

**RESPONSE**SYSTEMS



# Access Gen

**maximise your productivity**

**User Guide  
Version 8.64**

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# New and Noteworthy

## Version 8.64

### Added at 8.64.008

#### Web Service Reporting

Web Service GENius customers are now able to perform a number of reports to assist in analysis:

- Version report to show different versions of Web Services and WAR Files across the Models in the Encyclopedia.
- Browse report to show a Web Service Definition in a text or html format.
- Browse Compare to compare the differences between the output of the Browse command across two Web Services.
- Two Web Services can be compared across Models using the Cross Model Browse Compare.

#### Edit WAR File Definition

A WAR file can now be modified without the execution of the the WAR file generation.

#### Edit Web Service

A web service definition tab is no longer automatically opened on selection of the web service. Please use the Edit Web Service menu option to open a web service definition tab.

### Added at 8.64.007

#### Support for Simultaneously Packaged Procedure Steps

Procedure Steps packaged in multiple ways are now fully supported allowing more accurate analysis and Web Service support.

#### Technology Updates and Bug Remediation

A number of technology updates and bug remediations are included in 8.64.007.

### Added at 8.64.006

Action Diagram Browse bug remediation.

### Added at 8.64.005

Security update.

### Added at 8.64.004

#### RESTful API support for IMS

Support of RESTful APIs targeting IMS has been added to the product. See [Create and Maintain Web Service Definitions](#) for more information on creating and configuring these.

See [RESTful API](#) for more information on generating and deploying these.

#### CICS 6.1 Support for CICS web services

Web Services GENius now supports CICS 6.1 CICS Web Services.

#### Java 8 Support for Service First and Contract First CICS web services

Web Services GENius now supports Java 8 for Service First and Contract First CICS Web Services.

#### Streamlined licensing

Streamlined licensing only requires a Site license for Host Encyclopedia customers generating Service First web services.

#### Task Scheduling improvements

A number of bug remediations and improvements have made to the Task Scheduling functionality.

#### Web Service GENius - deprecated versions

The following are no longer supported and will be removed in a coming release:

- CICS 3.2 - 5.4
- COBOL 3.4 - 6.1
- Java 6 and 7

## Added at 8.64.003

### Support for z/OS password phrases and mixed case passwords

It is now possible for a user to login with a traditional eight character password or a password phrase of up to a hundred characters, if password phrases are enabled on their system. Mixed case passwords are also supported.

### Improvements to mainframe JCL

Changes have been made to some of the procedures and CLISTs to improve their flexibility in more environments. Please see the notes accompanying the mainframe package for further instructions.

Additionally, CICS 5.6 REST support has been improved for Contract First and Service First processes.

### User Exits for WSG generated API endpoints

It is now possible to modify user exits to interrogate information about an API request occurring during execution of the API.

Installation and configuration of this is covered further in the Technical Guide. Please consult it for the latest information.

## Added at 8.64.002

### Libcurl CVE vulnerabilities

Libcurl CVE vulnerabilities have been resolved.

### Search for Windows by Title

The new Find Windows by Title will return Windows, Primary and Secondary Dialog Boxes where their title matches or partially matches the search string specified.

### Securing Web Services with JWTs

It is now possible to specify whether a Web Service requires a valid JWT to be supplied. This field appears in the JWT group for a Web Service.

To support this, the Algorithm (RS256), Issuer and Public Key can be specified at a Site or Model level under JWT properties. For any Web Services that require it, it will ensure that a JWT is supplied and valid according to the issuer, key and issue time.

## Added at 8.64.001

### OpenAPI Specification Fields on Web Services

It is now possible to add a Summary and Description to a Web Service, as well as Example and Pattern properties to an Attribute or View in a Web Service. These fields appear in the OpenAPI specification that is generated.

## Added at 8.64.00 GA

### Improved support for regeneration of WAR/EAR files

Generation of WAR files is simplified by adding a WAR files node to the Model tree and allowing for full regeneration by interacting with the WAR file.

### Field level description on Web Services

It is now possible to add a Description to an attribute or view in a Web Service. This description appears in the OpenAPI specification that is generated during the build.

### Support for Enterprise COBOL versions

Enterprise COBOL versions 6.3 and 6.4 are now supported via the client at the site and model level. Versions 3.4, 4.1, 5.1, 5.2 and 6.1 are deprecated and will be removed in a coming release.

### FTPS Support

Web Service GENius artifacts can now be transferred using an FTPS interface.

### Web Service Migration

It is now possible to migrate web service definitions between Models using the new Migrate To option.

See [Web Service Migration](#) for more information.

## Version 8.63

### Added at 8.63.007

#### Support for z/OS mixed case passwords

It is now possible for a user to login with a mixed case password (Known issue: Passwords containing a lower case "r" will return an incorrect Invalid Password error.)

### Added at 8.63.005

#### Improved support for RESTful API generation of web services for External Action Blocks

Generation of CICS web services for EABs with High Performance View Passing turned off is now supported.

Note: Functionality that requires GlobData (e.g. System attributes, Default Exit State) is not supported for External Action Blocks where High Performance View Passing has been turned off and CICS is the generation target.

### Added at 8.63.004

#### Apache Log4j remote code execution vulnerability

The Log4j vulnerability has been resolved.

#### Problem Markers extended

Problem Markers have now been extended across all Web Service GENius properties. Instead of a series of warning or error dialog boxes being presented for missing or invalid information a Problem Marker is raised in the Problem Marker view that enumerates the outstanding issues to be resolved.

See [Problem Markers](#) for more information.

#### FTP transfer improvements

The FTP process has been improved making it more robust. An initial attempt is made using passive mode (PASV). If this fails active mode (EPSV) is attempted.

#### Custom trancode support

Custom trancode support has been extended to RESTful APIs so that transactions can be executed using the custom trancode.

#### Support a minLength of zero on Fixed Length string fields

Web Services GENius now supports the consumption of values that are shorter than the maximum defined length for Fixed Length strings.

#### Diagram Trace support for EJB improved

Diagram Trace has been improved when targeting EJB to facilitate tracing through used Action Blocks.

### Added at 8.63.002

#### Full RESTful API support for EJBs

Support of RESTful APIs targeting GEN EJBs has been added to the product. See [Create and Maintain Web Service Definitions](#) for more information on creating and configuring these.

See [RESTful API](#) for more information on generating and deploying these.

#### Filtering on Endpoints

The Endpoint node in the Model List can now be filtered on URI or web service name to allow for faster navigation.

#### Less restrictive field renames for API targets

Renaming of Import and Export views on the web service definitions when targeting RESTful API has been relaxed to allow the use of any desired names.

#### Varying length string support for API (CICS)

Web Service GENius now fully supports varying length strings for the API orientation.

#### CICS 5.6 Support for CICS web services

Web Services GENius now supports CICS 5.6.

## Added at 8.63.001

### OpenAPI support for RESTful APIs

An OpenAPI V3 schema is now generated for RESTful APIs as part of the build process. This is exported as part of the build process, and also dynamically discoverable at runtime through a nominated endpoint.

See [RESTful API](#) for more information.

### Problem Markers

Instead of a series of warning or error dialog boxes being presented for missing information in RESTful API definitions, there is now a Problem Marker view that enumerates the outstanding issues and what needs to be resolved.

This helps simplify the workflow when creating new RESTful APIs and provides a central mechanism for seeing outstanding problems.

See [Create and Maintain Web Service Definitions](#) for more information.

### Web Service / RESTful API Cloning

A Web Service or RESTful API can now be cloned and have its properties updated to be saved as a new service. See [Create and Maintain Web Service Definitions](#) for more information.

## Added at 8.63.00 GA

### Full RESTful API support for CICS web services

RESTful APIs with HTTP Verb support, path parameters and request parameters have been added to the product.

See [Create and Maintain Web Service Definitions](#) for more information on creating and configuring these.

See [RESTful API](#) for more information on generating and deploying these.

## Introduction

This application is an easy-to-use tool for developers and technical support staff, designed to provide fast browse and edit access to the Gen Host or Client Server Encyclopedia. It's a powerful encyclopedia browser and update tool that brings the information stored in the encyclopedia directly to your desktop without the need for a download.

By taking a model/object view of your Encyclopedia, it supports the selection of object types contained within a chosen model and the entry of simple search criteria to quickly locate specific objects. Once found, various features are available to run against either individual objects or multiple objects at the same time.

To start, choose a Model that contains the objects you are interested in and then locate the desired objects using a variety of available search methods. Once located, select an object to enable all features relevant to its type.

## Model List

This pane provides the encyclopedia model listing and allows the user to navigate to the desired object type or types by expanding or contracting the nodes.

Depending upon the site's security preference, the model list will contain either all models in the encyclopedia or only those models the user is authorised for.

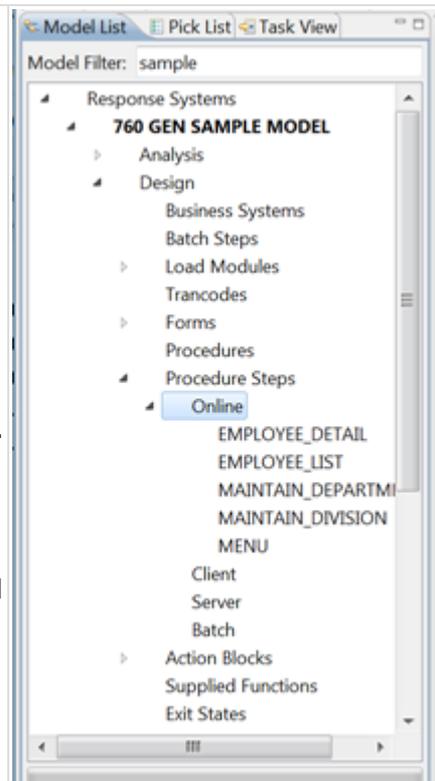
Should a model be added to or removed from the encyclopedia during a session the Model List can be refreshed using the File menu option or tool bar push button.

Clicking on a model name will trigger an object fetch that, when completed, causes the name to be displayed in bold. The model is then ready for use and its tree can be expanded. Models that are used often can be marked as favourites by right clicking them and selecting Add/Remove to Favourites from the Model menu. Favourite models are indicated by a star next to the model name and its tree will be automatically loaded when the application Console is next opened.

The Model Filter field allows the user to reduce the model list to those containing the desired value. Simply start typing in this field to filter models.

Select an object by clicking it or use the SHIFT key and click to select multiple objects.

Once objects are selected, choose from the toolbar menu options, push buttons or right click menu to perform the desired feature.



## Model Explore

This pane displays all objects contained within the node selected in the Model List pane. For example, if the model name is selected the Model Explore pane will display every object in the model. If the Online (Procedure Steps) node is selected in the Model List pane the Model Explore pane will display only online procedure steps for the current model.

The Model Explore pane cannot display objects from more than one model.

The Filter field allows the user to reduce the object list to those containing the desired value, simply start typing in this field to filter objects.

Select an object by clicking it or use the SHIFT key and click to select multiple objects.

Once objects are selected, choose from the toolbar menu options, push buttons or right click menu to perform the desired feature.

The columns that are displayed for the objects listed are user configurable from **OPTIONS > PREFERENCES > COLUMN PREFERENCES**.

Additionally, the feature invoked by double clicking on an object can be configured from **OPTIONS > PREFERENCES > GENERAL OPTIONS**.

760 GEN SAMPLE MODEL Explore

Filter:

Object Name	Object Ty...	In WSG
EMPLOYEE_DETAIL	PStep Onl	
EMPLOYEE_LIST	PStep Onl	
MAINTAIN_DEPARTM...	PStep Onl	
MAINTAIN_DIVISION	PStep Onl	
MENU	PStep Onl	

## Pick List

This pane displays objects the user has specifically selected for inclusion.

The Pick List is populated by highlighting an object in a pane or report output and selecting the Add to Pick List option. Object types that cannot be added to the Pick List are Supplied Functions, Users and User Groups.

Once in the Pick List pane, objects can be removed either by highlighting them and using the Remove option or the Clear List option.

When working in the Pick List, highlighting objects is only significant when removing objects from the Pick List.

Pick List features will execute against every object contained in the list where appropriate. Choose from the toolbar menu options, push buttons or right click menu to perform the desired feature.

Model List Pick List

Filter:

Object Name	Object Ty...	Object Id
ADD_DIVISION	Action BL...	1154750...
DELETE_DEPARTMENT	Action BL...	1154750...
DELETE_DIVISION	Action BL...	1154750...
ACTION_BAR_IS_INVALID	Exit State	1154746...
ALL_OK	Exit State	1154746...
DELETE_OK	Exit State	1154746...
CLIENT_DETAIL_DEPARTMENT	PStep Clt	1154748...
CLIENT_DETAIL_DEPARTMENT	Primary ...	1154748...
CLIENT_DETAIL_DIVISION	Primary ...	1154748...
CLIENT_DETAIL_DEPARTMENT	Procedure	1154748...
CLIENTD2	Trancode	1154753...

Add to Pick List	
Remove from Pick List	
Clear List	

## Locating Objects

### Filter

To open this search, right click on a model or one of its nodes in the Model List pane and choose Filter Object(s).

The Find Options supports:

- Object Name field. Enter the full name or partial name of the object. More than one character string may be entered.
- AND/OR radio buttons. If more than one character string has been entered in Object Name then this field will determine how the strings are to be handled. NOTE that AND/OR applies only to the Object Name field.
- Member Name/Domain. If this field is populated then the character string entered is checked against the Member Name for any Action Diagram, and against the Domain type for any attribute (entity, subtype or workset type). A partial match is done so, for example, searching for TE would give you objects with domain type DATE or TEXT (or any other domain type containing TE).
- Object ID. This is used to find a single object in the model. An exact match, not a partial match, is done.

Multiple filters may be applied simultaneously to different nodes.

Filters applied to different nodes will not interact unless one of the nodes is in the branch or branches under the other. For example, a filter on Screens will not interact with a filter on Batch Procedure Steps and vice versa.

Criteria applied to a parent node will be 'ANDed' to any criteria applied to its child nodes.

If an object isn't in the tree, schedule a tree extract with the MODEL > CREATE EXTRACT TASK option. Talk to your administrator about scheduling this to run automatically.

The screenshot shows a dialog box titled "Find Options". It has a close button (X) in the top right corner. The dialog contains the following elements:

- An "Object Name" field with a dropdown arrow.
- Two radio buttons: "AND" (selected) and "OR".
- A "Member Name/Domain" field with a dropdown arrow.
- An "Object ID" field with a dropdown arrow.
- "OK" and "Cancel" buttons at the bottom.

### Changed By Report

This option allows a user to nominate the desired date range to return all objects changed between those dates within the current selected model. The report will include all objects changed by any user.

The screenshot shows a dialog box titled "Changed By Report Options". It has a close button (X) in the top right corner. The dialog contains the following elements:

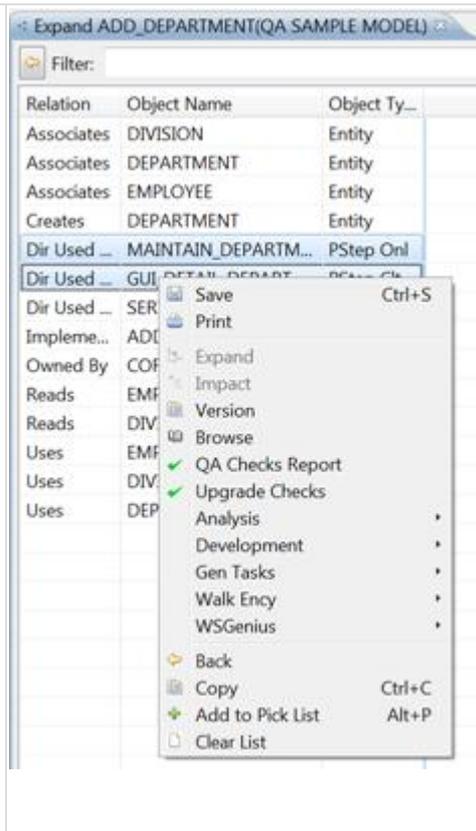
- The word "Between" followed by a date picker set to "05/11/2016".
- The word "and" followed by another date picker set to "12/11/2016".
- "OK" and "Cancel" buttons at the bottom.

## Report

Focus is automatically moved to this pane to display the output of the requested feature.

There are two different report formats but all reports are interactive.

Tabular format reports will let the user interact with single or multiple objects in the report. Select the desired objects by clicking them then choose from the toolbar menu options, push buttons or right click menu to perform the desired feature.



Text format reports will let the user interact with any highlighted objects. Right click to see the available features.



## Task Pane

Tasks provide a way for some features to be submitted as a scheduled job. Similar to objects, select a task to enable all features relevant to its type.

Supported features are:

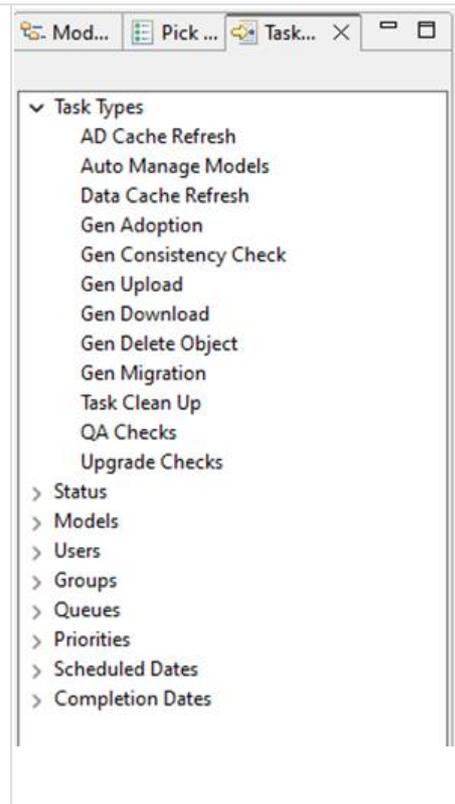
- Model Extract
- Gen Tasks
- Model QA Checks (Summary and Detail)
- Object QA Checks (Summary and Detail)

## Task View

The Task View pane is used to indicate one or more criteria that can be used to locate an existing task.

Expand nodes to select the desired filter values for each property. Where no selections are made, no filter is applied. For example, if no User is selected then tasks submitted by all users will be displayed.

Tasks that meet the specified criteria are displayed as a list in the Task List pane.



## Task Status

	Pending	Task is awaiting its scheduled processing start time.
	Running	Task is currently being processed.
	Completed	Task processing is complete.
	Held	Task is on hold awaiting release or cancellation.
	Cancelled	Task processing is cancelled. Only a Pending or Held task can be cancelled.
	Waiting	Task is waiting on another task.
	Locked	Task is preparing for execution.
	Failed	Task processing did not complete successfully.

## Task List

Focus is automatically moved to this pane to display the output of the requested Task View criteria.

The Task List pane offers the facility to monitor, hold, release or cancel submitted tasks. As well as resubmit or view the outcome of completed tasks.

Select a task by clicking it and choose from the toolbar menu options, push buttons or right click menu to perform the desired feature.

When a task is selected, its Detailed Report is automatically displayed in the Task Details pane. This pane displays the details of a submitted task such as the type of task, submitting User id, status, queue, recurrence properties, when it was requested to run, when it actually ran and whether it executed successfully.

The columns that are displayed for the tasks listed are user configurable from OPTIONS > PREFERENCES > COLUMN PREFERENCES.

Task ID	Task Description
392	Data Cache Refresh
393	Data Cache Refresh
395	Data Cache Refresh
396	Data Cache Refresh
397	Data Cache Refresh
398	Data Cache Refresh
399	Data Cache Refresh
400	Gen Download
401	Gen Download
402	Gen Migration
403	Data Cache Refresh
404	Data Cache Refresh
405	Data Cache Refresh
406	Gen Adoption
407	Data Cache Refresh

## Task Features

	Cancel Task	This feature will cancel a task. Only a Pending or Held task can be cancelled.
	Resubmit Task	The resubmit feature offers the ability to resubmit a Cancelled, Completed, Failed or Held task for reprocessing.
	Task Results	The Results feature shows the output for an asynchronous task. The results will differ based on the task type - for a download or upload task, the output will be a checkout.trn or verify.trn file. Using the results feature for these types of task will prompt for the folder location where those files are to be saved. For a QA Check task, Pre-migrate Check task, adoption or a consistency check, the results feature will display the report that has been output from the process.
	Hold Task	This feature will prevent the processing of a Pending task when its scheduled execution time is reached (but not cancel it). A task placed in a Held status can be released or cancelled.
	Release Task	This feature will restore the status of a Held task to Pending. If the scheduled execution time has passed, the Task will execute immediately. Only the user that submitted the Task can Release it.

## Task Results

Focus is automatically moved to this pane to display the results of the requested task.

All reports are interactive. Select an object within the report by clicking it and choose from the toolbar menu options, push buttons or right click menu to perform the desired feature.

Object Name	Object Type	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
ADD_DEPARTMENT	Action Block	✓	✓	✗	✓	✓	✓	✗	✓
ADD_DIVISION	Action Block	✗	✗	✗	✓	✓	✓	✗	✗
ADD_EMPLOYEE	Action Block	✓	✗	✗	✓	✓	✓	✗	✓
DELETE_DEPARTMENT	Action Block	✓	✓	✗	✓	✗	✗	✗	✗
DELETE_DIVISION	Action Block	✗	✓	✓	✗	✗	✗	✗	✓
DELETE_EMPLOYEE	Action Block	✓	✓	✓	✓	✓	✓	✗	✓
DELETE_SCOPING_CHECKED...	Action Block	✓	✓	✓	✓	✓	✓	✓	✓
DELETE_SCOPING_CHILD	Action Block	✓	✓	✓	✓	✓	✓	✓	✓
DELETE_SCOPING_CHILD_2	Action Block	✓	✓	✓	✗	✓	✓	✓	✓

## Features and Reports

	Navigate	Pick List	Model
Action Block Literal Locator			✓
Attribute Usage Report	✓	✓	
Browse	✓		
Browse Compare	✓		
Changed By Report	✓		✓
Create Aggregate Set	✓	✓	
Cross Ency Browse Compare	✓		
Cross Ency Impact	✓	✓	
Cross Model Attribute Usage Report	✓	✓	
Cross Model Impact	✓	✓	
Cross Model Timestamp Compare	✓	✓	
CRUD Report	✓	✓	
Custom Query by Model			✓
Custom Query by Object	✓	✓	
Data Model Differences Report			✓
Delete Sets(s)	✓	✓	
Description	✓		
Dialog Flow Report	✓		
Differences Report	✓		
Expand	✓		
External Interface Report	✓		
Find Windows by Title			✓
Gen Adopt**	✓	✓	✓
Gen Consistency Check**	✓	✓	✓
Gen Download**	✓	✓	✓
Gen Migration**	✓	✓	
Gen Object Delete**	✓	✓	
Gen Upload**	✓	✓	✓
Impact	✓		
Manage Subset	✓	✓	

Max Protection	✓	✓	
Modify Subset	✓		
Non-Supplied Function Locator			✓
Original Object Id		✓	
Packaging Information	✓	✓	
Pre-Migrate Check Report	✓	✓	
Properties	✓	✓	
Property Compare	✓		
Subset Report	✓		
Tree View	✓		
Unused Object Status	✓	✓	
Version	✓	✓	
View Size Calculator	✓	✓	
Model QA Detail Check*			✓
QA Checks Report*	✓	✓	
QA Checker Browse*	✓		
QA Browse Automated Correction *,**, ***	✓		

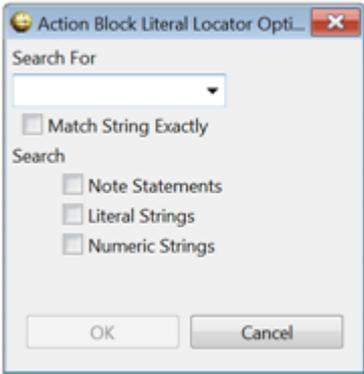
\*Only available in the QA Features add on module, \*\*Client Server Encyclopedia Users only, \*\*\*Only available from the QA Browse Check Browse output.

## Action Block Literal Locator

This feature is a model report.

The Action Block Literal Locator will take an input string and search through all action diagrams looking for situations where that string has been used partially or exactly in a character string, a numeric or in a note statement.

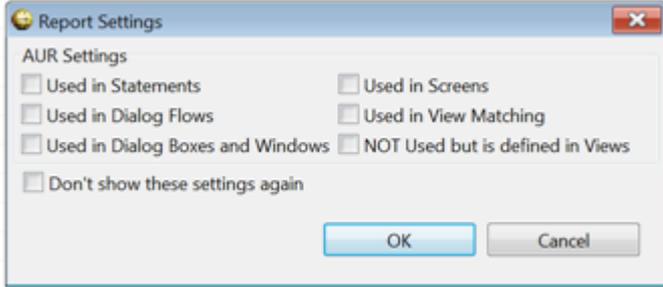
Choose any combination of search criteria to locate the desired action



diagrams.

The results are returned as a report detailing the list of qualifying action diagrams and the statement containing the search string.

## Attribute Usage Report

<p>This feature works with the following objects:</p> <p>Attribute</p> <p>Work Attribute</p>	<p>◆ The Attribute Usage Report is a powerful interactive feature that shows where an Attribute is used across a Model.</p> <p>Any one or a combination of the following ways of using an Attribute can be selected for the report:</p>  <p>To bypass the configuration settings presented each time the report runs and to use user defined default settings instead, go to the <b>OPTIONS &gt; PREFERENCES &gt; ADVANCED REPORT SETTINGS</b> tab.</p>
--	---

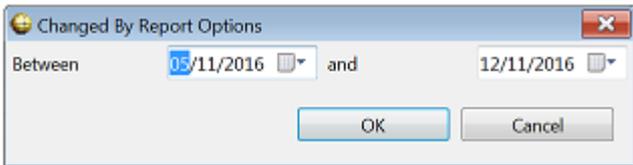
## Browse

<p>This feature works with the following objects for Access Gen customers:</p> <p>Action Block</p> <p>Aggregate Set</p> <p>Dialog Box Pri</p> <p>Dialog Box Sec</p> <p>Entity</p> <p>Ext. Action Block</p> <p>Procedure Step</p> <p>Procedure Step AD</p> <p>Subset</p> <p>Table</p> <p>User</p> <p>Window</p> <p>Work Attribute Set</p> <p>This feature works with the following objects for Web Services GENius customers:</p> <p>Web Service</p>	<p>📄 Many different types of objects can be browsed as follows:</p> <ul style="list-style-type: none"> <li>• Browsing Action Blocks or Procedure Steps returns their action diagram logic. To quickly locate statements use the CTRL+F shortcut.</li> <li>• Browsing Windows and Dialog Boxes allows them to be viewed as an approximation of what they would look like in their generated state. Clicking on a GUI object placed on a Window or Dialog Box displays information about that object.</li> <li>• Browsing an Entity returns an Entity definition report containing the properties of the Entity and all of its associated Attributes and Relationships.</li> <li>• Browsing a Table returns the physical definition of that table and all associated Columns and Indexes.</li> <li>• Browsing a Work Attribute set returns the definition of the set and its Attributes.</li> <li>• Browsing a Subset or Aggregate Set returns the properties of that set and all objects scoped within it. Note, <b>expanding</b> an Aggregate Set will only return the objects scoped within it that exist in the current selected Model but <b>browsing</b> an Aggregate Set will return all objects scoped within it regardless of the current Model.</li> <li>• Browsing a User will reveal the authorities and memberships for that user and also the Models and subsets currently checked out to that User.</li> <li>• Browsing a Web Service will return the properties of the Web Service, the Import and Export Views and any associated OpenAPI properties.</li> </ul>
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## Browse Compare

<p>This feature works with the following objects for Access Gen customers:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Entity</li> <li>Ext. Action Block</li> <li>Procedure Step</li> <li>Procedure Step AD</li> <li>Table</li> <li>Work Attribute Set</li> </ul> <p>This feature works with the following objects for Web Services GENius customers:</p> <ul style="list-style-type: none"> <li>Web Service</li> </ul>	<p> Use this feature to compare the differences between the output of the Browse command for an object in the current Model and another Model, or between two objects in the same Model.</p> <p>For an Action Block or Procedure Step, the logic for the action diagram will be compared. For Entities, Tables or Worksets, the definition report will be compared.</p> <p>For a Web Service the Web Service Properties, the Import and Export Views and any associated OpenAPI properties are compared.</p> <p>The list of available Models to compare against is filtered based on those that contain a version of the selected object. This is based on ancestry by default but can be configured to filter based on common technical implementation across Models in the <b>OPTIONS &gt; PREFERENCES &gt; GENERAL REPORT SETTINGS</b> tab (unless there is no technical implementation, in which case ancestry is used).</p> <p>The application uses a comparison tool called BC Differ to display comparison reports. Different Compare tool options have been made available under the <b>OPTIONS &gt; PREFERENCES &gt; GENERAL OPTIONS</b> tab.</p>
--	---

## Changed By Report

<p>This feature works with Users or at the Model level.</p>	<p> When a User object is selected the report will include all objects changed by that User. When a model is selected the report will include all objects changed by any user.</p> <p>Nominate the desired date range to return all objects changed between those dates within the current selected model.</p> <div data-bbox="587 1205 1220 1370" style="border: 1px solid gray; padding: 5px; margin: 10px auto; width: fit-content;">  </div> <p>Unsupported objects will be displayed but all functions for them are disabled. If an object has been changed more than once within the date range, only details of the most recent change will be detected.</p> <p>The results are returned as an Object Name and Type listing. To limit excessive run times this feature issues a warning if more than 1000 objects will be returned.</p>
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## Create Aggregate Set

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Batch Job Step</li> <li>Business System</li> <li>Column</li> </ul>	<p> Aggregate sets can be created, replaced or appended to with the selected objects.</p> <p>A user requires the necessary update Model authorities to create an Aggregate Set and the necessary Aggregate Set authorities to replace or append to an existing one.</p>
--	--

Database	
Dialog Box Pri	
Dialog Box Sec	
Entity	
Entity Subtype	
Exit State	
Ext. Action Block	
Function	
Index	
Link Table	
Load Module	
Procedure	
Procedure Step	
Procedure Step AD	
Process	
Relationship	
Screen	
Subject Area	
Supplied Function	
Table	
Tablespace	
Trancode	
Trigger	
Window	
Work Attribute	
Work Attribute Set	

### Cross Ency Browse Compare

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Entity</li> <li>Ext. Action Block</li> <li>Procedure Step</li> <li>Procedure Step AD</li> <li>Table</li> <li>Work Attribute Set</li> </ul>	 <p>This feature is identical to the Browse Compare feature except that it works across multiple Encyclopedias. If only one Encyclopedia was detected at start-up, this feature will be disabled.</p>
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## Cross Ency Impact

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Entity</li> <li>Ext. Action Block</li> <li>Trigger</li> <li>Work Attribute</li> <li>Work Attribute Set</li> </ul>	 <p>The Cross Encyclopedia Impact Analysis feature returns the consolidated potential impact of changing the nominated objects across one or more selected Models in another Encyclopedia. Use the SHIFT and CTRL keys to select multiple Models at once.</p> <p>If only one Encyclopedia was detected at start-up, this feature will be disabled.</p>
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## Cross Model Attribute Usage Report

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Attribute</li> <li>Work Attribute</li> </ul>	 <p>The Attribute Usage Report shows where all Attributes in the Pick List are used across one or more Models in a consolidated report.</p> <p>The attribute usage options cannot be configured at runtime. To view and change the settings go to the the OPTIONS &gt; PREFERENCES &gt; ADVANCED REPORT SETTINGS tab.</p> <p>The list of available Models for analysis contains all Models in the Encyclopedia. By default, ancestry is used to locate versions of the listed objects that exist in Models selected for analysis. There are two other options to locate versions available that can be configured in the OPTIONS &gt; PREFERENCES &gt; GENERAL REPORT SETTINGS tab. These are by object name and type or by common technical implementation (member name for Action Blocks, External Action Blocks, Procedure Steps and Screens or technical design implementation for Attributes). Where technical implementation is selected, objects that don't have a technical implementation are ignored (e.g. Entities).</p>
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## Cross Model Impact

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Entity</li> <li>Ext. Action Block</li> <li>Procedure Step</li> <li>Trigger</li> <li>Work Attribute</li> <li>Work Attribute Set</li> </ul>	 <p>The Cross Model Impact Analysis feature returns the consolidated potential impact of changing the nominated objects across one or more selected Models. Use the SHIFT and CTRL keys to select multiple Models at once.</p> <p>The list of available Models contains all Models in the Encyclopedia. By default, ancestry is used to locate versions of the listed objects that exist in Models selected for Impact Analysis. There are two other options to locate versions available that can be configured in the OPTIONS &gt; PREFERENCES &gt; GENERAL REPORT SETTINGS tab. These are by object name and type or by common technical implementation (member name for Action Blocks, External Action Blocks, Procedure Steps and Screens or technical design implementation for Attributes). Where technical implementation is selected, objects that don't have a technical implementation are ignored (e.g. Entities).</p>
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## Cross Model Timestamp Compare

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Batch Job Step</li> <li>Business System</li> <li>Column</li> <li>Database</li> <li>Dialog Box Pri</li> <li>Dialog Box Sec</li> <li>Entity</li> <li>Entity Subtype</li> <li>Exit State</li> <li>Ext. Action Block</li> <li>Function</li> <li>Index</li> <li>Link Table</li> <li>Load Module</li> <li>Procedure</li> <li>Procedure Step</li> <li>Procedure Step AD</li> <li>Process</li> <li>Relationship</li> <li>Screen</li> <li>Subject Area</li> <li>Table</li> <li>Tablespace</li> <li>Trigger</li> <li>Window</li> <li>Work Attribute</li> <li>Work Attribute Set</li> </ul>	<p> This feature compares the timestamps for all objects in the list with versions of the same objects linked by ancestry in another chosen Model. The report will indicate whether the timestamp is identical, ahead or behind or if the object does not exist in the target Model.</p>
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## CRUD Report

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Entity</li> </ul>	<p> The CRUD Report allows a user to see how Action Blocks physically interact (create, read, update, delete, refer, associate, disassociate, transfer) with a selected Entity, or vice versa. The results are presented in the traditional CRUD Matrix tabular format.</p>
--	--

Ext. Action Block	
Procedure Step	
Procedure Step	
AD	

### Custom Query by Model

This feature is a model report.	 The Custom Query by Model facility allows customer written SQL qualified by the Model ID of the current selected model to be run against the Encyclopedia with the results displayed either as a list of objects in the Custom Query Results pane or as a formatted report in the report pane (dependent on user requirements and the format of the SQL).
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### Custom Query by Object

Dependent on the available Custom SQL, this feature works with all object types.	 The Custom Query by Object facility allows customer written SQL qualified by the object ID of the current selected object to be run against the Encyclopedia with the results displayed either as a list of objects in the Custom Query Results pane or as a formatted report in the report pane (dependent on user requirements and the format of the SQL).
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### Data Model Differences Report

This feature is a model report.	 The Data Model Differences Report compares the entire Data Model between the current model and another model. The report will list all changes made including Entities and Attributes that have been created or deleted and any changes that have been made to the properties of existing objects.
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### Delete Sets

This feature works with the following objects: Aggregate Set Subset	 The Delete Set(s) option deletes aggregate sets and checked-in subsets.
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### Description

This feature works with the following objects: Action Block Attribute Business System Column Database Dialog Box Pri Dialog Box Sec Entity Entity Subtype Ext. Action Block Function	 The Description option will display the description for the selected object.
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Index	
Link Table	
Procedure	
Procedure Step	
Procedure Step AD	
Process	
Relationship	
Screen	
Subject Area	
Supplied Function	
Table	
Trigger	
Window	
Work Attribute	
Work Attribute Set	

## Dialog Flow Report

<p>This feature works with the following objects:</p> <p>Procedure Step</p>	 <p>This feature displays all view matching information for incoming and outgoing Dialog Flows for the selected Procedure Step. All Dialog Flow properties and the data sent and data returned are displayed.</p>
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## Differences Report

<p>This feature works with the following objects:</p> <p>Database</p> <p>Entity</p> <p>Exit State</p> <p>Subject Area</p> <p>Table</p> <p>Work Attribute Set</p>	 <p>This feature highlights the differences between an object across two Models. For Entities, Tables and Worksets, any new Attributes will be highlighted as well as changes to the properties of those that exist across the two Models. Subject area comparisons will compare all data Model objects contained within that Subject Area (not including those contained in subordinate Subject Areas). Comparison of the root Subject Area will compare the entire data Model.</p>
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## Expand

<p>This feature works with the following objects:</p> <p>Action Block</p> <p>Aggregate Set</p> <p>Attribute</p>	 <p>The Expand feature allows a user to expand any object to its related objects. It can be used to navigate a Model and explore the relationships between objects or as an aid to locating objects. The types of objects that are returned can be filtered to user requirements. For instance, expanding a Procedure Step with a large number of views can return a large number of related Attributes. If this level of detail is not required, Attributes can be unchecked so they are not returned from an Expand</p>
---	--

Batch Job Step	command. This is configured in the OPTIONS > PREFERENCES > FILTER OPTIONS tab.
Business System	
Column	
Database	
Dialog Box Pri	
Dialog Box Sec	
Entity	
Entity Subtype	
Exit State	
Ext. Action Block	
Function	
Index	
Link Table	
Load Module	
Procedure	
Procedure Step	
Procedure Step AD	
Process	
Relationship	
Screen	
Subject Area	
Subset	
Supplied Function	
Table	
Tablespace	
Trancode	
Trigger	
User	
User Group	
Window	
Work Attribute	
Work Attribute Set	

## External Interface Report

<p>This feature works with the following objects:</p> <p>Action Block</p>	 For a selected Action Block or Procedure Step, this feature produces a report with the import and export views of the action diagram (along with the Attribute data types for those views) and the pre and post conditions note statements.
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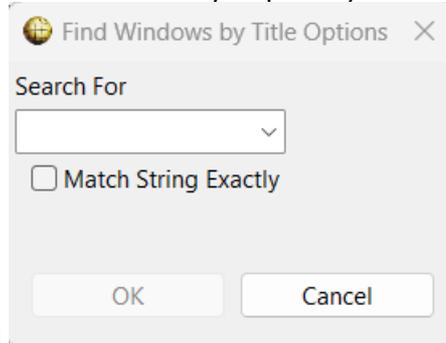
Procedure Step	
Procedure Step AD	

## Find Windows by Title

This feature is a model report.



The Find Windows by Title will return Windows, Primary and Secondary Dialog Boxes where their title matches exactly or partially matches the



search string specified.

The results are returned as a list of objects.

\* Currently available for HE and MSSQL CSE customers.

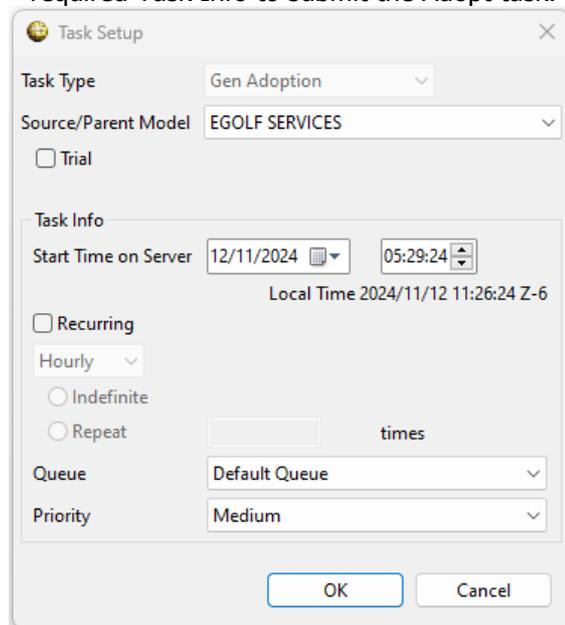
## Gen Adoption

This feature works with all object types or at the Model level. CSE users only.



The Gen Adopt feature establishes common ancestry between corresponding objects in two different Models so that the adopted objects can be replaced by migration.

Specify the SOURCE/PARENT MODEL and TRIAL property as well as the required Task Info to submit the Adopt task.



An adoption can only be run as an asynchronous task. Its progress and outcome can be monitored in the Task List.

## Gen Consistency Check

This feature works with all object



The Gen Consistency Check feature displays information where a Model does not conform to the rules and conventions within Gen data, activity and interaction levels.

<p>types or at the Model level. CSE users only.</p>	<p>Specify the required task parameters and Task Info to submit the</p> <div data-bbox="810 230 1353 958" style="border: 1px solid gray; padding: 5px;"> </div> <p>Consistency Check task.</p> <p>A Consistency Check can only be run as an asynchronous task, the progress and outcome of which can be monitored in the Task List.</p>
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## Gen Download

<p>This feature works with all object types or at the Model level. CSE users only.</p>	<div data-bbox="411 1131 443 1182" style="float: left; margin-right: 10px;"> </div> <p>Download either a full model or Subset from the Encyclopedia to the Gen workstation toolset so that it can be viewed or updated.</p> <p>If a Subset is required but has not yet been created, the Subset creation process is integrated into the Download process. If the Subset is to contain multiple objects, create a Pick List of the objects to be scoped and drive the Download from the Pick List Pane.</p> <p>Select the object(s) to be downloaded and choose the Gen Download option.</p> <p>Specify the required task parameters and Task Info. If a Subset is to be created as part of the Download request, the Subset name and expansion</p>
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and protection options will need to be supplied. Pressing OK will then

submit the Download task.

A Download can only be run as an asynchronous task, the progress and outcome of which can be monitored in the Task List.

Once the task has completed, view the results to confirm the folder location for the CHECKOUT.TRN download output file.

In the Gen Workstation:

1. Ensure the 'Perform file transfers for Encyclopedia options' check box is unchecked under MODEL > SETTINGS > ENCYCLOPEDIA COMMUNICATIONS.
2. Select 'Check Out A Model' under MODEL > ENCYCLOPEDIA and ensure the Model Path and Local Model Name will combine to ensure the CHECKOUT.TRN file saved in step 4 above is processed. OK the Overwrite warning.
3. The Model Retrieval Status report should open automatically to detail the outcome of the Download.

## Gen Migration

This feature works with the following objects:

- Action Block
- Aggregate Set
- Attribute
- Batch Job Step

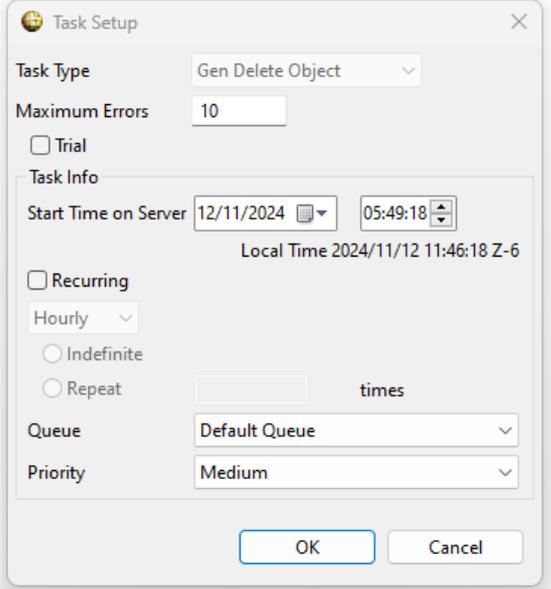


The Migrate option takes an individual aggregate object or a selected Aggregate Set and initiates a Migrate request to a specified Model. If an Aggregate Set is selected for migration, then it is expanded to its scoped objects.

<p>Business System</p> <p>Column</p> <p>Database</p> <p>Dialog Box Pri</p> <p>Dialog Box Sec</p> <p>Entity</p> <p>Entity Subtype</p> <p>Exit State</p> <p>Ext. Action Block</p> <p>Function</p> <p>Index</p> <p>Link Table</p> <p>Load Module</p> <p>Procedure</p> <p>Procedure Step</p> <p>Procedure Step AD</p> <p>Process</p> <p>Relationship</p> <p>Screen</p> <p>Subject Area</p> <p>Table</p> <p>Tablespace</p> <p>Trancode</p> <p>Window</p> <p>Work Attribute</p> <p>Work Attribute Set</p> <p>CSE users only.</p>	<p>Specify the required task parameters and task info to submit the</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px 0;"> </div> <p>Migration task.</p> <p>A Migration can only be run as an asynchronous task the progress and outcome of which can be monitored in the Task List.</p>
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## Gen Object Delete

<p>This feature works with the following objects:</p> <p>Action Block</p> <p>Aggregate Set</p> <p>Attribute</p> <p>Batch Job Step</p> <p>Business System</p> <p>Column</p>	<p><b>X</b> Select the object(s) to be deleted and choose the Gen Object Delete option.</p>
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<p>Database</p> <p>Dialog Box Pri</p> <p>Dialog Box Sec</p> <p>Entity</p> <p>Entity Subtype</p> <p>Exit State</p> <p>Ext. Action Block</p> <p>Function</p> <p>Index</p> <p>Link Table</p> <p>Load Module</p> <p>Procedure</p> <p>Procedure Step</p> <p>Process</p> <p>Relationship</p> <p>Screen</p> <p>Subject Area</p> <p>Subset</p> <p>Table</p> <p>Tablespace</p> <p>Trancode</p> <p>Trigger</p> <p>Window</p> <p>Work Attribute</p> <p>Work Attribute Set</p> <p>CSE users only.</p>	<p>Specify the required task parameters and task info to submit the</p> <div style="text-align: center;">  </div> <p>Delete task.</p> <p>Object Delete can only be run as an asynchronous task, the progress and outcome of which can be monitored in the Task List.</p> <p>The Object Delete feature will only work in the following circumstances:</p> <ul style="list-style-type: none"> <li>• If the server has been installed on the same machine as the Client Server Encyclopedia.</li> <li>• If Gen Release 7 or above has been installed.</li> </ul>
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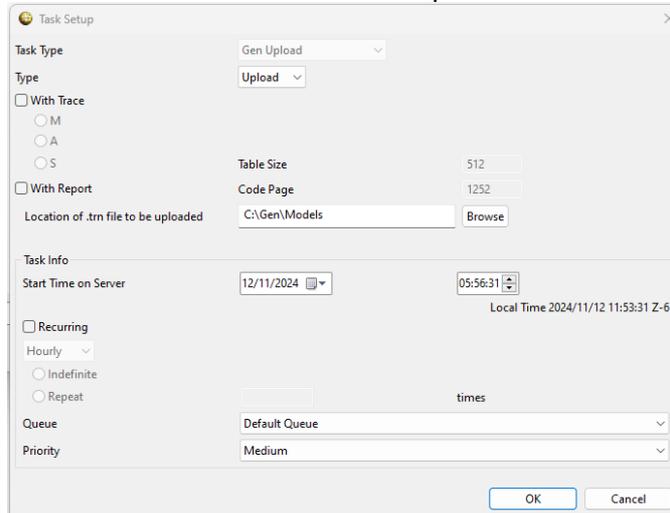
## Gen Upload

<p>This feature works with all object types or at the Model level.</p> <p>CSE users only.</p>	<p> The CGen Upload feature copies the changes that have been made to a Model or Subset using the Gen Workstation toolset to the Encyclopedia.</p> <p>In the Gen Workstation:</p> <ol style="list-style-type: none"> <li>1. Ensure the 'Perform file transfers for Encyclopedia options' check box is unchecked under MODEL &gt; SETTINGS &gt; ENCYCLOPEDIA COMMUNICATIONS.</li> <li>2. Open the desired Model where changes have been made that require applying to the Encyclopedia.</li> <li>3. Select 'Upload And Check In Model' or 'Upload But Do Not Check In' under MODEL &gt; ENCYCLOPEDIA dependent on whether or not the Model is to be returned to the Encyclopedia and OK the communication configuration warning.</li> </ol>
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4. An UPDATE.TRN file will now be created in the Model directory. OK the file transfer and verification warning.

Back in the application:

Select the Gen Upload option and specify the required task parameters and Task Info to submit the Upload task.



An Upload can only be run as an asynchronous task the progress and outcome of which can be monitored in the Task List.

Once the task has completed view the results to confirm the folder location to save the VERIFY.TRN upload output file.

In the Gen Workstation:

Select MODEL > ENCYCLOPEDIA > VERIFY LAST UPDATE and confirm the upload process has completed successfully. If the 'Upload And Check In Model' option was selected, the Model will now have been returned to the Encyclopedia and will be read only in the Gen Workstation toolset. If the 'Upload But Do Not Check In' option was selected, updates can now continue in the Model or subset.

## Impact

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Aggregate Set</li> <li>Attribute</li> <li>Entity</li> <li>Ext. Action Block</li> <li>Procedure Step</li> <li>Trigger</li> <li>Work Attribute</li> </ul>	<p> The Impact Analysis feature determines the potential impact of changing a particular object. For Procedure Steps, Action Blocks and external Action Blocks, all potentially affected objects are displayed by tracking USE statements back through Action Blocks and Procedure Steps to their respective load modules. If required, Impact Analysis can be configured to omit reporting on impacted Action Blocks where the relevant USE statement has been commented out. This is configured in the OPTIONS &gt; PREFERENCES &gt; GENERAL REPORT SETTINGS &gt; IMPACT.</p>
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Work Attribute Set	
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## Manage Subset

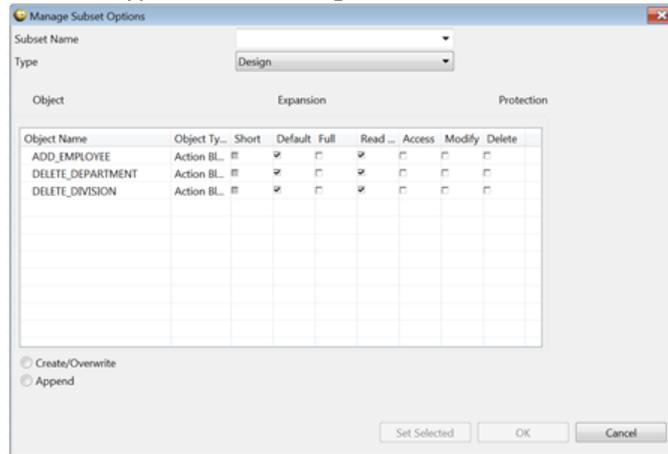
This feature will scope subsets containing the following objects:

- Action Block
- Batch Job Step
- Business System
- Database
- Entity
- Exit State
- Ext. Action Block
- Function
- Link Table
- Load Module
- Procedure
- Procedure Step
- Process
- Screen
- Subject Area
- Table
- Work Attribute Set

 This feature supports both create of a new subset and append to an existing subset.

Choose the Create/Overwrite option to create a new subset containing the selected list of supported object types.

Choose the Append option to add the selected list of supported object types to an existing checked in subset.



The user must have the necessary model/subset privileges to create or append. This feature does not support incremental updates to subsets that are checked out.

## Max Protection

This feature works with the following objects:

- Action Block
- Attribute
- Batch Job Step
- Business System
- Column
- Database
- Dialog Box Pri
- Dialog Box Sec
- Entity
- Entity Subtype
- Exit State

 The Max Protection feature shows the highest checkout status for each listed object.

If the object is checked out to a single user, the User ID column displays their ID. If the object is checked out in multiple subsets, the User ID column will contain asterisks.

Ext. Action Block	
Function	
Index	
Link Table	
Load Module	
Procedure	
Procedure Step	
Procedure Step AD	
Process	
Relationship	
Screen	
Subject Area	
Table	
Tablespace	
Trancode	
Trigger	
Window	
Work Attribute	
Work Attribute Set	

## Modify Subset

<p>This feature works with Subsets.</p>	 <p>For existing Subsets that are not checked out, this feature allows a user to change the properties of a Subset, modify the expansion/protection options for its scoped objects or remove scoped objects from a Subset altogether.</p> <p>If a Subset is checked out or the currently logged in user no longer has authority to update a Model or does not own the selected Subset (except for Encyclopedia administrators and Model owners) then modifications to that Subset are prevented.</p>
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## Non-Supplied Function Locator

<p>This feature is a model report.</p>	 <p>This is a variation on the Action Block Literal Locator. It allows the user to search through all Action Blocks for a specified non-supplied function specified as a search string (e.g. ABORT, ABSOLUTEVALUE etc.).</p>
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## Original Object ID

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Batch Job Step</li> <li>Business System</li> <li>Column</li> </ul>	 <p>This feature will return the original object ID for all selected objects.</p>
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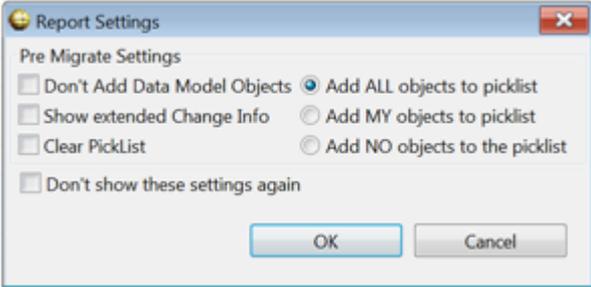
Database	
Dialog Box Pri	
Dialog Box Sec	
Entity	
Entity Subtype	
Exit State	
Ext. Action Block	
Function	
Index	
Link Table	
Load Module	
Procedure	
Procedure Step	
Procedure Step AD	
Process	
Relationship	
Screen	
Subject Area	
Table	
Tablespace	
Trigger	
Window	
Work Attribute	
Work Attribute Set	

## Packaging Information

<p>This feature works with the following objects:</p> <p>Load Module</p> <p>Procedure Step</p>	 <p>The Packaging report details the packaging details for either a Procedure Step (what load modules it is packaged in and the Action Blocks and Triggers that are included) or a Load Module (what Procedure Steps, Action Blocks and Triggers it packages). The report details all of the relevant member names and dynamic linking flag properties of the packaged objects.</p>
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## Pre-Migrate Check Report

<p>This feature works with the following objects:</p> <p>Action Block</p> <p>Aggregate Set</p> <p>Attribute</p>	 <p>Pre-Migrate check is a powerful feature that allows a user to choose an aggregate object or Aggregate Set and determine whether a potential migration from the current Model to a specified target Model is likely to succeed. The facility replaces the need to run the slow and costly Trial Migrate facility that comes with Gen and offers the added benefit of identifying all additional pre-requisite objects that may need to accompany the selected object for the migration to succeed. If an Aggregate Set is selected for a migrate check then it is expanded to its scoped objects.</p>
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<p>Batch Job Step Business System Column Database Dialog Box Pri Dialog Box Sec Entity Entity Subtype Exit State Ext. Action Block Function Index Link Table Load Module Procedure Procedure Step Procedure Step AD Process Relationship Screen Subject Area Table Tablespace Trancode Window Work Attribute Work Attribute Set</p>	<p>In combination with the Create Aggregate Set Pick List feature, the Migrate Check presents a very efficient way for developers to create full and complete Aggregate Sets for migration to other Models. The fact that pre-requisite objects can be automatically added to the Pick List for inclusion in an Aggregate Set makes the process very simple.</p>  <p>At runtime, the Migrate Check can be configured to report on, but not automatically add pre-requisite Data Model objects. It can also be configured to report on, but not automatically add changed objects, optionally dependent on whether the object has been changed by the current User or not. To bypass the configuration settings presented each time the report runs and to use user defined default settings instead, go to the OPTIONS &gt; PREFERENCES &gt; ADVANCED REPORT SETTINGS tab.</p>
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## Properties

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Column</li> <li>Entity</li> </ul>	<p> This feature allows the highlighted object's properties to be viewed. These will differ dependent on the object type.</p>
---	--

Exit State		
Ext. Action Block		
Procedure Step AD		
Relationship		
Subject Area		
Table		
Work Attribute		
Work Attribute Set		

## Property Compare

This feature works with the following objects:		Use this feature to view and compare the differences between the output of the Properties command for an object in the current Model and another Model.
Action Block		<p>The list of available Models to compare against is filtered based on those that contain a version of the selected object. This is based on ancestry by default but can be configured to filter based on common technical implementation across Models in the <b>OPTIONS &gt; PREFERENCES &gt; GENERAL REPORT SETTINGS</b> tab (unless there is no technical implementation, in which case ancestry is used).</p> <p>A comparison tool called BC Differ is used to display comparison reports. Different Compare tool options have been made available under the <b>OPTIONS &gt; PREFERENCES &gt; GENERAL OPTIONS</b> tab.</p>
Attribute		
Column		
Entity		
Exit State		
Ext. Action Block		
Procedure Step AD		
Relationship		
Subject Area		
Table		
Work Attribute		
Work Attribute Set		

## Subset Report

This feature works with the following objects:		This feature will detail all subsets that contain the selected object. If they are checked out then the report will display the protection level held on the object as well as the check out user, date and time. If they are checked in it will show the requested protection and expansion options.
Action Block		
Attribute		
Batch Job Step		
Business System		
Column		
Database		
Dialog Box Pri		
Dialog Box Sec		
Entity		

Entity Subtype	
Exit State	
Ext. Action Block	
Function	
Index	
Link Table	
Load Module	
Procedure	
Procedure Step	
Procedure Step AD	
Process	
Relationship	
Screen	
Subject Area	
Table	
Tablespace	
Trancode	
Trigger	
Window	
Work Attribute	
Work Attribute Set	

### Tree View

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Procedure</li> <li>Procedure Step</li> <li>Procedure Step AD</li> </ul>	 <p>This feature displays the hierarchical structure of Procedures, Procedure Steps and Action Blocks. The Tree feature can be configured at runtime to summarise repeated Action Block calls (selecting this suffixes the number of times an Action Block is called to the end of the Action Block name) and to expand Action Blocks only once when they appear at multiple nodes (denoted by the suffix 'Suppressed').</p> <p>To bypass the configuration settings presented each time the report runs and to use user defined default settings instead, go to the <b>OPTIONS &gt; PREFERENCES &gt; ADVANCED REPORT SETTINGS</b> tab.</p>
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### Unused Object Status

<p>This feature works with the following objects:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Entity</li> <li>Entity Subtype</li> </ul>	 <p>This feature will show which objects are referenced by others and which are not. This can be used as an aid in determining objects that may be suitable for deletion.</p>
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Exit State		
Ext. Action Block		
Procedure Step		
Procedure Step AD		
Process		
Work Attribute		
Work Attribute Set		

## Version

<p>This feature works with the following objects for Access Gen customers:</p> <ul style="list-style-type: none"> <li>Action Block</li> <li>Attribute</li> <li>Batch Job Step</li> <li>Business System</li> <li>Column</li> <li>Database</li> <li>Dialog Box Pri</li> <li>Dialog Box Sec</li> <li>Entity</li> <li>Entity Subtype</li> <li>Exit State</li> <li>Ext. Action Block</li> <li>Function</li> <li>Index</li> <li>Link Table</li> <li>Load Module</li> <li>Procedure</li> <li>Procedure Step</li> <li>Procedure Step AD</li> <li>Process</li> <li>Relationship</li> <li>Screen</li> <li>Subject Area</li> <li>Table</li> <li>Tablespace</li> <li>Trigger</li> <li>Window</li> </ul>	<p> The Version feature displays the different versions of an object across the Models in the Encyclopedia.</p> <p>There are three Ancestry options available that are used to locate versions. These can be configured in the <b>OPTIONS &gt; PREFERENCES &gt; GENERAL REPORT SETTINGS</b> tab.</p> <p>For Gen Object types these are:</p> <ul style="list-style-type: none"> <li>• Normal, which uses common ancestry. This is the default and fastest option.</li> <li>• Object Name and Type.</li> <li>• Technical implementation (member name for Action Blocks, External Action Blocks, Procedure Steps and Screens or technical design implementation for Attributes).</li> </ul> <p>For Web Services these are:</p> <ul style="list-style-type: none"> <li>• Normal, which uses the parent Action Block and Web Service name.</li> <li>• Object Name and Type, which uses the Web Service name.</li> <li>• Technical implementation, which uses the Web Service's member name.</li> </ul> <p>For WAR Files these are:</p> <ul style="list-style-type: none"> <li>• Normal, which uses common ancestry.</li> <li>• Object Name and Type, which uses the WAR File name.</li> </ul>
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Work Attribute	
Work Attribute Set	
This feature works with the following objects for Web Services GENius customers:	
Web Service	
WAR File	

## View Size Calculator

<p>This feature works with the following objects:</p> <p>Action Block</p> <p>Procedure Step</p> <p>Procedure Step AD</p>	<p> The View Size Calculator will calculate the view size of a Procedure Step or Action Block including all overheads, for both C and COBOL. This can be used when reviewing modules that are approaching or have exceeded the 32K limit. A breakdown is displayed detailing all components of views imported and exported by the Procedure Step/Action Block.</p> <p>The report that is generated has numbers that detail the following:</p> <ul style="list-style-type: none"> <li>• Black Figures - These figures are adjacent to Entity or Work Set <u>views</u> and detail the total view size for that view (i.e. the sum of all the Attributes contained in that view).</li> <li>• Blue Figures - These are adjacent to Entity or Work Set <u>Attributes</u> and detail the view size for that Attribute as defined in the Gen data Model or Work Set list.</li> <li>• Figures in Parenthesis - These figures detail the overheads that are associated with the adjacent view or Attribute.</li> </ul>
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## QA Console

QA\* is an add-on module that is fully integrated into the interface, taking advantage of the application's existing features to identify objects for review and then display the QA review outcomes in a report of tabular format. Alternatively, an action diagram can be browsed in "QA Checker Browse" mode showing individual statements that do not conform to the standard highlighted.

For some checks the Client Server Encyclopedia version of the QA Check Browse has been extended to incorporate an Automated Correction Facility that can be used to update objects so that they conform to the defined site standard for that check. This is performed directly in the Encyclopedia without the need to download.

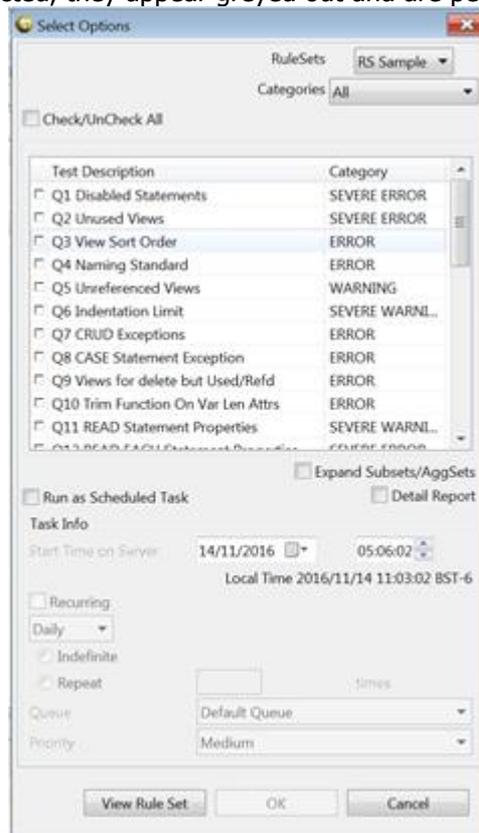
\*Available to QA customers only.

### Checking Objects

This feature can be run against models, individual objects or multiple objects simultaneously.

✓ Summary or detailed reports are available that can highlight areas where an object(s) does not conform to standards. These reports can be generated online or submitted as a Scheduled Task to run at a specified time. The progress and outcome of Scheduled Tasks can be monitored in the Task List pane.

QA reports present the user with a set of QA Checks that can be run against the highlighted object/s. Selecting to run a QA report opens the last rule set used in the current model. A different rule set can be selected in the top right drop down. Only those rule sets associated to the current model will be available. Mandatory checks cannot be deselected, they appear greyed out and are permanently



selected.

For those checks that are selected, a report is produced detailing whether the object passed or failed. If the object failed a particular check, further details are given.

The output of Scheduled Tasks are stored in the QA Tasks database for later retrieval but the output of an online task is available as soon as the task has executed in a Results tab.

## Summary Report

A Summary report is a table of checked objects against selected checks showing if an object passed, failed or is of a type not applicable to the check.

The Summary Report is invaluable for gaining a high level understanding of affected objects and highlighting areas of concern. The Summary report option is chosen by deselecting the Detail Report check box on the window.

Object Name	Object Type	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q...	Q..	Q..	Q..	Q..	Q..
ADD_DEPARTMENT	Action Block	✓	✓	✗	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓
ADD_DIVISION	Action Block	✓	✓	✗	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓
ADD_EMPLOYEE	Action Block	✓	✗	✗	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓
DELETE_DEPARTMENT	Action Block	✓	✓	✗	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓
DELETE_DIVISION	Action Block	✓	✓	✓	✓	✗	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓
DELETE_EMPLOYEE	Action Block	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓
DELETE_SCOPING_CHECKED...	Action Block	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	=	✗	✓	✓	✓	✓
DELETE_SCOPING_CHILD	Action Block	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	=	✓	✓	✓	✓	✓

When a collection of objects changed for a unit of work are first uploaded, it provides an ideal springboard to request Detailed Reports for those objects that fail one or more checks. Highlight the failing objects (click on the Summary column to bring all failing objects to the top) and right click.

## Detail Report

After a Summary Report highlights objects that need attention, the Detail Report gives the greater level of detail often required to pinpoint why an object has failed a check. For instance, if an Action Block fails a statement related check, the report shows the statement in error - critical information when there are several similar statements but only one is wrong!

QA Detail Model: QA SAMPLE MODEL
QA Check Detail Report

Access Gen

QA Check executed at 2016-11-12 04:28  
 QA Check on model QA SAMPLE MODEL

Description (Rule Set):  
 RSPV2.1  
 Name: RSSample.qai  
 Created: December 2009  
 Create by: Response Systems  
 Example Rule Set file for QA Checker. Designed for use with the CA Gen Sample Model.

The following checks have been selected:

Q1	Disabled Statements	[ SEVERE ERROR ]
Q2	Unused Views	[ SEVERE ERROR ]
Q3	View Sort Order	[ ERROR ]
Q4	Naming Standard	[ * ]
Q5	Unreferenced Views	[ WARNING ]
Q6	Indentation Limit	[ SEVERE WARNING ]
Q7	CRUD Exceptions	[ ERROR ]
Q8	CASE Statement Exception	[ ERROR ]
Q9	Views for delete but Used/Refd	[ ERROR ]
Q10	Trim Function On Var Len Attrs	[ ERROR ]
Q11	READ Statement Properties	[ SEVERE WARNING ]

The following checks have NOT been selected: (20 rules) ...

---

The following objects have failed some/all of the selected checks:

ActnBlock	ADD_DEPARTMENT	2016-08-18 22:30	by	R'
Q3	View Sort Order	[ ERROR ]		Failed
	- Imports Failed			
Q7	CRUD Exceptions	[ ERROR ]		Failed
	'When Successful' - Not Present			
3	+-- READ required division			
3	WHERE DESIRED required division number IS EQUAL TO input division number			

---

ActnBlock	ADD_DIVISION	2016-08-18 22:30	by	R'
Q3	View Sort Order	[ ERROR ]		Failed
	- Imports Failed			
	- Entity Actions Failed			

The Detail Report also serves as a Compliance Certificate when work is ready to be submitted for signoff. It records what checks were run and when, the objects they were run against and the selected rule set so reviewers have everything they need to certify the work. Running the report as a Scheduled Task stores the output against a unique Task ID which all reviewers have access to.

## Model Level QA Check

This feature is a model report.	<div style="display: flex; align-items: flex-start;"> <div style="margin-right: 10px; color: green; font-size: 24px;">✔</div> <div> <p>The Model Level QA Check feature presents the user with a set of QA Checks that can be run against an entire Model or all objects of the types selected in the Query Criteria pane for the current Model. For instance if all Action Blocks and Procedure Steps are to be checked the required Model is selected, the Procedure Step and Action Block checkboxes checked, and then the Model Level QA Check push button is pressed. If all object types are to be tested, then select the "All Object Types" option.</p> <p>Two methods of outputting the results are available:</p> <ol style="list-style-type: none"> <li>1. Summary Table - this option takes all checked objects and indicates whether they passed or failed the selected check(s) in a Pass/Fail matrix.</li> <li>2. Detailed Report - this option takes all checked objects and produces a more detailed report including the checks selected, those NOT selected and the details of check failures.</li> </ol> </div> </div>
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	<p>This feature can be run either online or scheduled to run as an asynchronous task, the latter being recommended for Model level checking. Their progress and outcome can be monitored in the Task List pane.</p> <p>Refer to the Technical Guide for details on the authority required to execute this feature.</p>
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## QA Checker Browse

<p>This feature works with the following objects:</p> <p>Action Block</p> <p>Procedure Step</p> <p>Procedure Step AD</p>	 <p>The QA Checker Browse feature allows the user to run a set of pre-defined QA Checks against Procedure Step or Action Block objects. Mandatory checks cannot be deselected (they appear greyed out and are permanently selected). For the selected checks, an object browse highlights areas where the object does not conform to standards. Right clicking on a highlighted statement details the check it has failed.</p>
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## QA Browse Automated Correction Facility

<p>This feature works with the following objects:</p> <p>Action Block</p> <p>Procedure Step</p> <p>Procedure Step AD</p>	<p>For certain QA Checks, an Automated Correction Facility option is available within the QA Check Browse to address the failed QA Check. For example, where an entire view is identified as unused it can be deleted directly within the Encyclopedia. This will update the last updated timestamp and user ID in the same way as if the object was changed using the Gen toolset. The object needs to be checked in for the Automated Correction Facility to function. If the Automated Correction impacts an import or export view, any calling member must also be checked in.</p>
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## Walk Ency

Walk Ency mode offers a significant benefit over the Gen Walk Ency feature. When the Forwards, Backwards or Both features are used, the Association Type Code that ties the two related objects together is displayed in a new Report pane column. This is especially useful when writing Custom Checks for QA.

Double clicking on an object in a Walk Ency Report pane performs the equivalent of a BOTH command. As you navigate around a Model using the Walk Ency features, you can return to the previous object list using the Back push button.

### Forwards

 The Forward option (indicated by ">") displays the forward associations for the selected object. Users can navigate around the Model by selecting successive objects and moving from object to object via these associations.

### Backwards

 The Backward option (indicated by "<") displays the backward associations for the selected object.

### Both

 The Both option (indicated by "<>") displays the both the forward and backward associations for the selected object.

### Properties

 This feature displays the full details of the properties stored in the Encyclopedia for the selected object.

## Options and Preferences

There are a number of options and preferences that can be set in the Client. These options are set for all instances of the Client installed on a workstation.

These settings are reached by selecting the **OPTIONS > PREFERENCES** menu option.

### Advanced Report Settings

Settings to be applied when running the Attribute Usage Report, Pre-Migrate Report and Tree View Report are set here. These settings will be applied whenever these reports are run unless the "Select settings at time of execution" checkbox is checked.

### Tracking License Usage

An Audit Report displays usage information. Administrators can use this to see the license details and which users have logged on and when. It is available under the **OPTIONS > PREFERENCES > AUDIT REPORT** menu option to those with the necessary authority.

### CSEConfig

If the configuration information needs to be changed after installation for any reason this can be done from the CSEConfig tab given the user has sufficient authority to do so.

### Client Configuration

The Client's configuration can be changed after installation, for instance if the Server is relocated the Address/Port can be modified here so that the Client can connect to the new Server.

Additional Client configurations can also be added to enable a client to connect to more than one Server.

### Server Configuration

Admin users are able to change the Server's configuration from the Server Configuration tab.

Settings that might be changed from here are the Cache location (Please note: this path is relative to the Server), Enforcing Model Authority, updating the configured Encyclopedia database password (used by the Server) if the password is changed on the database and applying a new license.

For most of these settings the Server must be stopped and restarted for the changes to take affect.

For further information regarding the Server Configuration please refer to the Server Installation section in the Technical Guide.

### Server Trace Settings

Various trace settings can be set here to assist Support with any support issues. These settings should only be changed with assistance from Support.

### PreLoad Models

Models added to the list of pre-loaded models are loaded into memory when the Server is started. This improves performance when these pre-loaded models are first accessed by the Clients.

Please stop and restart the Server for the Pre-Load setting to take effect.

### Collect Diagnostics

Selecting the "Collect Diagnostics" option will retrieve log and environment information files from the Server and Client to aid Support with any support issues.

The location of the .7z file containing all these logs will be displayed at the bottom of the panel.

### Column Preferences

Select the optional columns to be visible in the Explore Model and Task List tabs. This allows the user to see only the information that is relevant to their needs.

## Filter Options

When expanding an Object which has Attributes, Columns, Load Modules, Tran Codes, Work Attributes or Triggers related to it, the option to filter some of these related object types out of the returned results is made possible from this panel, if this level of detail is not required.

For instance, expanding a Procedure Step with a large number of views can return a large number of related Attributes. If this level of detail is not required, Attributes can be unchecked so they are not returned from an Expand command.

## General Options

Setting the Compare Tool to be used and the double click action is set here.

To change the Compare Tool to Beyond Compare, the user must have a licensed copy of Beyond Compare installed on their workstation. When changing the Compare Tool the user will be prompted to browse to the location of the chosen tool.

## General Report Settings

Various options can be set here that will be used when running various reports.

### Ancestry

There are various cross model features available in Access Gen such as the Version feature, Cross Model, Impact Analysis, Cross Model Object Comparisons and Cross Model Attribute Usage. They can be configured to run in one of three ways – by using ancestry, by using Object Name in combination with Object Type and by using their Technical Implementation (for those objects that have one). The fastest method is by ancestry which should be extremely quick to run as it is able to use pre-defined encyclopedia indexes.

By selecting the “Object Name and Type for Ancestry (Version)” option, ancestry is ignored for the Version Command and a scan is invoked based on object name and type across the encyclopedia. Since there are no available table indexes that Access Gen can use to perform this operation, it takes considerably longer to process and should only be used when necessary.

By selecting the “Technical Implementation (Version/Impact/Compares/Cross Model Attribute Usage)” option, the Member Name and TD Implementation of an object are used to determine where it exists. Again, there are no native indexes that can be used when this option is selected and so processing will take considerably longer than when using ancestry.

### Omit Disabled Statements

Impact Analysis: For Procedure Steps, Action Blocks and external Action Blocks, all potentially affected objects are displayed by tracking USE statements back through Action Blocks and Procedure Steps to their respective load modules. If required, Impact Analysis can be configured to omit reporting on impacted Action Blocks where the relevant USE statement has been commented out.

Disabled statements are included by default.

### Action Block Browse

Forcing an Action Block Browse returns the Action Block directly from the encyclopedia instead of using the Action Block Cache. This is usually unnecessary as the Browse functionality verifies that the cached Action Block is current and if not refreshes the Cache version. However, there may be times that a user would like to force the Browse of an Action Block, checking this option will force the browse of the next Action Block to be browsed.

Forcing an Action Block Browse will be slower than browsing it from the cache. The default option for Browse is to use the Action Block Cache and this option will be reset after each Browse.

To Browse an Action Block showing the statements ordered as they would be in the generated code select the check box here. This option is unchecked by default and will be reset after each Browse.

## Install Update

Use these settings to determine when and how updates are applied to the Client.

## Bitmap Location

Set the location of the bitmaps to be used when browsing any forms.

## Restore Options

Under the Window >> Show View menu, there are a number of menu options to restore the position of or re-open closed panes.

Explore Model	Re-open the Explore Model pane if it has been closed.
Pick List	Re-open the Pick List pane if it has been closed.
Problem View	Re-open the Problems pane if it has been closed.
Reset All Views	Resets the user interface to the default layout.
Task List	Re-open the Task List pane if it has been closed.
Task View	Re-open the Task View pane if it has been closed.
Welcome	Re-open the "What's New" welcome panels.
WSGenius Site Properties	Re-open the Site Properties pane if it has been closed. *
WSGenius Model Properties	Re-open the Model Properties pane if it has been closed. *

\* These settings apply to GENius installations only.

## Printing and Saving

There are two different report formats but all reports may be printed or saved.

To print or save a tabular format report, highlight the required rows and press the Print or Save push button.

To print or save a text format report simply press the Print or Save push button. The entire report will be printed or saved regardless of any text that may be highlighted.

## Contact Us

If you need more information or assistance please visit our website at:

<http://www.response-systems.com>

We welcome your feedback and suggestions.