What's New At Robelle

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Suprtool/Open with MYSQL Access

We've been busy adding new features to the Suprtool Suite of products, namely with
the JSON option in STExport and more recently we've added access to MYSQL
databases
in Suprtool/Open.

```
>OPEN MYSQL robelle_4 Jz2xrwX tream_robelle dbserver.robelle.com
>SELECT * FROM ALL_TYPES
>FORM
Column                          Len Offset  Type
TINYINT                           4      0  Tiny
SMALLINT                          6      3  Short
MEDIUMINT                         9      9  INT24
INT                              11     18  Long
BIGINT                           20     29  LONGLONG
FLOAT                             6     49  FLOAT
DOUBLE                            8     55  Double
DECIMAL                          10     63  NEWDECIMAL
CHAR                             20     73  String
DATE                             10     93  Date
DATETIME                         19    103  DateTime
TIMESTAMP                        19    122  TimeStamp
TIME                             10    141  Time
YEAR                              4    151  Year
>LIST
>XEQ

>SQL  (1) >OUT $NULL (0)
TINYINT         = 1              SMALLINT        = 2
MEDIUMINT       = 3              INT             = 4
BIGINT          = 5
FLOAT           = 6.01           DOUBLE          = 7.02
DECIMAL         = 8.03           CHAR            = MYCHAR
```

```
DATE               = 2016-02-26    DATETIME          = 2016-02-29
02:15:22
TIMESTAMP       = 2016-02-26 15:06:39
TIME               = 15:06:39      YEAR              = 2016


>SQL  (2) >OUT $NULL (1)
TINYINT            = 1             SMALLINT          = 2
MEDIUMINT          = 3             INT               = 4
BIGINT             = 5
FLOAT              = 6.01          DOUBLE            = 7.02
DECIMAL            = 8.03          CHAR              = MYCHAR
DATE               = 2016-02-26    DATETIME          = 2016-02-29
02:15:22
TIMESTAMP       = 2016-02-26 15:06:50
TIME               = 15:06:50      YEAR              = 2016


IN=2, OUT=2. CPU-Sec=1. Wall-Sec=1.
```

We are looking for anyone who has MYSQL data and knows a little about Suprtool. We are looking at
what to do with certain fields and how to handle some data types and the most common data types used
in MYSQL.

If you're interested in trying this new feature out or have any questions, let me know by e-mailing Neil@robelle.com

Keep in mind that this products is currently just in our little wind tunnel, but it does extract data, list to the terminal and output to link/SD files. We are interested in getting feedback to look at the direction of how to handle some data types.

JSON Data Representation

In the last few years I've been expanding my knowledge and playing with more mordern tools in the Apple, iOS realm. I recently did some work with
JSON data and found that the format was so similar to XML etc and other formats that it would be relatively easy to get STExport to generate data in the JSON format.

The JSON command specifies STExport to generate Json output. Use the JSON command to produce Java Script Object Notation documents for either Internet or Intranet applications.

```
JSON
     OBJECT "string"
     ONEPERLINE
```

Example:

STExport can generate JSON output with just a few commands.

```
$input file1sd
$JSON
$output myJSON
$xeq
```

These four simple commands will generate a file that can be read by various applications. The result of such an STExport task will look as follows:

```
[{"CHAR-FIELD":"11111","INT-FIELD":1111,"ZONED-FIELD":11111}]
```

Object

The Object option allows the JSON data to be wrapped in a specific Object description.

```
JSON Object "Json object"
```

Looks like this:

```
{"Json object":
[{\"CHAR-FIELD":\"11111",
\"INT-FIELD"\:1111,
\"DBL\-FIELD"\:11111,
\"PACKED\-FIELD"\:+1111,
\"PACKED\.-FIELD"\:+11111,
\"QUAD\-FIELD"\:11111,
\"ID\-FIELD"\:1,
\"LOGICAL\-FIELD"\:111,
\"DBLLOG\-FIELD"\:11111,
\"ZONED\-FIELD"\:11111
}]
}
```

Note that the example of the Output has one field per line with data. Normally this would have to be specified via the command line but the data is shown this way simply due to space constraints.

OnePerLine

For files that have many fields you may want to consider using the OneLine option of the JSON command:

JSON OnePerLine

STExport will put each field and data on one line with the appropriate beginning and end notation.

```
[{\"CHAR\-FIELD"\:"11111",
\"INT\-FIELD"\:1111,
\"DBL\-FIELD"\:11111,
\"PAC\KED\-FIELD"\:+11111,
\"PAC\KED\.-FIELD"\:+11111,
```

```
\"QUAD\-FIELD"\:11111,
\"ID\-FIELD"\:1,
\"LOG\ICAL\-FIELD"\:1111,
\"DBL\LOG\-FIELD"\:11111,
\"ZONED\-FIELD"\:11111
}]
```

Multiple Json Commands

You can enter multiple JSON commands per task to set the JSON options you require.

```
$in file1sd
$JSON Object "Json object"
$JSON OnePerLine
$out *
$xeq
```

An example of the output generated by the above commands is as follows:

```
{"Json object":
[{"CHAR\-FIELD"\:"11111",
\"INT\-FIELD"\:1111,
\"DBL\-FIELD"\:11111,
\"PACKED\-FIELD"\:+11111,
\"PACKED\.-FIELD"\:+11111,
\"QUAD\-FIELD"\:11111,
\"ID\-FIELD"\:1,
\"LOGICAL\-FIELD"\:1111,
\"DBLLOG\-FIELD"\:11111,
\"ZONED\-FIELD"\:11111
}]
}
```

Questions contact Neil Armstrong neil@robelle.com

Suprtool 5.8.11 and $Month

I was recently asked how to write a script in Suprtool to add a month to a given date. Now on the surface this
sounds fairly simple, but given the nature of dates it gets a little complicated fairly quickly when handling
dates that end up being invalid.

Here is the script:

```
  rm tobefixed tobefixed.sd
  rm tobefixed.else tobefixed.else.sd
  rm fixed fixed.sd
  rm fixed.else fixed.else.sd
  rm good good.sd
```

```
rm feb feb.sd
rm feb.else feb.else.sd
rm data2 data2.sd
in data
item math,date,ccyymmdd
ext math=(($truncate(mydate / 100) - 1) * 100)  + mydate mod 100
out data2,link
xeq
in data2
if $invalid(math)
out tobefixed,link,else
xeq
mv tobefixed.else good
mv tobefixed.else.sd good.sd
in tobefixed
if math mod 10000 = 431 or math mod 10000 = 631 or math mod 10000
= 931 or math mod 10000 = 1131
ext math = math - 1
out fixed,link
xeq
in fixed
out good,append
xeq
rm fixed fixed.sd
in tobefixed
if math mod 10000 = 431 or math mod 10000 = 631 or math mod 10000
= 931 or math mod 10000 = 1131
ext math
out fixed,link,else
xeq
rm tobefixed tobefixed.sd
mv fixed.else tobefixed
mv fixed.else.sd tobefixed.sd
in fixed
out good,append
xeq
in tobefixed
if $truncate(math / 100) mod 100 = 2
ext math=($truncate(math / 100) * 100) + 28
out feb,link
xeq
in feb
out good,append
xeq
rm feb feb.sd
rm feb.else feb.else.sd
in tobefixed
if $truncate(math / 100) mod 100 = 2
ext math
out feb,link,else
xeq
rm tobefixed tobefixed.sd
mv feb.else tobefixed
mv feb.else.sd tobefixed.sd
```

```
  in tobefixed
  if $truncate(math / 100) mod 100 = 0
  ext math=((($truncate(math / 10000) - 1) * 100 + 12) * 100) + math
mod 100
  out good,append
  xeq
```

While this corrected dates that would not be correct for certain end of month dates, it didn't account for leap years and
February 28, and 29th.

We have added a new feature to Suprtool called $month, which will allow you to add or subtract number of months from a given date.

It was great to go thru the process of writing the Suprtool code as it was a reminder of the issues that needed to be
addressed when adding or subtracting months from a given dates, which made the coding of the new $MONTH function
a lot simpler and a lot of fun.

Currently the $months function only works with ccyymmdd/yyyymmdd dates in J2 or double integer containers. I'm not
sure if that will be expanded upon since this is a format that can be achieved by using the $stddate function.

```
>in month
>form
    File: MONTH.NEIL.GREEN      (SD Version B.00.00)
      Entry:                   Offset
         MYDATE             I2      1                    <<CCYYMMDD>>
    Limit: 25  EOF: 4  Entry Length: 4  Blocking: 64
>list
>xeq
>IN MONTH.NEIL.GREEN (0) >OUT $NULL (0)
MYDATE          = 20160529

>IN MONTH.NEIL.GREEN (1) >OUT $NULL (1)
MYDATE          = 20160530

>IN MONTH.NEIL.GREEN (2) >OUT $NULL (2)
MYDATE          = 20160530

>IN MONTH.NEIL.GREEN (3) >OUT $NULL (3)
MYDATE          = 20160531

IN=4, OUT=4. CPU-Sec=1. Wall-Sec=1.


SUPRTOOL/Copyright Robelle Solutions Technology Inc. 1981-2016.
(Version 5.8.11 Internal)  Tue, Jun 14, 2016,  9:13 AM  Type H for
help.
>in month
>def a,1,4,double
```

```
>ext a=$month(mydate,+1)
>ext a=$month(mydate,+2)
>ext a=$month(mydate,+3)
>ext a=$month(mydate,+4)
>ext a=$month(mydate,+5)
>ext a=$month(mydate,+6)
>ext a=$month(mydate,+7)
>ext a=$month(mydate,8)
>ext a=$month(mydate,9)
>ext a=$month(mydate,10)
>ext a=$month(mydate,11)
>ext a=$month(mydate,12)
>ext a=$month(mydate,-1)
>ext a=$month(mydate,-2)
>ext a=$month(mydate,-3)
>ext a=$month(mydate,-4)
>ext a=$month(mydate,-5)
>ext a=$month(mydate,-6)
>ext a=$month(mydate,-7)
>ext a=$month(mydate,-8)
>ext a=$month(mydate,-9)
>ext a=$month(mydate,-10)
>ext a=$month(mydate,-11)
>ext a=$month(mydate,-12)
>list
>xeq
```

The data then looks as follows. As you can see you can see what dates get adjusted to have
the proper date for the end of the month.

At this point we assume that all dates are valid, however, this may change before this enhancement
is released to the public.

```
>IN MONTH.NEIL.GREEN (0) >OUT $NULL (0)
A            = 20160629        A            = 20160729
A            = 20160829        A            = 20160929
A            = 20161029        A            = 20161129
A            = 20161229        A            = 20170129
A            = 20170228        A            = 20170329
A            = 20170429        A            = 20170529
A            = 20160429        A            = 20160329
A            = 20160229        A            = 20160129
A            = 20151229        A            = 20151129
A            = 20151029        A            = 20150929
A            = 20150829        A            = 20150729
A            = 20150629        A            = 20150529


>IN MONTH.NEIL.GREEN (1) >OUT $NULL (1)
A            = 20160630        A            = 20160730
A            = 20160830        A            = 20160930
A            = 20161030        A            = 20161130
A            = 20161230        A            = 20170130
```

```
A            = 20170228     A            = 20170330
A            = 20170430     A            = 20170530
A            = 20160430     A            = 20160330
A            = 20160229     A            = 20160130
A            = 20151230     A            = 20151130
A            = 20151030     A            = 20150930
A            = 20150830     A            = 20150730
A            = 20150630     A            = 20150530

>IN MONTH.NEIL.GREEN (2) >OUT $NULL (2)
A            = 20160630     A            = 20160731
A            = 20160831     A            = 20160930
A            = 20161031     A            = 20161130
A            = 20161231     A            = 20170131
A            = 20170228     A            = 20170331
A            = 20170430     A            = 20170531
A            = 20160430     A            = 20160331
A            = 20160229     A            = 20160131
A            = 20151231     A            = 20151130
A            = 20151031     A            = 20150930
A            = 20150831     A            = 20150731
A            = 20150630     A            = 20150531

IN=3, OUT=3. CPU-Sec=1. Wall-Sec=1.
```

As always if you're interested in more about this function and feature feel free to e-mail Neil Armstrong at neil@robelle.com

Robelle's Book Club

We Robellians like to read. In our last newsletter, we listed a few of the books we have shared and enjoyed.

We have listed a few more of our recent "good reads" below.

The Nightingale by Kristin Hannah

I Am the Messenger by Markus Zusak

His Whole Life by Elizabeth Hay

Station Eleven by Emily St. John Mandel

Missing You by Harlan Coben

We are always looking for book recommendations. Send your book recommendation to Fran Glasgow fran@robelle.com

Introducing Marek our office feline

At Robelle we consider ourselves an equal opportunity company. Yes we have our office dogs Cassie, Dakota, Otis & Parker. We do have one office feline named Marek. This coming August Marek will be 10 years old and is best buddies with Cassie. Marek was adopted from rescue shelter same as Cassie, Dakota, Otis & Parker.

Marek
busy working

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