

FixDates v2.50 for Win32

Program Description

FixDates provides a quick way of scanning a Btrieve database file for invalid Btrieve dates and time values at specified offsets. The invalid date fields, which can cause problems from ODBC queries, can be set to one of four valid dates at this time, including 00/00/0000, 01/01/1901, 01/01/1980, and 01/01/1000. Others can be easily added with an enhancement request.

FixDates can also repair invalid time values, setting them all to 00:00:00, 12:00:00, 22:22:22, or 01:02:03, or TIMESTAMP values, setting them to 4 different options as well.

Finally, FixDates can also fix NaN values in FLOAT(4) and DOUBLE(8) fields by using the /F4 and /F8 switches.

Platform and Package

Win32 Console; Btrieve Utilities, Resources & Tools; GS_Lic

Pricing

\$100; An unregistered trial license is available that is limited to checking dates, but not repairing them.

Command Line Syntax and Help Screen

FixDates Version 2.50: 06/04 (C)2024 Goldstar Software Inc.

```
Usage:  FIXDATES Filename Offsets [/N##] [/Z] [/T] [/S] [/C] [/O=Owner]
        This command scans a Btrieve file for invalid dates/times & fixes them.
        Specify the offset at which the Field resides in the Btrieve Record.
        (Multiple offsets can be specified with commas, as in 14,89,114.)
        Use the /N# option to specify a new field value from this list.

            DATE              TIME              TIMESTAMP
            1 = 00/00/0000    00:00:00        0000-00-00 00:00:00.0 (Default)
            2 = 01/01/1901    12:00:00        1901-01-01 00:00:00.0
            3 = 01/01/1980    22:22:22        1980-01-01 00:00:00.0
            4 = 01/01/1000    01:02:03        9999-12-31 23:59:59.0

        The /Z option fixes ZERO Dates (00/00/0000) also.
        The /T option fixes TIME values instead of dates.
        The /S option fixes TIMESTAMP values instead of dates.
        The /F4 option fixes FLOAT(4) NaN values instead of dates.
        The /F8 option fixes DOUBLE(8) NaN values instead of dates.
        The /R option disables Status reporting.
        The /C option enables Changes to the data file. (BEWARE!)
        The /DELETE option DELETES bad records (must also use /C). (BEWARE!)
        Use the /O= option to provide an owner name.
```

Note: Unregistered Trial can report, but not fix, the problems.

Examples and Sample Usage

By default, FixDates will run a report to tell you what it **WOULD** change given the parameters you provided. To actually enable changes, you must include the /C flag on the command line.

WARNING: No record locking is currently done on the file, so this process should ideally be done when all other users are out of the file. Also, NO UNDO is possible with this utility! If you specify an incorrect offset on the command line, it will DESTROY your data, potentially to where fixing it may be impossible. *Be sure to have a valid and tested backup before proceeding!*

To specify the new field value to use, add the /N switch with the appropriate number from the table. At this time, there are 4 possible replacement values, but we can add a new one if needed for a specific use.

To fix all of the DATE fields located at offset 165 in the Btrieve file, setting all invalid dates to 01/01/1901 and correcting 0-dates as well:

```
FIXDATES DATAFILE.BTR 165 /N2 /Z /C
```

You can correct the TIME field located at offset 613 by using the /T switch with

this command. Without specifying the /N switch, this will change the time to the default value of 00:00:00:00:

```
FIXDATES DATAFILE.BTR 613 /T /C
```

You can correct the TIMESTAMP field located at offset 805 to a value of 1980-01-01 00:00:00:00.0000000 with the /S option and this command:

```
FIXDATES DATAFILE.BTR 805 /S /C /N3
```

You can search for bad floating point values (NaN and INFINITY values) with this tool as well. A NaN value is one which has all ones in the exponent, and a non-zero fractional value (mantissa), and an INFINITY Value is one that has a zero mantissa. These values often cause the SQL engine to return "Bad Numeric Value" errors. This tool replaces these bad values with 0. To scan and fix 4-byte floating point values, include the switch /F4. For 8-byte floating point values, include the switch /F8.

```
FIXDATES DATAFILE.BTR 613 /F4 /C
```

If you do not know the proper tables and offsets for the date fields, then a short SQL query may provide this information to you (if you have valid DDF's):

```
SELECT Xf$Name, Xe$Name, Xf$Loc, Xe$Offset
FROM X$file, X$field
WHERE Xf$Id = Xe$file
AND Xe$Datatype = 3
```

The result of this query will be a list of tables and their related Btrieve files that have Btrieve DATE fields, and their respective offsets. Change the Xe\$DataType field WHERE clause to 4 to check for TIME fields, or 20 to check for TIMESTAMP fields. Change the last line of the WHERE clause to "AND Xe\$DataType = 2 AND Xe\$Size = 8" to find all FLOAT(8) fields in the database.

If you wish to correct multiple fields in a single pass through the file (a great time-saver), then provide the Offset value as a comma-delimited list of offset values, with NO spaces in between. An example would be:

```
FIXDATES DATAFILE.BTR 165,228,532 /N4 /Z
```

Note that for this to work correctly, you can ONLY search for one data type (i.e. date or time) at a time. If you need to fix both dates AND times, it will require at least two passes.

If you just want to scan for a count of bad values, then you can include the /R option to disable Reporting. However, we do recommend checking this data first before attempting any changes.

In some cases, you may be aware that the records with bad dates or times have bad data in other fields as well, and it may be better to simply delete the data altogether. This is where the /DELETE option comes in. When used along with the /C flag, FixDates will delete the records with the bad data. As a final double-check, the tool will delay the start by 7 seconds to give you a chance to kill it before it potentially starts wiping out your data. **Use with extreme caution!**

Other Information

FixDates for Win32 is provided as a licensed program only. Goldstar Software can provide customized changes or other options to this program to registered users upon request. For more information, contact Goldstar Software Inc. at www.goldstarsoftware.com

Version History

Version 1.0: First documented version

Version 1.1: Added support for the date 01/01/1000.

Version 1.2: Added support for multiple offsets in a single run.

Version 1.3: Improved the bad date detection code to detect days of months that don't exist, including 02/29 in non-leap-years. Also added the ability to scan for (and correct) time values.

Version 2.0: Added GS_Lic support and free trial options.

Version 2.1: Display the number of "bad" records found, even on the trial.

Version 2.2: Added the ability to replace one specific NAN value in FLOAT(8) variables with 0 values.

Version 2.3: Added ability to replace both NaN and Infinity values on 4-byte and 8-byte FLOAT values.

Version 2.31: Fixed crash which occurs when no field list is provided.

Version 2.32: Made FixDates "safe" by requiring /C flag to enable changes.

Version 2.33: Updated licensing code.

Version 2.34: FixDates was ignoring the year, but the .NET components choke on years over 9999, so any years of 10000 or higher are now considered bad and will be fixed. So much for Y10K compatibility, Microsoft.

Version 2.40: Added the ability to delete bad records entirely.

Version 2.41: Added 32-byte owner name support.

Version 2.42: Added ability to specify the time value to be used, just like dates.

Version 2.50: Added ability to find invalid TIMESTAMP values as well, and provided 4 different "fix" options.

Known Problems

FixDates will handle only records up to 63000 bytes in size.