Article
Robert Cemper · Jan 23, 2023 2m read

Global-Streams-to-SQL

In general Global Streams are data objects embedded in Classes / Tables.
Using and viewing them with SQL is normally a part of the access to the containing tables.

SO WHAT?

During debugging or searching for strange or unexpected behavior there could be the need to
get closer to the stored stream. No big problem with direct access to Globals with SMP or Terminal.
But with SQL you are lost.
So my tool provides dynamic access to Global Streams wherever you may need this
Special thanks to @Oliver Wilms for the inspiration for this tool.

Mapping of globals to SQL is a rather traditional art from past.
Though Global Streams are somehow specialized.
But even as their Object classes have changed their representation in Global is the same.

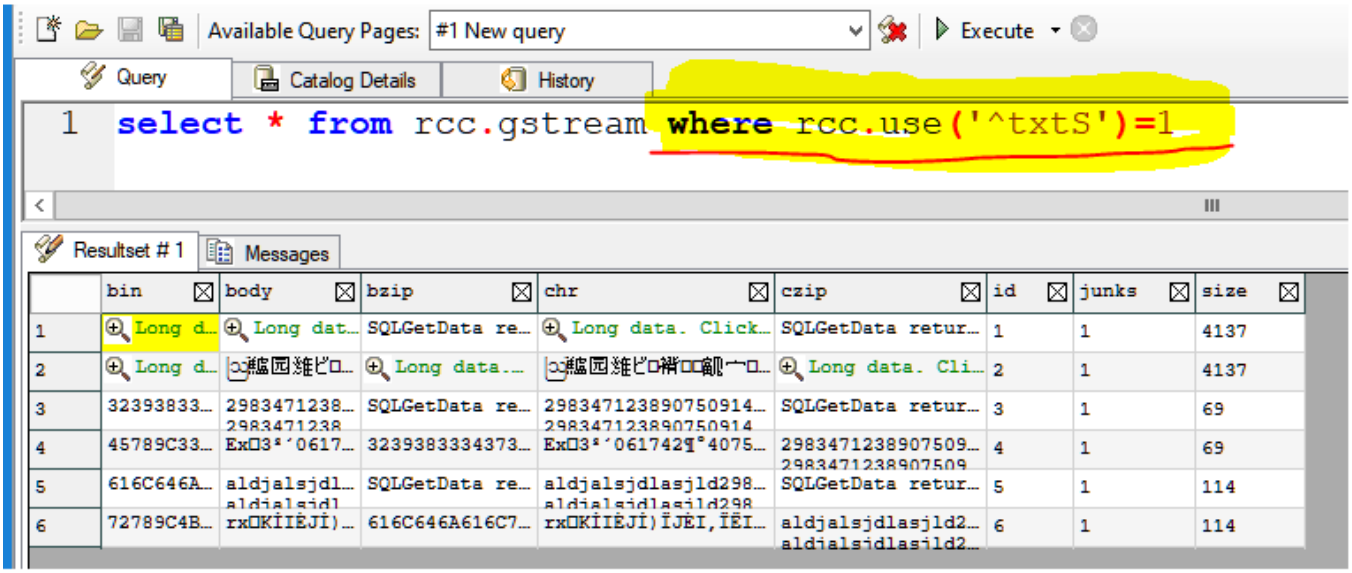
The tricky point is that we see 4 different types of Global Streams in a common structure
Only the embedding Class /Table knows the meaning of the content.

- %Stream.GlobalCharacter - raw text
- %Stream.GblChrCompress - zipped text
- %Stream.GlobalBinary - raw binary sequence
- %Stream.GblBinCompress - zipped binary sequence

The Global itself has no indication, of what format it holds.
Dumping the Global just helps for raw text, the rest needs special treatment.
In combination with SQL you meet the problem of maximum field lengths.

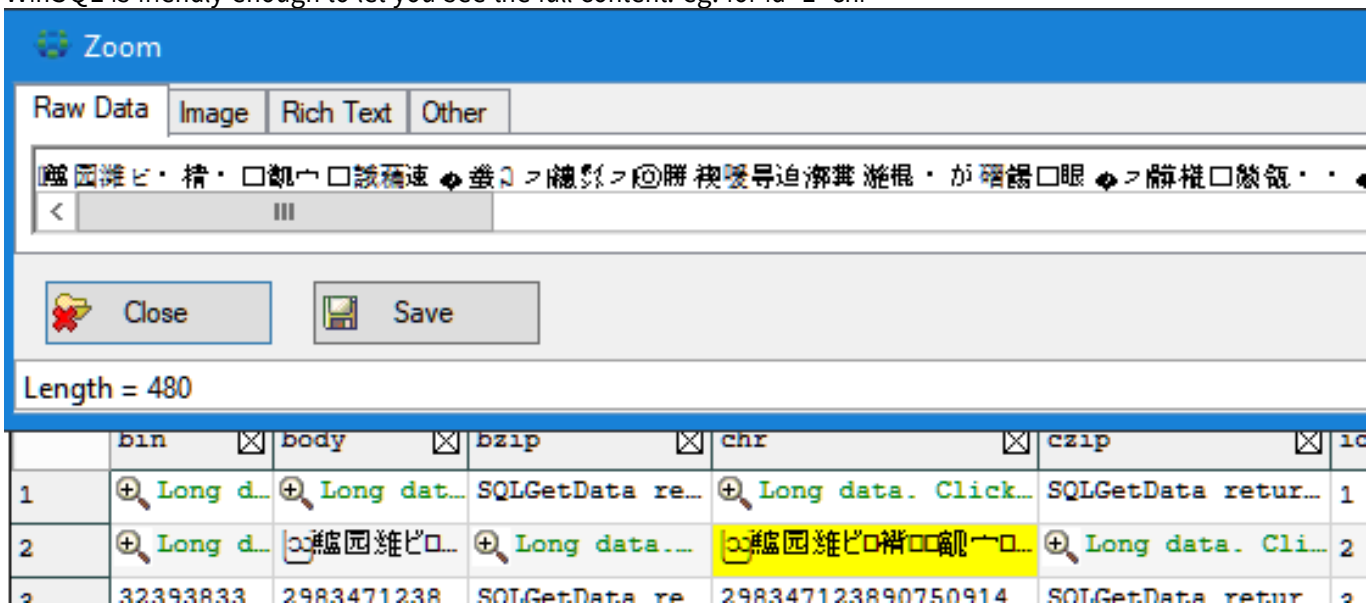
I cover this issue by mapping all 4 types over the same stream and the user decides.
In addition, the total size and number of subnodes is also available.
For string manipulation, the first subscript level is also available as "body" VARCHAR
The Global Stream to examine is provided by a static where clause like this:

```
select * from rcc.gstream where rcc.use('^txtS')=1
```



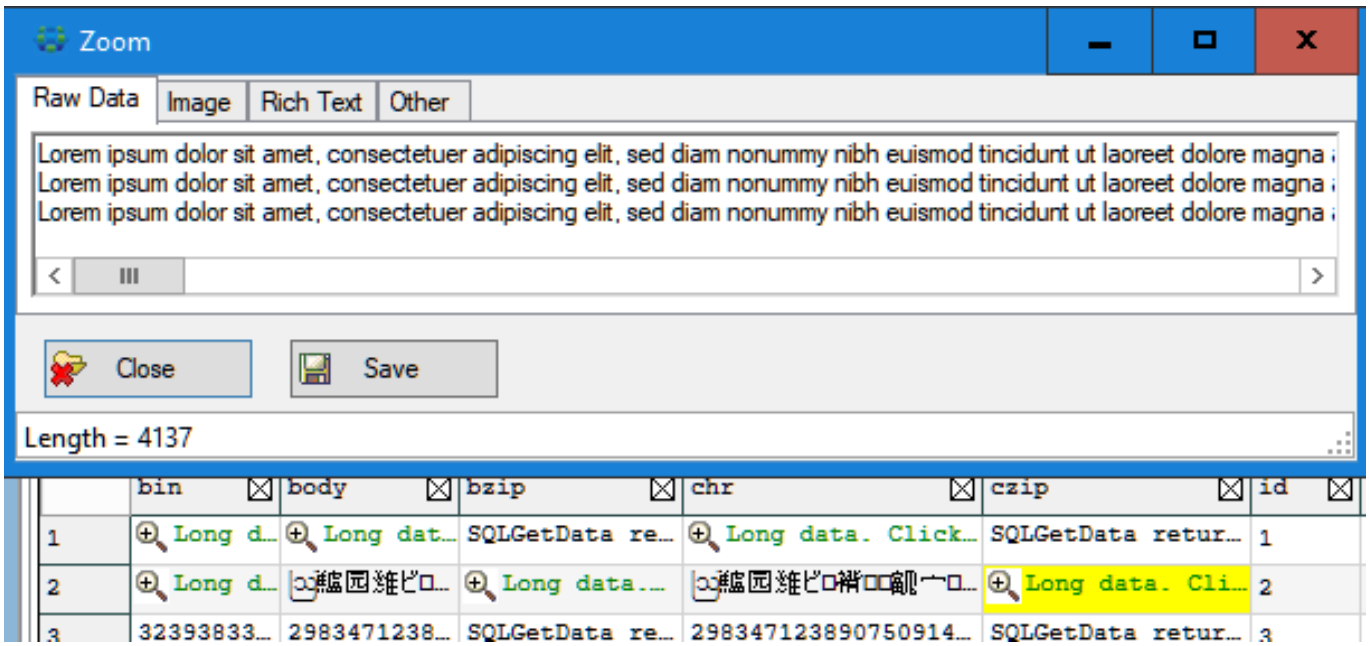
	bin	body	bzip	chr	czip	id	junks	size
1	Long d...	Long dat...	SQLGetData re...	Long data. Click...	SQLGetData retur...	1	1	4137
2	Long d...	臨囲雑ビロ...	Long data....	臨囲雑ビロ褞ロ劒ーロ...	Long data. Cli...	2	1	4137
3	32393833...	2983471238... 2983471238	SQLGetData re...	298347123890750914... 298347123890750914	SQLGetData retur...	3	1	69
4	45789C33...	Ex□3ˢ´0617...	3239383334373...	Ex□3ˢ´061742¶°4075...	2983471238907509... 2983471238907509	4	1	69
5	616C646A...	aldjalsjdl... aldjalsjdl	SQLGetData re...	aldjalsjdlasjld298... aldjalsjdlasjld298	SQLGetData retur...	5	1	114
6	72789C4B...	rx□KİIĖJİ)...	616C646A616C7...	rx□KİIĖJİ)ĬJĖI,ĬĖI...	aldjalsjdlasjld2... aldjalsjdlasjld2...	6	1	114

WinSQL is friendly enough to let you see the full content. eg. for id=1 chr



	bin	body	bzip	chr	czip	id
1	Long d...	Long dat...	SQLGetData re...	Long data. Click...	SQLGetData retur...	1
2	Long d...	臨囲雑ビロ...	Long data....	臨囲雑ビロ褞ロ劒ーロ...	Long data. Cli...	2
3	32393833	2983471238	SQLGetData re	298347123890750914	SQLGetData retur	3

and czip



with SQL the compressed data can be viewed unzipped.

Video

GitHub

#Other

Source URL:https://community.intersystems.com/post/global-streams-sql