



WEBINAR SERIES

Writing Effective IQAs

Presented by:
Association Technology Solutions





About ATS

- Serving iMIS community since 1995
- Full-service Authorized iMIS Solutions Provider (AiSP)
- Application development to extend the functionality of iMIS
- iMIS Bridge powered by ATS with over 120 integrations
- ASI's Client Sales Leader of the Year and Chairman Circle for 2020





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- a) Attendees are muted to reduce background noise
- b) Raise your hand to get the attention of the presenter/moderator
- c) Download handouts
(not typically provided for ATS webinars)
- d) Ask questions to be answered during Q&A after presentation is complete



Keep your website responsive



Be a considerate iMIS EMS member (shared servers)



Streamline dashboard data



Recommendations

Top Five

1. Use recommended contact business objects
2. Use cached results
3. Limit Sources
4. Use filters with No prompt or Required prompt
5. Limit the number of rows returned



Recommendations are not always reality

I'm a

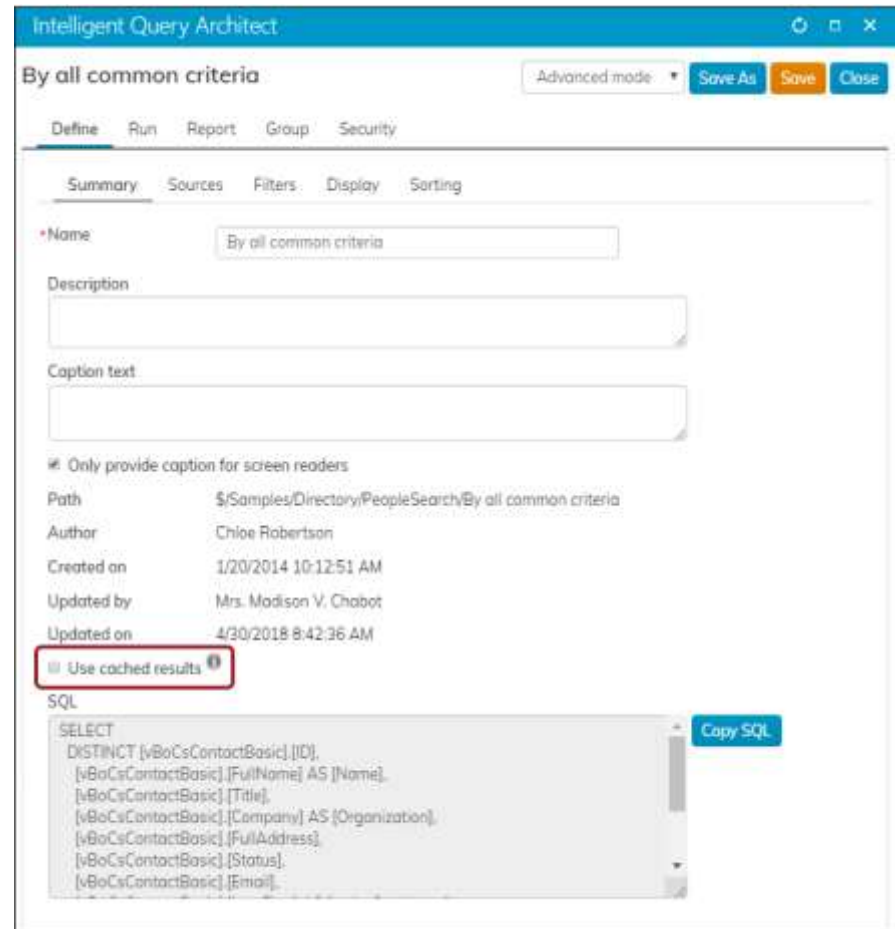
- Advanced IQA Writer – I write IQAs daily and am familiar with complex joins and reporting
- Regular IQA Writer – I write IQAs regularly and can copy and edit more complicated IQAs
- Beginner IQA Writer – I write simple IQAs occasionally and am not comfortable with joining sources
- New IQA Writer – I am not comfortable writing IQAs

Use **NetContactData** or **csContactBasic** business objects for contact information. These sources are optimized for efficient querying.

NetContactData use when you need **contact_key**

ContactBasic use when you do **NOT** need **contact_key**

- The **Use cached results** option stores query results so that future requests for the data can be served faster.
- This option is used for queries that do not require real-time results.
- When this option is enabled, the query results may be cached for 1 to 6 hours.



The screenshot shows the 'Intelligent Query Architect' application window. The title bar reads 'Intelligent Query Architect'. Below the title bar, there is a subtitle 'By all common criteria' and a dropdown menu set to 'Advanced mode'. There are three buttons: 'Save As', 'Save', and 'Close'. The main interface has a menu bar with 'Define', 'Run', 'Report', 'Group', and 'Security'. Below the menu bar, there are tabs for 'Summary', 'Sources', 'Filters', 'Display', and 'Sorting'. The 'Summary' tab is active, showing a form with fields for 'Name' (containing 'By all common criteria'), 'Description', and 'Caption text'. Below the form, there is a checkbox labeled 'Only provide caption for screen readers' which is checked. A metadata section shows 'Path' as '\$/Samples/Directory/PeopleSearch/By all common criteria', 'Author' as 'Chloe Robertson', 'Created on' as '1/20/2014 10:12:51 AM', 'Updated by' as 'Mrs. Madison V. Chobot', and 'Updated on' as '4/30/2018 8:42:36 AM'. A red box highlights the 'Use cached results' checkbox, which is checked. Below this, there is an 'SQL' section with a text area containing a SQL query: 'SELECT DISTINCT [vBoCsContactBasic].[ID], [vBoCsContactBasic].[FullName] AS [Name], [vBoCsContactBasic].[Title], [vBoCsContactBasic].[Company] AS [Organization], [vBoCsContactBasic].[FullAddress], [vBoCsContactBasic].[Status], [vBoCsContactBasic].[Email]'. A 'Copy SQL' button is located to the right of the SQL text area.



Recommendations are not always reality

- Link sources by ID, Key or Code
- Start small
 - begin with 2 sources and test before adding more sources
- Limit your sources to no more than 4 business objects. Every additional source in a query affects performance.
- Using a query as a source does not join the same as two business objects
- Avoid Cross Joins
 - A cross join returns rows for every unique combination of the data in each source (a Cartesian product). This option can affect performance adversely and should only be used when absolutely needed.

- Include filters with **No Prompt** or **Required Prompt** (skip **Optional**). These filters can reduce the number of possible rows returned by the query, thus improving the response time of the query.
- Stay away from the **Contains** filter if possible. This filter can take additional processing time as it does not make use of indexes. The **Starts With** or **Equals** filters are preferred alternatives.
- Limit the number of rows returned
- Set Max run limit to 30 seconds
 - When in **Advanced mode**, the query **Filters** tab gives you the option to set the maximum amount of time a query will attempt to generate before the query times out. It is recommended that this setting is kept at **30 seconds**.



Recommendations are not always reality

- Be mindful of SQL expressions.
 - Use Expression Builder in the Business Object.
 - Copy a standard Business Object and format fields in the copied Business Object.
- Limit using
 - **Only display unique results** checkbox
 - Subtotal option
 - Displaying large text columns or blobs

Add Primary Keys

Indexing is great for reporting, but not for data updates.

Format Fields

Use formatting in Business Object to display data as desired, instead of using SQL formatting

Build Filters

Add criteria filters in the Business object instead of IQA



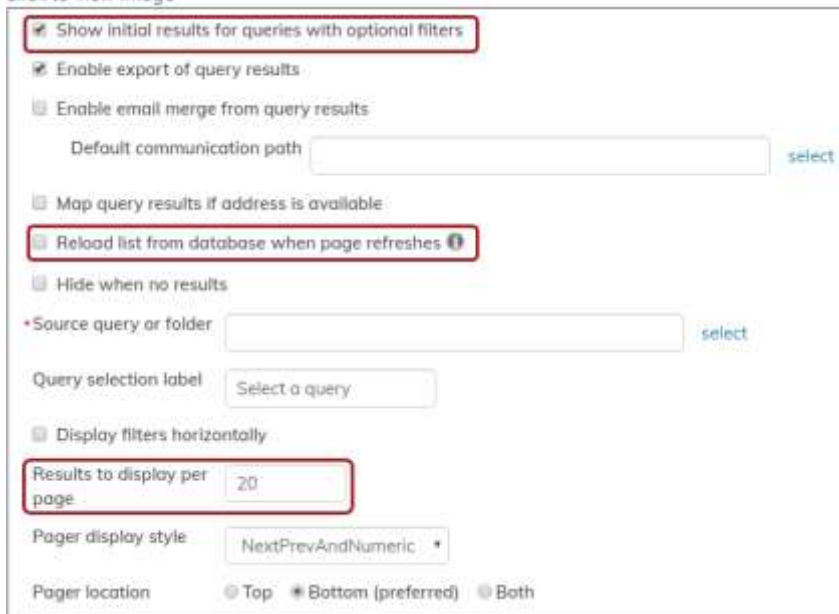
Applying IQAs

Display on a RiSE
Page

Value Lists
for Panel fields

Dashboards





The screenshot shows a configuration panel for query menus. Several options are highlighted with red boxes:

- Show initial results for queries with optional filters
- Reload list from database when page refreshes ⓘ
- Results to display per page: 20

Other visible options include:

- Enable export of query results
- Enable email merge from query results
- Default communication path: [text input] select
- Map query results if address is available
- Hide when no results
- Source query or folder: [text input] select
- Query selection label: Select a query
- Display filters horizontally
- Pager display style: NextPrevAndNumeric ▾
- Pager location: Top Bottom (preferred) Both

- Use “Show initial results for queries with optional filters” only for fast-running queries
- Use “Reload list from database” only when needed
- Use a lower number of results per page to improve page load time



Testing

- Helpful tips for testing
 - Find an ID and add that to the filters in place of “@SelectedID”
 - Limits the results
 - Identifies if the correct data is returned
 - Limit results to Top X (5-10)
 - Allows for multiple records
 - Save your query before adding ANY SQL expression



Using Custom Business Objects for Filtering

The screenshot displays the iMIS 2017 configuration interface for a custom business object. The main window is titled 'ACSM_LongestHeld_Certification' and is divided into several sections:

- Source:** Shows the source name and a 'Add Source' button.
- Database:** Contains a 'Tables' list with 'Activity (Primary)' and a 'Relations' section.
- Used Columns:** Lists columns such as 'Activity.ACTION_CODE3', 'Activity.ACTIVITY_TYPE', 'Activity.AMOUNT', 'Activity.CAMPAIGN_CODE', 'Activity.CATEGORY', and 'Activity.CO_ID'. There are 'Add as Properties' and 'Add All as Properties' buttons.
- Filter Expression:** Contains a complex SQL query:


```
Activity.PRODUCT_CODE IN ('DLS_ES', 'DLS_HFI', 'DLS_CPT')
AND Activity.EFFECTIVE_DATE <= getdate()
AND Activity.THRU_DATE >= getdate()
AND Activity.EFFECTIVE_DATE << (SELECT MIN (A.EFFECTI
```
- Advanced Options:** Includes checkboxes for 'Use FORCE', 'Use NOLOC', and 'Use join me'.
- Filters:** A table with columns: Where, Property, Function, Comparison, Multiple, Value, Prompt, and a refresh button. The table contains several filter rules:

Where	Property	Function	Comparison	Multiple	Value	Prompt	Refresh
	CsRegistration.Event Code	None	Equal			Optional	X
	NetContactData.Id	None	Equal			Optional	X
	NetContactData.First Name	None	Equal			Optional	X
	NetContactData.Last Name	None	Equal			Optional	X
	NetContactData.Email	None	Equal			Optional	X
	CsRegistration.Status	None	Not Contain		C	No	X
- Query options:** Includes checkboxes for 'Require user to provide at least one valid value' and 'Limit the number of results returned'.



Example 2 – iMIS EMS

Custom Business Object with Expression Builder

Expiration in 120 Days

ATS_NetContactDatawithExpDays

ATS_NetContactDatawithExpDays

Definition Properties Database

File Database

Primary

PROPERTY NAME	FUNCTION
SourceCode	None
MobilePhone	None
ExpDays	None
JoinDays	None
PreferredEmail	None

Available Columns

- Name_Address.ADDRESS_FORMAT
- Name_Address.ADDRESS_NUM
- Name_Address.BAD_ADDRESS
- Name_Address.BAR_CODE
- Name_Address.COMPANY
- Name_Address.COMPANY_SORT

Add All as Properties

Definition Display Values Expression builder

Expression

Calculation No function

Property vNetContactData.PaidThrough DBTimeStamp No function

Today No function

Calculated Formula
(vNetContactData.[PaidThrough]) - (dbo.asi_GetAppDatetime())

Inner Join Add

dAddressNumber = Name_Address.ADDRESS_NUM (InnerJoin)





Example 3 – iMIS 2017

Multi Tier List Bill

Define

Run

Report

Group

Security

Summary

Sources

Filters

Display

Sorting

			Add Source
Source	Type		
CsContact	Business Object	✕ ▲ ▼	
CsSubscriptions	Business Object	✕ ▲ ▼	
CsContact1	Business Object	✕ ▲ ▼	
CsSubscriptions1	Business Object	✕ ▲ ▼	
CsDemographics	Business Object	✕ ▲ ▼	
CsContact2	Business Object	✕ ▲ ▼	
CategoryList	Query	✕ ▲ ▼	
AlliancePastDues	Business Object	✕ ▲ ▼	





Summary

Best Practices are NOT hard and fast rules

NetContactData (for contact_key) otherwise
use csContactBasic

Use Business Object Designer to improve your
IQAs

Start Small/Test Often





Questions & Answers



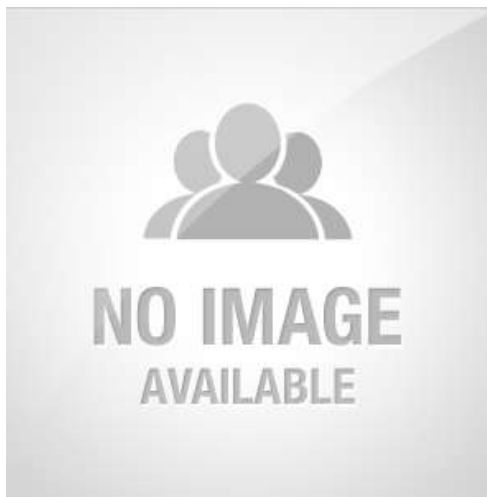
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