigating and performing IMS Analysis is now available. This tool can perform IMS Analysis for an entire project, as usual, or it can target specific chains by starting from selected roots only. Full logging of the process is included in the tool.

To access this tool, open Enterprise Analyzer Administration and choose **Tools** > **Launch IMS Administrator**.

Other Enhancements and Changes

- You can now open files and run queries from results in EA Web.

- Search Assistant history provides speedy entry of frequently searched terms.
- Search Assistant now displays the result count and elapsed time of the search.
- Search Assistant now allows leading wildcards and includes a timeout to prevent long running queries affecting performance.
- Workspace Options are now visible to master users only.

Nonfunctional Changes

All EA executables are now signed. If User Account Control is enabled, when running any executable from the Bin folder in the EA install directory you will be prompted to allow the program to make changes to the computer.

Updates from Previous Versions

Enterprise Analyzer 3.5 supports upgrades of workspaces from Enterprise Analyzer version 3.3 with HotFix 13, version 3.4 with HotFix 10, and version 3.5 GA or any HotFix level.

Note: If upgrading from version 3.2, you will need to uninstall the product first, and then upgrade to version 3.4 HotFix 10 before upgrading to version 3.5.2.

Resolved Issues

The numbers that follow each issue are the Support Incident Numbers followed by the Reported Problem Incident (RPI) number (in parentheses).

- *EA - Administration*
- *EA - Analysis*
- *EA - Analysis - Diagrammer*
- *EA - Analysis - HyperView - Clipper*
- *EA - Backend*
- *EA - Backend - Analysis*
- *EA - Backend - Analysis - Cobol*
- *EA - Backend - Analysis - Cobol - Advanced*
- *EA - Backend - Analysis - DDL*
- *EA - Backend - Analysis - EmbeddedSQL*
- *EA - Backend - Analysis - IMS Analysis*
- *EA - Backend - Analysis - Java*
- *EA - Backend - Analysis - JCL*
- *EA - Backend - Analysis - PL1*
- *EA - Backend - Architecture Modeler*
- *EA - Backend - Parsing - Assembler*
- *EA - Backend - Parsing - Cobol*
- *EA - Backend - Parsing - Cobol/ACU*
- *EA - Backend - Parsing - Cobol/Cobol 390*
- *EA - Backend - Parsing - Cobol/MicroFocus*
- *EA - Backend - Parsing - Cobol/Unisys MCP*
- *EA - Backend - Parsing - CSD*
- *EA - Backend - Parsing - DASDL*
- *EA - Backend - Parsing - DBD*
- *EA - Backend - Parsing - DDL*
- *EA - Backend - Parsing - EmbeddedSQL*
- *EA - Backend - Parsing - Java*
- *EA - Backend - Parsing - JCL*
- *EA - Backend - Parsing - Natural*
- *EA - Backend - Parsing - PL1*
- *EA - Backend - Parsing - PSB*
- *EA - Backend - Parsing - VB*
- *EA - Backend - Parsing - WFL*
- *EA - Backend - Verification*
- *EA - Batch Refresh Process*
- *EA - Business Rules*
- *EA - Change Analyzer*
- *EA - Common*
- *EA - Complexity Metrics*
- *EA - Decision Resolution*
- *EA - Diagrammer*
- *EA - Documentation*

EA - Administration

- All EA executables are now signed with a Micro Focus certificate. Rescan tool crash has been fixed.

  2791669 (1096006)
- The problem causing a crash when upgrading metrics from 3.4 to 3.5 no longer occurs.

  2788317 (1095863)
- The issue that caused the Clean-up HC Sources Table feature to hang has been fixed.

  2681877 (1092733)
- A new menu called "Shrink MSSQL database into Admin console" has been added.

  2679741 (1092501)
- Custom scopes and relationships are no longer lost during upgrades.

  2679165 (1092663)
- Trend metrics management has been redesigned to support homonyms.

  2677224 (1092266)
- Delete from Workspace has been fixed to delete a project from everywhere.

  2670033 (1091580)

EA - Analysis

- The Oracle error during verification of projects containing a single quote character in the name has been fixed.

  2686361 (1093453)

EA - Analysis - Diagrammer

Back to the list

- The Diagrammer now shows incomplete composite relationships.

  2785425 (1095183)
- Internal sort program objects from JCLs no longer appear in the diagrams.

  2696831 (1094121)

EA - Analysis - HyperView - Clipper

Back to the list

- The issue with sometimes receiving a mailslot warning message when running batch scripts has been fixed.

  2695122 (1093955)
- The correct file has been copied as temp HCSearch.xml.

  (603179)
- An issue that caused conflicts when multiple users ran Clipper queries at the same time has been fixed.

  (603205)
- There is no longer an error when starting a search from Clipper after running the Portability Assessment or Quality Assessment reports.

  (604576)

EA - Backend

Back to the list

- The issue with SetRevisionNumber.bj has been fixed.

  2800119 (1096817)
- Checks for Oracle driver memory leaks have been implemented. If a memory leak in an Oracle driver is detected, the queue processor is restarted.

  2781247 (1095118)
- Parallel verification with more than three queue processors has been significantly improved.

  2781247 (1094852)
- There is no longer a problem verifying COMS Configuration files containing extended Latin characters.

  2697277 (1094138)
- The issue with showing the invalidation progress of large source sets has been fixed. The progress bar will update for every 2000 files invalidated.

  2686361 (1093694)
- Error messages now point to the correct file.

  (599512)

EA - Backend - Analysis

Back to the list

- Visual feedback while invalidating objects has been improved.

  2686361 (1095013)
- The loading of results produced by plug-ins now allows duplicate relations.

  2680582 (1092709)

- The COPY statement removal while performing DCE has been fixed.

  2679024 (1092425)
- API for executing scripts is now backward compatible with EA 3.4.

  2672990 (1091823)
- Memory consumption and performance during invalidation have been improved.

  2666002 (1091443)
- Flow through transaction now works when the transaction was started through generic API configuration.

  2662067 (1090862)
- There is no longer a problem resolving the main entry when the *MAIN* tag is placed after column 72 in INCLUDE linkdeck statement.

  2655779 (1091844)
- There are no longer missing relationships to files if the Easytrieve JOB INPUT statment has more than one input files as parameters. Initial support for the DISPLAY statement has been added.

  2647403 (1089552)

EA - Backend - Analysis - Cobol

Back to the list

- The problem with Error 2073 - Move function numval(variable) has been resolved and no longer occurs when MF COBOL files are verified.

  2675897 (1092131)
- Dead Statements query now works for SQL statements embedded in insert statements.

  2664755 (1091019)

EA - Backend - Analysis - Cobol - Advanced

Back to the list

- New legacy.xml has been supplied that requires less memory.

  2653386 (1090042)
- New legacy.xml has been attached that requires less memory to generate APIs' relations.

  2653384 (1090041)

EA - Backend - Analysis - DDL

Back to the list

- An issue causing stored procedures to be incorrectly marked as unresolved has been corrected.

  2678269 (1092421)
- The issue with the identification of DDL indexes when the Use DBSchema options is enabled has been fixed.

  2653907 (1090049)

EA - Backend - Analysis - EmbeddedSQL

Back to the list

- Tables without owner specified now resolve correctly when using the Use Database Schema option.

  2685532 (1093131)

- The Append clause of Create AUXILIARY TABLE and the Create AUXILIARY TABLE statement are properly supported now.

  2685496 (1093133)

EA - Backend - Analysis - IMS Analysis

Back to the list

- Alias values coverage evaluation has been improved.

  2655782 (1090821)
- Alias coverage evaluation has been improved.

  2651772 (1090225)
- An issue when assigning to a variable the ADDR of another variable based on the first one (A based(B); B = ADDR(A);), has been fixed.

  2651772 (1092320)
- If the segment cannot be resolved, then a resolution is created toward all segments from the data store.

  2651772 (1092472)
- An issue that caused a system out of memory exception to occur during IMS Analysis in BRP has been fixed.

  2638303 (1092525)
- The BRP_Watchdog.exe which looks for error messages, logs them, and closes them, has been created.

  2613451 (1095245)

EA - Backend - Analysis - Java

Back to the list

- An issue that caused a verification error on Java files for workspaces created in EA 3.4 after being upgraded to EA 3.5 or later has been corrected.

  (604405)

EA - Backend - Analysis - JCL

Back to the list

- A new functionality for generating JCL relationships in Legacy.xml has been added.

  2675933 (1092309)

EA - Backend - Analysis - PL1

Back to the list

- AdjustRntHiddenRel.bj now populates correctly the reference type.

  2662024 (1092153)
- On condition blocks in PL/I are now supported for data flow analysis and decisions inside these blocks are resolved automatically.

  2657419 (1090771)
- An issue with undefined rvalues in a single statement causing some lvalues not to be evaluated when they should be, has been fixed.

  2657419 (1091452)
- There is no longer an issue with some statements where aliases of a variable were marked as if data was written to them when it should be only marked as read.

2657419 (1092881)

EA - Backend - Architecture Modeler

Back to the list

- Single line comments can now comment the whole line (not only the remaining text on the same line). Single line comments can now be counted only in specific columns.

  2680754 (1092590)

EA - Backend - Parsing - Assembler

Back to the list

- An issue that caused incorrect reporting of missing SQL include file name in Assembler, has been fixed.

  2683272 (1092832)

EA - Backend - Parsing - Cobol

Back to the list

- Literal names are now supported for DELETE segment operations.

  2792614 (1096030)
- The ImportObject: Illegal relationship Loads warning when verifying certain COBOL files has been fixed by enabling the Program Loads relationships when CICS is configured in EA.

  2693616 (1093820)
- The defect attribute is now populated for divisions that result in truncation.

  2683146 (1093402)
- The problem with "erase" COBOL syntax has been resolved and no longer occurs when COBOL files are verified.

  2675101 (1092013)
- Quick Inventory support has been improved.

  2672304 (1091760)
- The problem with indicator and area A start in col 1 producing parse errors with copy statements has been resolved and no longer occurs when ACUCOBOL files are verified.

  2664282 (1090975)
- There is no longer a problem parsing the ON ESCAPE clause of the ACCEPT statement. EQUALS/NOT EQUALS is also supported when used in conditions.

  2662410 (1090806)
- The problem with Linkdeck Processing choosing a wrong Entry Point from Program has been resolved and no longer occurs when LinkDeck files are verified.

  2645092 (1089295)

EA - Backend - Parsing - Cobol/ACU

Back to the list

- ACCEPT MSG... WITH SECURE is now supported.

  2783632 (1094969)
- DISPLAY... WITH HIGHLIGHT is now supported.

  2783631 (1094964)
- Optional WITH has been added to the DISPLAY... WITH CONTROL statement.

2783629 (1094963)

- Environment division's numeric clause, when specified, no longer causes a crash.

  2698501 (1094258)

- An issue with the reverse-video clause in display statements has been fixed.

  2698500 (1094257)

- The "not optional" syntax for file selection is now supported.

  2698498 (1094254)

- A new option has been added under Project Options -> COBOL -> Advanced -> Use Advanced Data Dependency Analysis. It is on by default. To reduce memory usage during verification, the user can disable it.

  2691372 (1093394)

- The parsing errors with RM code migrated to Visual COBOL have been resolved and no longer occur.

  2668257 (1091439)

- An issue where exception handlers in ACU COBOL were flagged as dead code has been fixed.

  2665903 (1091165)

- There is no longer a problem parsing alphanumeric runtime switches.

  2664471 (1091172)

- An issue with DISPLAY WITH CONTROL statement has been fixed.

  (604593)

EA - Backend - Parsing - Cobol/Cobol 390

Back to the list

- There is no longer a memory access violation error when the Use DB Schema option is enabled and there are verification errors.

  2791347 (1095898)

- Parentheses and quotes ("('") can now have spaces in-between (e.g. "('").

  2790088 (1095788)

- There is no longer a problem verifying COBOL files with EXEC CICS LINK statements.

  2679519 (1092623)

- There is no longer a problem verifying COBOL files with EXEC DLI statements that contain AREA# and LENGTH# (# can be 1..3).

  2679519 (1092625)

EA - Backend - Parsing - Cobol/MicroFocus

Back to the list

- There is no longer a problem with the evaluation of the conditional compiler directive $if defined for Micro Focus COBOL and ACU COBOL.

  2696955 (1094095)

EA - Backend - Parsing - Cobol/Unisys MCP

Back to the list

- There is no longer a duplicate identifier error when there are multiple formal parameters with the same name defined in different LD clauses in a Unisys MCP-85 COBOL file.

  2788838 (1095662)

- A lexer issue with some statements has been fixed.

    2700294 (1094648)
- Comparing external decimal to Boolean is now permitted for Unisys COBOL.

    2700175 (1094438)
- DMSII Index key used as both aliased and by name is now supported.

    2699974 (1094424)
- An issue that caused Boolean flags VTFLAG and TRANSPARENT in Unisys COMS records to be disallowed in conditions has been corrected.

    2699966 (1094421)
- An issue that caused a verification error to be reported when using a reference modification expression in DMSII statements has been corrected.

    2699907 (1094397)
- An issue that caused a verification error to be reported on Unisys MCP85 COBOL library description entries has been corrected.

    2699665 (1094394)
- An issue that caused "NOT <=" and "NOT >=" operators to produce verification errors in MCP85 COBOL has been fixed.

    2698866 (1094288)
- An issue that caused some PIC clauses to be incorrectly processed when using SET AUTOINSERT in Unisys MCP85 COBOL has been corrected.

    2698529 (1094256)
- An issue that caused an error when locating DMSII schema copybooks in folders other than the root folder has been corrected.

    2696809 (1094156)
- The problem with reporting attribute names in COBOL MCP as undeclared identifiers has been fixed.

    2695021 (1093918)
- An issue with the CHANGE ATTRIBUTE statement has been fixed.

    2695021 (1094497)
- An issue where an incorrect error "Insufficient number of indices" is generated for Unisys MCP COBOL has been fixed.

    2694754 (1093869)
- An issue with Unisys MCP 85 COBOL files failing verification can be addressed by defining calls as read-only using the <Cobol> <UnisysMCP85> <ReadOnlyCalls> section of Legacy.xml.

    2686561 (1093335)

EA - Backend - Parsing - CSD

Back to the list

- There is no longer a problem with case-sensitive Transaction names.
    2605266 (1087080)

EA - Backend - Parsing - DASDL

Back to the list

- A problem with DASDL DMCONTROL statement being processed incorrectly has been fixed.
    2675932 (1092181)

EA - Backend - Parsing - DBD

- There is no longer a problem verifying DBD files when there is DBDGEN statement with FINISH instead of END.

  2682228 (1092812)

EA - Backend - Parsing - DDL

- The issue with verifying DDL files that have CREATE TABLE statement with PARTITION ENDING has been fixed.

  2685470 (1093136)
- The issue with parsing DDL files with extended ASCII characters has been fixed.

  2685469 (1093135)
- References to tables are now resolved correctly.

  2667247 (1091283)
- Support for some Oracle specific syntax for the CREATE TABLE statement has been added.

  2661815 (1090842)

EA - Backend - Parsing - EmbeddedSQL

- Dynamic cursors are unsupported. Parser warnings have been added where applicable.

  2683147 (1092924)
- The problem with EXEC SQL Verification Error has been resolved and no longer occurs when COBOL files are verified.

  2679519 (1092624)
- The problem with Native SQL elements producing parsing errors has been resolved and no longer occurs when NATURAL files are verified.

  2668377 (1091461)
- The problem with SELECT parsing errors has been resolved and no longer occurs when NATURAL files are verified.

  2668376 (1091491)
- The FETCH FIRST 1 ROW ONLY SQL construct is supported now.

  2668358 (1091621)
- OPTIMIZE FOR is now processed correctly for NATURAL files.

  2668355 (1091462)
- Support has been added for the SKIP LOCKED, NOWAIT and WAIT options on the SELECT FOR UPDATE clause in the Oracle (ANSI SQL-92) parser.

  2662403 (1090805)
- Support for Oracle LOB statements has been added to the ANSI SQL-92 dialect.

  2661739 (1090843)
- The problem with 'Error 13000 - Unknown SQL statement or syntax error' has been resolved and no longer occurs when COBOL files are verified.

  (599247)

EA - Backend - Parsing - Java

Back to the list

- There is no longer a problem parsing TLD files that contain namespace declaration.

  2599844 (1086754)
- Java boundary decisions are now being created and displayed correctly when verifying files. There is still an issue with displaying the relationship to the decision when running Apply Boundary Decisions from the Prepare menu. The workaround is to close EA and reopen the workspace to see the relationships properly in the browser. This issue also affects the relationships created during IMS Analysis.

  (599842)
- All Java Package metrics are now being calculated.

  (599468)
- An issue that caused failures during Java verification in some non-English locales has been corrected.

  (604446)

EA - Backend - Parsing - JCL

Back to the list

- An issue that caused incorrect processing of JCL names containing question marks has been corrected.

  2693285 (1093884)
- Large Instream data is processed faster now.

  2681341 (1092664)
- The problem with Unknown Parameter Error on JCL has been resolved and no longer occurs when JCL files are verified.

  2679519 (1092602)
- The problem with :Error 9014 Cannot Open Include Group on Parentheses" has been resolved and no longer occurs when JCL files are verified.

  2674915 (1092089)
- A workspace option to generate program entry for C main() functions has been added.

  2608943 (1087454)

EA - Backend - Parsing - Natural

Back to the list

- The problem with Incorrect Index Value Error on Natural Files has been resolved and no longer occurs when Natural files are verified.

  2668359 (1091626)

EA - Backend - Parsing - PL1

Back to the list

- Verification issues related to PL/I macros have been addressed. The Disable Auto-Margins option should be enabled in Workspace Options > Legacy Dialects > PL/I File to see correct results.

  2693767 (1093933)
- Jumping inside a DO-END block no longer causes a warning.

  2684873 (1093035)

- The issue with verification status of the source file when there are errors in embedded code and relaxed parsing is enabled, has been fixed.

  2684872 (1093030)
- The processing of incomplete PL/I source sets now longer crashes.

  2684871 (1093029)
- There is no longer a problem with automatic invalidation of the linkdeck file when one of the included modules(programs) has changed.

  2681474 (1092691)
- The problem "PL/I Verification - Error Critical 99999" has been fixed and no longer occurs when PL/I files are verified.

  2663405 (1090969)
- There is no longer an error "Program Already Defined in File" when there are several PROCs in a PL/I program.

  2661146 (1091022)
- The "TYPE" keyword used as a field name has better coverage now.

  2659909 (1090657)
- The "TYPE" keyword used as a field name has better coverage now.

  2659909 (1090658)
- The problem with Internal Error: PLI2.dll: Hypercode():Assertion Failed has been resolved and no longer occurs when certain PL/I files are verified.

  2659909 (1092527)
- Several issues that caused critical errors during PL/I verification have been addressed.

  2644909 (1094171)
- The problem with PL/I Syntax Memory Access Violation has been resolved and no longer occurs when PL/I files are verified.

  2644909 (1092250)
- IMS memory consumption has been improved.

  2638303 (1091894)
- The problem with EA not using the customer specified margins correctly has been resolved and no longer occurs when PL/I files are verified.

  2670010 (1091582)

EA - Backend - Parsing - PSB

Back to the list

- # is now parsed as a letter.

  2790089 (1095789)

EA - Backend - Parsing - VB

Back to the list

- A verification error when parsing VB.NET partial classes has been fixed.

  2683620 (1092866)

EA - Backend - Parsing - WFL

Back to the list

- An error that caused missing WFL include files to be omitted from the Unresolved Reference Report has been corrected.

  2796402 (1096380)

EA - Backend - Verification

Back to the list

- The Extracts folder is now created when the workspace is created.

  2792576 (1096184)

- An issue with DDL verification warnings showing for a COBOL file has been fixed.

  2779510 (1094536)

- The issue with verifying TWS schedule ADR files containing non-Latin characters in application names has been fixed.

  2686126 (1093158)

- The icons for completed verification status are now correct for TWS scheduler files.

  2684893 (1093016)

- An issue with Easytrieve verification has been fixed.

  2684892 (1093017)

- .Net files now have a full icon after a successful load.

  (599890)

- The problem with Quick Inventory not working with Parallel Verification has been resolved and no longer occurs.

  (593910)

EA - Batch Refresh Process

Back to the list

- The Brave job script SetChangeDate.bj now cleans up the dates correctly.

  2797705 (1096545)

- `ProcessChangeUnit.bj` is using an input file, containing a list of object names to be removed from the EA workspace. You can specify a single object name or path + object name on this list.

  Example:

```
DATE: 2014-09-11 12:55:00
DELETED:AR7100.CBL
DELETED:SOURCES\TVT\DEVSOURCES\COBOL\AR7200.CBL
```

  Note: The path (`SOURCES\TVT\DEVSOURCES\COBOL\`) specified up to the object name is the relative path to the EA workspace root.

  Note: If more than one object matches the given condition, a warning will be output in the BRP log, containing the duplicated objects and their paths, and the file and its duplicates will not be deleted.

  Example:

```
Batch Registration and Verification. Version 3.5.2  (build 3.5.2.59)

Date: 9/15/2014    Computer: SOF-ORLINN3
Cmd:  ProcessChangeUnit.bj Log1.txt Workspace="c:\temp\swap\mssql1.rwp"
File="ProcessChangeUnit_List.lst"
Job:  ProcessChangeUnit.bj (C:\MF\MW\F_Lion\Binaries\Scripts\BRP
\ProcessChangeUnit.bj)
```

```
18:04:18 >Open c:\temp\swap\mssql1.rwp
18:04:21 >*
Object found SOURCES\TVT\DEVSOURCES\COBOL\AR7100.CBL
Duplicate object found SOURCES\TVT\PRODSOURCES\COBOL\AR7100.CBL
Object found SOURCES\TVT\DEVSOURCES\COBOL\AR7200.CBL
"1 object(s) deleted"
18:04:21 >Close
18:04:21 ---Finished---
```

2794725 (1096209)

- A problem with the drop indexes function in BRP has been fixed.

2794162 (1096159)

- Unregister.bj now works with homonyms. The input file name must contain the path so as to be able to identify the correct object in the repository. This is not necessary if there are no homonyms.

2794037 (1096186)

- Environment variables in EA 3.5, used in BRP user exits, are now the same as in EA 3.4.

2781055 (1094715)

- The folder structure in <brp>\PreparedSources is now preserved when files are copied to <brp>\Staging \...

2700637 (1094480)

- The AffectedCodeReport.bj script now works correctly.

2685546 (1093263)

- The AddJavaPath.bj file now works correctly.

2683411 (1092846)

- The Debug option has been restored in the Advanced tab of the BRP Configurator.

2679483 (1092474)

- Configure BRP no longer crashes when workspaces have an incorrect WaitHCCBefore option value.

2675594 (1092215)

- VerifyX.bj now works with the optional Project parameter.

2644304 (1089132)

- The tool now deletes only information that was created as part of creating the BRP configuration. Any file created manually inside any folder created by BRP will be deleted.

(599687)

- The issue where the user exit field remained empty when set in the BRP Configurator has been fixed.

(603405)

EA - Business Rules

Back to the list

- There is no longer an unhandled exception when deleting rules.

2691709 (1093434)

- Rule Segment Text Column has been changed to preserve formatting of the source code.

2691635 (1093423)

- BRM reports are now generated with rule segments contained in single cells.

2685246 (1093074)

- Cancelling the delete operation of the rule has been changed so that it doesn't show an empty list.

2683466 (1092865)

EA - Change Analyzer

- An issue that caused scroll bars not to appear in Change Analyzer panes on lower resolutions has been fixed.

  2698159 (1094216)
- Synonym batch search while disabling program analysis no longer causes a crash.

  2692981 (1093650)
- Memory consumption has been improved.

  2684170 (1092949)

EA - Common

- Tags are now displayed correctly.

  2684538 (1093072)

EA - Complexity Metrics

- The Decimal metrics are now calculated correctly, even when the OS is configured for European Usage.

  2675741 (1092185)
- The .NET metrics have been checked and the documentation now contains all the metrics that are displayed in the product.

  2592127 (1086536)

EA - Decision Resolution

- To resolve an issue with Restoredecisions.bj, True and False values are no longer localized.

  2684129 (1092931)

EA - Diagrammer

- The performance of Diagrammer Quickview for BMS screens is improved.

  2685662 (1093401)
- Diagrams grouped by tags now display homonyms correctly.

  2684538 (1093073)
- The Queue type has been added to the Diagrammer options.

  2679346 (1092523)
- When the number of edges exceeds 10 000, the diagram is not drawn and the user is notified with a message box.

  2586496 (1085935)

EA - Documentation

- A note has been added to the documentation about the need to enable the .NET Framework 3.5 SP1 on Windows Server 2008 before installing EA.

  2674015 (1091901)
- There is no longer an error reported when references cannot be resolved due to conflicting objects. The documentation has been updated with information on homonyms search path and registering of source files by dragging-and-dropping and copying-and-pasting.

  2665457 (1091074)
- The "Defining Potential Code Anomalies" and "Viewing Executive Reports" topics have been updated.

  2656393 (1090283)
- A note has been added to the "Preparing Files for Batch Refresh Processing" topic about the limitation in file name length.

  2644434 (1089218)
- The Code Segment in Business Rules has been fixed and the source alignment is now correct.

  2641673 (1088830)
- Parameters needed for BRP scripts have been added to the documentation.

  2640508 (1088736)
- Default source directory option is now obsolete. This option is now removed and is no longer in use.

  2618940 (1088477)
- A new topic has been added to Installation Guide > Troubleshooting the Installation > Troubleshooting Oracle Errors, addressing the following error when restoring repository indexes: "There were errors during Index Preparation."

  (601401)
- Support Notes.PDF has been created and added to the Enterprise Analyzer documentation set.

  (602947)

EA - HyperView

Back to the list

- The blue boxes that were appearing in the diagrams in VDX format have been removed.

  2696620 (1094345)
- More informative messages will be shown when opening Interactive Analysis if the query XML file is not found or not accessible.

  2674665 (1091969)

EA - HyperView - Clipper

Back to the list

- Clipper queries related to IMS database operations are now working correctly.

  2672861 (1091859)
- Advanced searches and folders are now saved correctly when using the Clipper pane.

  2672545 (1091840)
- Two Quality Assessment queries for the CONFIGURATION SECTION have been updated and should no longer always return no results.

  2667319 (1091277)
- Clipper results have been changed to be saved to lists created in the General category.

  2647754 (1092142)

- The problem with "RunTime Error '-2146233086 (80131502)': startIndex cannot be larger than length of string" has been resolved and no longer occurs when Clipper Detailed report is viewed.

  2646219 (1091502)
- The problem with access error message when trying to create Clipper queries has been resolved. The [Enterprise_Analyzer_Install_Directory]\Data\BLIn.Dialogs.xml is not modified on saving the new criteria.

  2642170 (1088880)

EA - HyperView - Watch pane

Back to the list

- Watch pane no longer crashes when using the Build link after the Object in Interactive Analysis was changed.

  2665073 (1091057)

EA - IDE

Back to the list

- The "Save Subtree" option has been fixed to work as designed.

  2692108 (1093511)
- The context menu option "Edit" has been changed to "Open" in EA Desktop.

  2691947 (1093445)
- Project Options are no longer disabled until after project folder is expanded.

  2680738 (1092591)
- Verification errors for one object no longer appear for another object.

  2679871 (1092489)
- The object name filtering in the Folders view has been fixed. In the Folders view, the object name filter may only be applied at the Project level. The behavior in the Types view is unchanged.

  2679674 (1092495)
- The Expand Subtree option now works in Types view.

  2679199 (1092496)
- Additional Japanese language translations have been added.

  (604948)

EA - IDE - Activity Log

Back to the list

- The new activity log didn't show the icon for some object types. This has now been fixed.

  (599276)
- The blue icons for Warning and Critical Error in the new activity log no longer occur when verifying files with warning (error).

  (599476)

EA - IDE - Project Operations

Back to the list

- Dragging and dropping, or pasting, changed source files into a project now correctly updates the files.

  2780176 (1094593)

- Objects are now deleted as a group, not one by one. The performance has been greatly improved as a result of that.

  2779813 (1094670)
- The Project Options captions for Executive Report have been changed so that they are not duplicated anymore.

  2679348 (1092484)
- When excluding objects from a project, the confirmation pop-up no longer performs an action after closing the window.

  2436539 (1073375)

EA - IDE - Repository Browser

Back to the list

- Expand subtree now expands only 2 levels below the selected node. Now, when expanding a subtree for a file with many levels, only two levels below the selected node are expanded.

  2800903 (1096926)
- Homonyms are now displayed in alphabetic order.

  2786010 (1095280)
- The Legacy Source repository query has been changed to show the source path.

  2699172 (1094304)
- The project options are now enabled when the project node is not expanded.

  2680738 (1093582)
- The unverified objects have been changed to show as bold.

  2680737 (1092586)
- The issue with the missing files under the directories in Folder view after executing filtering has been fixed.

  2679686 (1092585)
- The workspace refresh operation has been changed to leave open all of the expanded folders.

  2679744 (1092576)
- Empty projects can now be deleted using the context menu.

  2679192 (1092475)
- The "Refresh" button for Query Repository results will now re-run the query for the current selection in the browser and not the original selection.

  2676420 (1092288)
- Search Assistant has been changed to show that the search is in progress and doesn't allow other actions until it stops.

  2676372 (1092184)
- User RXP Queries have been fixed to return results on folder selection.

  2675997 (1092113)
- The project context menu is no longer different when the project is open and when it is closed.

  2670038 (1091631)
- Expand sub-tree context menu option is now working when in Types browser mode.

  2670034 (1091579)
- Tooltips now show the source path of objects.

  (599483)

- Type-ahead search behavior now works as it did in previous versions.

  (599447)
- Toggle Sharing/Protection changes the project's icon in types view now.

  (599400)
- The Select All and Unselect All features now work correctly in the Folders view of the Repository browser.

  (599984)
- The Folder view has been changed to allow the selection of source files from different folders.

  (601232)
- The source path of non-legacy objects has been corrected.

  (604528)

EA - IDE - Workspace Operations

Back to the list

- Deleting a copybook is now performed without issues and is correctly identified as unresolved.

  2686502 (1093353)
- The Export Sources from Workspace dialog is now more user-friendly.

  2681608 (1092670)
- Unresolved refreshing of objects has been improved.

  2681473 (1092671)
- Source files and folder names are no longer changed to all caps when exporting sources from the workspace.

  2679753 (1092569)
- Restore Repository Indexes now works correctly for DB2 workspaces.

  (599577)
- InPlace registration is no longer available as an option.

  (599543)

EA - IMS Analysis

Back to the list

- A crash no longer occurs when var usage information is missing.

  2655817 (1090564)

EA - Installation

Back to the list

- The UAC dialogs are now shown correctly.

  (596516)

EA - Plugins

Back to the list

- The upgrade no longer fails when the description of an entity is changed.

  2646301 (1089627)

EA – Portability Assessment – Reports

- Special level declarations have been excluded from the "Level numbers must align in multiples of 4" report.

  2791288 (1095897)
- Three new reports have been added: All supported System programs, All unsupported and without FDS, and All unsupported with FDS that MF can provide.

  2789015 (1095591)
- PA queries have been made project specific.

  2786703 (1095303)
- The unsupported system programs list has been updated.

  2786703 (1095309)
- Additional report criteria for filtering the GDG files have been added.

  2784411 (1095099)
- Unique List of Data JCL GDG Base now contains only unique DSN Names.

  2784408 (1095224)
- The Portability Assessment Inventory Report is now correct when the "Count Lines in Unverified Objects" option is enabled.

  2784406 (1095055)
- Quality Assessment report formatting has been redesigned to reduce memory consumption.

  2680824 (1092620)
- Several EXEC CICS statements have been updated to avoid returning incorrect results due to statement keywords being included in variable names.

  2680632 (1092567)
- CRUD report has been optimized for performance and memory usage reports with more than 65k records will not be displayed and will be saved to a file instead.

  2677861 (1092366)
- Several reports have been added to or updated in the Portability Assessment report. New or changed reports include Unique List of Tables, Unique List of Segments, Unique List of VSAM KSDS and ESDS, Unique List of VSAM RRDS, Inbound Interface Files, Unique List of Data JCL GDG Base.

  2671362 (1092469)
- Unique List of Table has been renamed, Unique List of VSAM KSDS and ESDS now reports unique results.

  2671362 (1095463)
- Computational Statements has been changed to Computational Statements - Eliminate Duplicates

  (603211)

EA - Reports - CRUD Report

- A new option "Show SourcePath In Reports" has been added to the Workspace Options > Homonyms tab. The option is disabled by default. When enabled, the Complexity Metrics report, Unresolved Report, Cross Reference Report, and CRUD Report will include a column showing the path with the file name to distinguish between objects with the same name. The column is called "File Source" in the CRUD Report.

  2698404 (1094242)

- The order of the results given by offline CRUD report has been changed to be the same as that of the online CRUD report.

  2673354 (1091849)

EA - Reports - Executive Report

Back to the list

- Missing objects report is now project-based instead of workspace-based.

  2695447 (1093929)
- Grouping has been added for the Potential Code Anomalies section to make the summary lines stand out.

  2680606 (1092843)

EA - Reports - Reference

Back to the list

- The Cross Reference Report no longer contains extraneous relationships to system programs.

  2699940 (1094440)
- A new option "Show SourcePath In Reports" has been added to the Workspace Options > Homonyms tab. The option is disabled by default. When enabled, the Complexity Metrics report, Unresolved Report, Cross Reference Report, and CRUD Report will include a column showing the path with the file name to distinguish between objects with the same name. The column is called "Referred Object Source" in the Cross Reference report.

  2698403 (1094240)
- A new option "Show SourcePath In Reports" has been added to the Workspace Options > Homonyms tab. The option is disabled by default. When enabled, the Complexity Metrics report, Unresolved Report, Cross Reference Report, and CRUD Report will include a column showing the path with the file name to distinguish between objects with the same name. The column is called "Referring Object Source" in the Unresolved Report.

  2698402 (1094239)
- A new option "Show SourcePath In Reports" has been added to the Workspace Options > Homonyms tab. The option is disabled by default. When enabled, the Complexity Metrics report, Unresolved Report, Cross Reference Report, and CRUD Report will include a column showing the path with the file name to distinguish between objects with the same name. The column is called "Source Path" in the Complexity Metrics report.

  2698399 (1094238)
- Unreffered report is now correctly refreshed when changing the options.

  2678791 (1092785)
- The performance of the Unreferred Report has been improved.

  2610095 (1096390)

EA - Reports - Verification Report

Back to the list

- A new report has been added to Portability Assessment that gives a list of unique missing objects.

  2671359 (1091783)
- Verification Report no longer produces an exception on attempting to open it.

  (599695)

EA - Tag Manager

Back to the list

- The saving of the Object list in the Tag Manager has been fixed.

  2677897 (1092307)
- **1.** UnTagged Objects predefined query has been fixed.
  - **2.** Project filtering behavior when Tag was applied as primary filter has been fixed.
  - **3.** The problem when query containing deleted tag causes Tag Manager to freeze has been fixed.

  2660336 (1090626)
- **1.** The Object List pane now contains only those types which are present in the Object Types filter.
  - **2.** The ENTER button can be used to run the selected query while working with the Query pane on a keyboard.
  - **3.** The Empty column in Query pane has been renamed to "No criteria".
  - **4.** Empty (no criteria) queries are not executed, so newly created queries aren't executed either. The Object List remains unchanged and the Object List's header turns red to indicate that the displayed information does not match the query.
  - **5.** If a query was cleared by the Edit dialog, a star ("*") will be shown in the No criteria column (as it is shown for newly created queries).
  - **6.** The default UnTagged Objects query is indicated by bold font.
  - **7.** The popup menus Edit, Delete and Add Tags have been disabled if no query or default query is selected.
  - **8.** The Name column in the edit query dialog has been renamed to Tag Name.
  - **9.** Tool tip for the "+" toolbar button has been fixed and is now called "Show More Objects". Drop-down menus for this button have been also changed from "More" and "All" to "More Objects" and "All Objects" to be consistent with the menus in the main menu > View.

  (601477)
- The warning message about a potentially long query will be shown only in case of 1 million or more objects when: 1) "All Types" is selected in the Object Types filter (as it was before) 2) The primary filter is Category or Query

  (595025)

EA - Upgrade

Back to the list

- DB schema upgrade procedure was fixed to properly modify the MS SQL collation for all string columns. Note: To resolve further problems, a workspace upgrade is needed.

  2676712 (1092277)
- Metrics history configuration is no longer lost after workspace upgrade.

  2666829 (1091242)

EA - Usability

Back to the list

- Context menus for JCL, Data and COBOL have been unified in EA, EA Web and Eclipse.

  2672332 (1091730)

EA Search Assistant

Back to the list

- When typing in Search Assistant, a hint window appears, with search suggestions based on previous searches by all users in the current workspace.

2693759 (1093715)

- Search Assistant has been changed to retain criteria between Folders and Types view.

2683287 (1092830)

- Additional entities are now correctly handled while searching.

2682338 (1092756)

- Search Assistant results will now be saved when switching to the Legacy Search.

2676594 (1092279)

- A sorting option has been added for the main table.

2672422 (1091740)

- "Go To Source" option has been added to the EA Search Assistant.

2669805 (1091520)

- The default browser context menu for query repository results and CRUD report results in the EAWeb has been removed.

2668326 (1091374)

- Variable search has been added.

2668065 (1091344)

- Leading wildcard searches are now allowed in Search Assistant if the timeout option is set. The timeout for searches is enabled by default and can be changed in the Workspace Options > Search Assistant tab available only to master users. A new option for limiting the maximum number of results that can be returned in a search has also been introduced in the same section of Workspace Options but is disabled by default. Note that for EAWeb and the Enterprise Analyzer Access search plugin for Enterprise Developer for Eclipse the timeout option for the service log on user of the Enterprise Analyzer Web Service will be used.

2668064 (1091343)

- The Status column has been added in the Search Assistant plug-in.

2667227 (1091265)

- CICS transactions are now visible in Search Assistant.

2665269 (1091078)

- HC search results are now grouped by file in Types view just as they are grouped in Folders view.

(599388)

EA Web

Back to the list

- Browsing relationships is now aligned to the desktop version. SORT programs are not giving errors when trying to show their source.

2800490 (1096853)

- The issue that caused an empty folder to be shown in search results has been fixed.

2779883 (1094569)

- Double-clicking source files in EA Web search results will now show the source. Double-clicking hypercode objects in the search results will open the source with that construct highlighted.

2691953 (1093449)

- The "Legacy Source" context menu option has been removed for legacy objects in EA Web and in the Eclipse plug-ins.

2691948 (1093446)

- The behavior of the "Open" and "Go To Source" options in EA Web has been changed.

2691946 (1093444)

- When a diagram is generated for multiple files, the title of the tab is "Scope Name - Multiple Files Selected".

  2691944 (1093440)
- Multi-select behavior for "Go To Source" has been added.

  2691942 (1093439)
- Tab names for multiple selection have been changed and the query repository results have been re-ordered.

  2691941 (1093438)
- A context menu for executing queries, drawing diagrams, or displaying the source file is now available when selecting objects in the repository query results.

  2683938 (1092902)
- Multiple selection issues have been fixed so that there's no longer a difference in behavior and results.

  2684381 (1092973)
- The "Fit to window" option has been added to EA Web Diagrammer.

  2681520 (1092659)
- Context menu for file grouping nodes for hypercode objects (e.g. Declarations) has been added.

  2680970 (1092642)
- Diagram generation for Detail scopes has been fixed.

  2680968 (1092643)
- The system copybook OS390Cobol.cpy will no longer be visible in the EA Repository browser, Query Repository results, Diagrammer, EA Web or the ED/Eclipse plugins. Note that reverification of the COBOL files that use the COBOL/390, Enterprise COBOL legacy dialect option is required to see this change.

  2680930 (1092631)
- The title when viewing source has been changed to Browse instead of Edit.

  2680929 (1092629)
- The arrow/text overlap on "Query Repository" has been fixed.

  2680903 (1092615)
- A project drop-down menu has been added for Inventory Report in EA Web. Only shared projects will appear in the drop-down menu.

  2674928 (1091991)
- Tab Names in EA Web diagrams have been changed to use the correct scope names.

  2672430 (1091780)
- Diagram Titles now contain the name of the selected object.

  2672428 (1091741)
- The version of the EA Web Service and the connection status can now be seen by clicking links located in the top right corner of the webpage.

  2672394 (1091735)
- A new full view option is available for each of the charts, allowing users to have a better view of the chart's data.

  2671926 (1091708)
- The "Is CRUD by" context menu has been renamed to "CRUD Information". The results it shows are the same.

  2671366 (1091650)
- Horizontal and vertical scroll has been added to the Search Assistant.

  2671347 (1091647)

- Query results can now be sorted.

  2668070 (1091346)
- It is now possible to draw diagrams for search results.

  2668063 (1091342)
- Detailed scopes now produce correct diagrams.

  2667879 (1091326)
- The issues with the menus have been fixed.

  2665294 (1091065)
- Hints are added when performing searches in the Search Assistant view based on the previous search terms provided by the users.

  2665293 (1091071)
- The user is now notified with a message if no result has been found.

  2665273 (1091070)
- A popup menu has been added to the tab control which allows closing of the tab or closing all other tabs.

  2665272 (1091072)
- Diagrams should now fit the size of the tab frame. If the diagram appears thumbnail size in the top left corner of the tab, clicking on a different tab or resizing the browser window will display the diagram image correctly. The issue may only appear in Internet Explorer, not Chrome or Firefox.

  (599781)
- When there are no relevant diagram scopes, the Diagrammer menu is inactive.

  (599820)
- Searches in EA Web no longer return HC objects for unshared projects.

  (599916)
- The objects displayed as part of the EA Web navigation are now sorted.

  (607688)

EA-ED Integration

Back to the list

- The ability to populate the list of POIs via Eclipse messages has been added to the Clipper View plugin (to be used from the AWM plugin).

  2697803 (1094181)
- The ability to set breakpoints from selected POIs has been added to the Clipper View plugin.

  2696122 (1094013)
- When typing in Search Assistant, a hint window appears, with search suggestions based on previous searches by all users in the current workspace.

  2693758 (1093716)
- Double-click on a search result now opens its source code.

  2691954 (1093450)
- The Open option has been added to the context menu for files that exist in the project.

  2682292 (1092737)
- "Clear all" has been moved from the context menu to the toolbar.

  2682247 (1092736)
- Connection with the service no longer fails.

  2681521 (1092658)

- Overlaid icons have been added to identify files that exist or don't exist in the Eclipse plugins.

  2681138 (1092660)
- The CRUD information option has been added for COBOL files in the Search Assistant Plug-in.

  2673353 (1091847)
- The dialog "Add to project" now shows the objects as tree. They also have checkboxes.

  2672701 (1091773)
- System names have been removed from project selection.

  2672681 (1091772)
- A context menu has been added to "Copy to Clipboard".

  2672414 (1091737)
- The workspace version is now shown next to the connection status.

  2672396 (1091736)
- EA options will now appear under Micro Focus category. If you don't have ED installed, these options will appear under Enterprise Analyzer.

  2672390 (1091734)
- A new Brave job has been introduced to export list content to an .xml file to be used from the Eclipse EA plugins. Example usage: Brave.exe ExportListToXML.bj "c:\temp\swap\zzz.log" Workspace="C:\temp\swap\ORA1MWTEST2" ListName="zzz" Category="General" FileName="c:\temp\swap\zzz.xml"

  2671374 (1091652)
- In the Window/Preferences menu, the plugin entries are now under the "Micro Focus" category.

  2671348 (1091649)
- A blank "Is CRUD By" results list is no longer shown if no results have been found.

  2670226 (1091558)
- The search results and query results tables will now fit to the edges of the search view.

  2670225 (1091559)
- HyperCode objects are now available in the search results.

  2669812 (1091522)
- "Go to Source" for HC objects is now included in EA Eclipse plugins / EA Web.

  2669806 (1091521)
- The "Delete" and "Clear All" options have been added on the Clipper View Eclipse Plug-in.

  2669718 (1091512)
- The .rwp workspace file now shows the correct file type description in Windows.

  2669714 (1091511)
- Query names in ED have been aligned to the ones in EA/EAWeb.

  2668326 (1091557)
- The plugin components are signed now, and a license dialog is shown during the installation.

  2667705 (1091310)
- Add to project with references has been added to the plugins.

  2667182 (1091254)

Homonyms

Back to the list

- There is no longer a problem using relative paths for search in the project homonym configuration.

  2677500 (1092281)

- There is no longer a problem using absolute search path for homonyms on a shared workspace.

  2670963 (1091639)
- PCF-related Brave scripts (ApplyPCF, CreatePCF, SetProject) now work correctly in a homonyms enabled workspace.

  2670621 (1091630)
- The issue where the homonym search path priority did not work for non-source file objects has been fixed.

  (601059)

Updates and SupportLine

Our Web site gives up-to-date details of contact numbers and addresses.

Contacting Micro Focus

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Information Needed by Micro Focus SupportLine

When contacting Micro Focus SupportLine, please include the following information if possible. The more information you can give, the better Micro Focus SupportLine can help you.

- The name and version number of all products that you think might be causing an issue.
- Your computer make and model.
- System information such as operating system name and version, processors, and memory details.
- Any detailed description of the issue, including steps to reproduce the issue.
- Exact wording of any error messages involved.
- Your serial number or works order (WO) number.

To find out these numbers, look in the subject line and body of your Electronic Product Delivery Notice email that you received from Micro Focus on the box in which the product was supplied, and on the red card supplied in the DVD case .