Information Engineering Technology

Release Notes

Release 8.8.4

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CONTENTS

Introduction

Changes marked with a '**' indicate fixes to high severity issues and it is highly recommended that the service pack is installed if you are likely to be affected by these issues.

Changes marked with a '*' indicates fixes to medium severity issues or a change in behaviour and again it is recommended that the service pack is installed if this issue is likely to affect you.

Highlights

REST Web Services

Studio Developer now provides the ability to define and generate both default and custom RESTful web service interfaces to Gen generated servers. The web services can also be generated using a system updating step using GuardIEn CSE.

The web services are generated either for Java to target a JEE application server or COBOL to target CICS.

Consult the *Studio Developer Web Services* document for further details.

CICS SOAP Web Services

Studio Developer now provides the ability to define and generate default and custom CICS SOAP web service interfaces to Gen generated applications.

GuardIEn Web Services Comms Option

GuardIEn can now use web services as an alternative client/server communications option between the GuardIEn client and server for CSE platforms (using the in-built web services feature of the Gen transaction enabler) and also for CICS (using the new GuardIEn feature to generate CICS SOAP web services).

Action Diagram Compare

Studio Developer provides a facility to perform a side-by-side comparison and editing of two action diagrams. It is often useful to compare two versions of the same action diagram from different models, for example when performing parallel development or re-working a fix into a development model and this can be achieved by dragging the second action diagram into the compare with field from a different model.

Data Model Diagrams

Studio Developer now provides a data model diagram to facilitate visualisation of all or part of the data model.

Navigation Diagrams

Studio Developer now provides a Navigation Diagram which displays the dialog flows between screened procedure steps.

Project Definition Diagrams

The life-cycle and model architecture diagrams are now available in the GuardIEn Studio client.

GuardIEn REST API

The GuardIEn API now includes a REST API. Consult the GuardIEn API document for further details.

SSL/TLS support

The GuardIEn client and Remote Processing Deamon (RPD) now support SSL/TLS encryption (FTPS).

Increased length for encyclopaedia password and connect strings

The length of the encyclopaedia password and connect strings has been increased to allow longer passwords to be specified.

Support for Linux CSE

The IET DevOps suite now supports Linux as a server platform to coincide with the recent support for Linux as a CSE platform.

Increased number of jobcard lines

The number of jobcard header lines supported by GuardIEn has been increased from 4 to 10, primarily to support long passwords in the jobcard.

Security Token

GuardIEn can now use a security token for user authentication. An example is when multi-factor authentication is enabled that requires a time-limited code to be included in the password and subsequent authentication using a generated token rather than the time-limited password.

General

*** CR11958 FTPS support*

The FTP function provided with the GuardIEn client uses the Microsoft WinInet library which does not support TLS encryption (often called FTPS). The GuardIEn client DLL has been modified to use the libCurl library that supports SSL/TLS encryption. FTP is used in the GuardIEn client for:

- Transferring transaction (.trn) files between the toolset and encyclopaedia server for upload/download tasks
- Transferring XOS files between the client and the XOS file server(s)
- Transferring XOS minor version files between the client and encyclopaedia server

If the server supports or requires TLS encryption, then the client will automatically negotiate the encryption. This means that the hostname specified should match the server certificate. For example, if the FTP server name is myserv.myorg.com with an IP address of 10.1.2.3, then currently either the IP address or hostname can be specified in the GuardIEn connection details. With this change, since TLS negotiation is automatic, if the FTP server allows TLS, then the negotiation will fail if the hostname specified in the connection details does not match the certificate, for example if the connection details use the IP address instead of the hostname.

CR11952 RPD Fixes

1) RPDLSNR on z/OS will re-try a failed open of the destination file to cater for temporarily in use

2) Fixed issue with a 'get' on UNIX resetting file permissions instead of preserving them from destination file if it exists.

3) Fixed issue with running multiple XO processes online.

4) Fixed issue when using a specific port and GuardIEn z/OS server not using codepage 285. **Note that this fix requires both the client and server to be using release 8.8.4.**

*** CR11959 Increased length for encyclopaedia password and connect strings*

The length of the encyclopaedia password and connect strings has been increased to allow longer passwords to be specified:

- Password increased from 20 to 100#
- Encyclopaedia connect and api-connect strings increased from 64 to 255#

To use the longer passwords and connect strings you must upgrade both the clients and servers to release 8.8.4 and update the database.

If you have already upgraded to release 8.8, then you will need to modify the CDW_PASSWORD, CDW_CONNECT and CDW_API_CONNECT columns using the ALTER TABLE statements in the gdupg SQL.

If you use VerifIEr with a customised GDOPVCUS and also connect to a non-default encyclopaedia, then you will need to re-generate GDAVF2 and GDAVF3 and re-build GDOPVCUS.

CR11962 SSL/TLS encryption for RPD

The data transferred between the RPD client and server can now be encrypted using SSL/TLS. Consult the RPD user guide for details on how to enable this.

CR11977 Error connecting to non-default encyclopaedia

The encyclopaedia connect string for Oracle can incorrectly contain trailing spaces which causes an Oracle logon error when reading data from the non-default encyclopaedia.

CR11979 Support for Linux CSE

The IET DevOps suite now supports Linux as a server platform to coincide with the recent support for Linux as a CSE platform.

CR11989 GuardIEn REST API

The GuardIEn API now includes a REST API. Consult the GuardIEn API document for further details.

CR11993 GuardIEn password incorrectly trimmed

The GuardIEn password is incorrectly trimmed at the first space when placed into the Gen runtime buffer.

*** CR12002 Increased number of jobcard lines*

The number of jobcard header lines supported by GuardIEn has been increased from 4 to 10, primarily to support long passwords in the jobcard.

The following user exits have been modified to cater for the change:

GuardIEn CSE:

- GDJCLEX

GuardIEn HE:

- GDJCLEX
- GDPUEXIT
- CPDPUXIM copybook used by GDPUEXIT
- CPPPUXE1 copybook used by GDPUEXIT
- CPPPUXNC copybook used by GDPUEXIT

If you have customised any of the above exits, you will need to modify your customised exit, taking into account the changes to the import/export views of the exit.

Note that the ChangeMan interface only supports 4 jobcard lines due to a restriction in the ChangeMan XML services.

CR12003 Security Token and new exit

A new server exit GDSECTOK can be customised to generate a security token that is then returned to the client and can be inserted into the Gen CFB for subsequent authentication. An example is when multi-factor authentication is enabled that requires a time-limited code to be included in the password. In this scenario, the initial logon will invoke the server exit which will generate a token (for example a JSON Web Token) which is returned to the client and then sent on subsequent server calls. The Gen runtime validation would then verify the user with the token rather than the password.

To enable the security token, customise the GDSECTOK user exit and also set the client environment variable GDN_SECURITY_TOKEN to a value of SERVER.

Studio

REST Web Services

Studio Developer now provides the ability to define and generate custom RESTful web service interfaces to Gen generated servers.

The web services are generated either for Java to target a JEE application server or COBOL to target CICS.

The java generated services can either invoke the Gen servers as a Java EJB or via a Java proxy. The Java proxy can then invoke the Gen server on multiple platforms, for example Windows, UNIX or CICS.

Consult the *Studio Developer Web Services* document for further details.

CICS SOAP Web Services

Studio Developer now provides the ability to define and generate default and custom CICS SOAP web service interfaces to Gen generated applications.

Consult the *Studio Developer Web Services* document for further details.

Action Diagram Compare

Studio Developer provides a facility to perform a side-by-side comparison and editing of two action diagrams.

Select one or two action diagrams in the Model Explorer and use the right-click Compare or *Actions->Compare* menu to open the Compare editor.

It is often useful to compare two versions of the same action diagram from different models, for example when performing parallel development or re-working a fix into a development model and this can be achieved by dragging the second action diagram into the compare with field from a different model.

Data Model Diagrams

Studio Developer now provides a data model diagram to facilitate visualisation of all or part of the data model. Multiple diagrams can be opened at the same time and either saved to the model or a local file.

The Data Model Diagram in Studio Developer is designed to help you visualise an existing data model, it is not designed as a data modelling tool that allows you to add new entity types or relationships.

Large data models can be difficult to comprehend, and it is often more useful to be able to view a subset of the data model focussed on specific entity types, so the Studio Developer data model diagram has been designed to make it quick and easy to view the data model for a specific set of entity types.

A new diagram can be created by first selecting scoping object(s) and then using the right-click or Actions menu *Data Model Diagram* option. The scoping objects can be:

- The root subject area to show the entire data model
- One of more non-root subject areas
- One or more entity types
- An action block – this then scopes the diagram with the entity types that have an entity action view in the action block

Navigation Diagrams

Studio Developer now provides a Navigation Diagram which displays the dialog flows between screened procedure steps. Multiple diagrams can be opened at the same time and saved to the model. Large models can be difficult to comprehend, and for UI navigation design it is often more useful to be able to view the dialogs between a selection of procedure steps.

Project Definition Diagrams

- The life-cycle and model architecture diagrams are now available in the GuardIEn Studio client.

UI Designer Enhancements

1) Added the ability to re-order permitted value drop-down values for a drop-down within the Controls tab using drag and drop.
2) Changed the method of choosing which annotations to display in the editing area. This is now controlled by the Annotate drop-down which allows you to explicitly set which annotations are displayed or choose Auto which then annotates the UI design based on which component tab is open: Controls, Sequence or Mapping.
3) Added a new option in the Controls tab to switch between displaying tracking and custom themes to make it easier to see which custom themes are set for the controls. The custom theme can be set directly for each control by clicking on the theme cell or for multiple controls using the toolbar button. Note that tracking and custom themes are Rapide features only available when Rapide is enabled.

Rapide Generation Trace option

The Rapide Generation editor options now allow you to specify that trace is automatically selected when an object is selected for code generation.

Studio Developer Fixes and Enhancements

1) Fixed an issue where the UI Designer Controls tree does not show a push button as within a group box.
2) Certain dialogs (e.g. CR Content) allowed objects to be dragged/pasted when they were protected.
3) The Model Explorer filter is now case-insensitive so that objects with mixed case names can be filtered.
4) The Web Service Definition editor contains an additional check that the web service definition name converted to camel-case cannot be the same as any included procedure step names (camel-cased).
5) Build output can now be viewed from the Web Service Generation editor.
6) Added send/return current exit state properties to dialog flow editor.
7) When implementing a timestamp attribute and specializing for Oracle, the default column format is now “Timestamp” instead of “Date”.
8) The descriptions for some of the column formats for certain databases were not correct when displayed in the Data Structure Editor and the column was not specialized.
9) If the category of an attribute is changed to ‘Auto Number’ the data structure synchronisation will now detect if the column is not defined as an identity column and fix the column property.
10) Pstep Interface Editor: The mapping for system attribute views is not always correctly stored. This was caused by duplicate INTRFUSG objects being created for the system attributes. The issue has now been fixed but the model might contain these duplicates. Opening the interface definition within Studio Developer and pressing Apply will now remove the duplicate objects to fix the model.
11) For a local model, the Model Explorer contains a top level node called ‘AB/Pstep Changed Since Upload’ which when expanded lists action blocks and procedure steps with a modified date/time greater than the local model’s last upload date/time.You can now specify a date to be used instead of the last upload date. Either choose the *Options->Specify Date for AB/Pstep Changed Since* menu item or right-click on the node and choose the option. A dialog box will open allowing to specify either ‘Since Last Upload’ or a specific date.

Change Management

CR11995 CR Report error if status not found in life-cycle definition

If a CR status is removed from the customised life-cycle and a CR references the status, the CR list or summary report fails

System Updating

CR11955 Copy Expansion fix

When an expansion copy step selects multiple previous SUs to copy and these all reference a specific deliverable, if the last change timestamp for the object is the same in all previous SUs but the has-sql property differs (for example because it is an XOS object where the sql value changes but the Gen object is not changed), then the has-sql property in the copied expansion gets its value from the first SU in sequence whereas it should be taken from the most recent SU in the case where the AB timestamps are the same.

CR11972 RPD Support for HE Remote MVS processing

GuardIEn HE remote MVS processing jobs can now be submitted using RPD as an alternative to FTP. Steps supported include:

- Bind
- Staging Copy
- MFS Gen
- Staging copy

CR11980 CSE Generation for REST Web Services

The generation and build of the REST Web Services that are defined using Studio Developer can be automated in a GuardIEn CSE DU/SU process using the web service generation / install steps.

CR11996 Migrate Status Update error messages

The error message output when a version status cannot be updated post-migrate now reports more details rather than a generic message.

CR11998 Scoping a LU via GD54

If GD54 is used to scope a location update but DISTSU is used instead of SCOPELU, if a step type is selected which is customised to be 'LU only' in the project setup, this is incorrectly not allowed.

Task Dispatcher & Task Assistant

CR12001 Task Dispatcher include failure message in task output

When a task is failed by the Task Dispatcher, for example because a lock test failed, the task output file should contain the error message.

Subset Assistant

CR11982 Subset Assistant displaying proxy / web service definitions

The Subset Assistant does not display the name of custom proxy and web service definition objects.

System Administration

CR11974 Encyclopaedia API Connect string

The API Connect string property in the GuardIEn encyclopaedia definition is incorrectly limited to 50# instead of 64# for an Oracle database.

Project Administration

CR11970 Model Architecture Diagram

The model architecture diagram does not show a model that is not associated to an environment within the correct system release box.

XOS

CR11951 Parser Enhancement

The XOS parser matching process has been enhanced so that if a match based on deliverable code/name fails, it then always attempts a match based on XO server file name.

Interfaces

CR11986 HE Endevor interface

Fixed an issue with checking the results of multiple DEFINE PACKAGE statements

genIE

CR11976 View Initialisation

The genIE View Initialisation function should not include persistent entity views in the selection list of possible views to update.

CR11984 Copying p-step issue

When copying a procedure step that has custom interfaces using genIE or Studio Developer, interface usages of the import and export views are incorrectly copied into the new procedure step.

CR11987 Error changing business system

An error occurs when changing the owning business system for a procedure step that has window controls that use custom edit patterns.

Object List+

CR11961 Name search for web service objects

Web service objects whilst having a NAME (224) property actually use the LABELSTR (1976) text property to store the name. To make a name search more intuitive, the default property for WSUNIT, INTRFACE and PACKAGE objects is now set to LABELSTR with a description of "<Name Label>"

CR11964 ENT/WAS Expand option in multi-model mode

When using Object List+ in CBD or Multi-Model mode, the Expand option is disabled for entity types and work sets since multi-model expansion of an entity type is not relevant. To avoid having to switch to single-model mode to expand an ENT or WAS, the expand option is now enabled and this will expand the selected ENT/WAS to its component attributes and relationships as if single-model mode were selected.

VerifIEr

CR11957 Batch Scoping Information

Added additional diagnostic messages to the output when scoping a batch check since the GUI console is not available to display error messages.

CR11963 New Check Type IET170

A new VerifIEr check IET170 checks that entity types and optionally their attributes have a description. Import the new check types from the VerifIEr.exp file using the VerifIEr Administration client.

CR11978 VerifIEr report sort order

The VerifIEr results report default order is check type then check item. A new property VFREPSRT allows the sort order to be item then check type if the value is set to 'Name'.

pathvIEw

CR11948 pathvIEw Improved Error Handling

Added error handling to the pathvIEw runtime and listener for z/OS and UNIX to correctly handle a SIGPIPE signal instead of aborting the process in the event that the sending or receiving program aborts.

CR11973 Compare function only shows first page

The pathvIEw compare function only shows the first page of the compared PAD statements.

CR11991 Logging Folder

The pathvIEw logging files are now located in a folder defined by the PATHVIEW_LOG_FOLDER environment variable if this is defined. This affects Windows and *nix platforms. The log folder should exist and the environment variable should contain a trailing \ (Windows) or / (*nix).

CR11999 Filter on execution date

The pathvIEw client main list now contains a filter on last statement execution date and time. Specifying a date & time will then only show action blocks that have a statement executed on or after the specified time. This can be useful if you want to show which action blocks have been executed recently, for example to diagnose a problem without resorting to generating the code in trace.