

# ListStat v4.70 for Win32

## Program Description

The program LISTSTAT was designed to provide a better, more customizable interface to the Btrieve File Statistics information, better known as BUTIL -STAT information. The BUTIL -STAT command provides a display of the file's statistics, but it has some major problems, including a verbose display and the complete lack of multi-file and wildcard support.

ListStat is a direct replacement for BUTIL -STAT, with a number of additional features. In addition to being fewer characters to type, the ListStat output is more compact and often will eliminate the need to use "|MORE" or to scroll the display when you use it.

For normal use, use the command format:

```
LISTSTAT filename
```

Additionally, ListStat has the capabilities to perform STAT calls across a series of filenames using wildcards in a filespec. To display statistics for all .BTR files, use:

```
LISTSTAT *.BTR
```

Finally, ListStat can be used to extract out only specific pieces of information from the STAT report, based on options provided on the command line, and can push that out into a comma-delimited format, to allow for collection of statistics from a large number of files for further filtering in a spreadsheet.

## Platform and Package

Win32 Console; Btrieve Utilities Resources & Tools; GSLic

## Pricing

\$100 Single-User, \$500 Site License; Trial Download Available

## Command Line Syntax and Help Screen

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```
Usage: LISTSTAT filespec [/options] [/O=OwnerName]
This command STATs each Btrieve file and displays the data to the console.
/A Prints ALL Statistics. [Default]
/C Outputs Data in Comma-Delimited Format.
/E Prints Extended Stat Information.
/F Prints File Formats.
/G Generates a DES file based on the data file.
/I Ignores Errors (Like Status 30).
/K Prints Detailed Key Information.
/L Prints Record Length Information.
/M Suppresses 'Processing' Messages.
/N Starts each file's output segment on a New page (formfeeds).
/O= Use this Btrieve Owner Name.
/P Prints Page Sizes.
/R Prints Record Count Information.
/S Recurses All Subdirectories.
/T Prints Key Total Information.
/U Omit Unique Record Count Data.
/V Prints Variable Record Information.
/W Prints the Filename and Record Count Columns at 20/12 Chars Wide.
Also, the following 'macro' options have been defined:
/1 -> /AMN: Easily Generates printed STAT reports.
/2 -> /FPRCM: Generates delimited report prior to data conversions.
/3 -> /RM: Quickly checks record counts.
```

## Examples and Sample Usage

\*\*\* LISTSTAT COMMAND OPTIONS \*\*\*

The LISTSTAT program is even more powerful, though, since it allows a complete filespec to be used, instead of just a filename as the command line parameter. This filespec supports all standard DOS wildcards and pathing, so that you can simply specify \*.BTR to get information on all BTR files. LISTSTAT will process these files in the order in which they are found. You can also specify a directory in which to search, as in:

```
LISTSTAT F:\PVSW\DEMODATA\*.MKD
LISTSTAT K:*.DAT
```

These wildcards will save you loads of time when trying to analyze a system, especially when planning an upgrade where file conversion will be required. Of course, this is only half the fun! The other half comes when looking into the various options and features built into this powerful utility. These options can be used alone or in conjunction with other parameters, so that you can customize your LISTSTAT report to provide you with the exact information you need, with no extra text to clutter your screen. As you'll see, you can also set options to write the data to a comma-delimited file, excellent for importing into a spreadsheet!

### \*\*\* LISTSTAT DISPLAY OPTIONS \*\*\*

There are several options that can alter the display of information by LISTSTAT. These options can be provided on the command line individually, or concatenated together. For example, the following command:

```
LISTSTAT filename /F /P /V
```

will produce the exact same output as the easier-to-type version:

```
LISTSTAT filename /FPV
```

There are also a few short-cut options, which function as macros, for the most common options. These are listed below the full set of options.

Let's examine the display options first, one by one.

**/A (All Statistics):** This option displays all file statistics except the extended statistics to the screen, very similar to the output from a normal BUTIL -STAT function call, and it is the default. While not really invoking ALL functions, this option is the same as invoking the options: /FPRLVTK

**/E (Extended Information):** This option adds extended statistics to the display. This includes the number of extents, information about System Data and a System Log Key, internal file information (usage count, open timestamp, handle count, and file flags), gateway information (server name, version, patch level, and platform), and security information (handle security flags, database security flags, permissions, and username information). Most people ignore this data, but the System Data information can be useful when analyzing a data set for Replication, and the other details can be an aid to troubleshooting rights issues. Note that it is NOT included in the /A switch, so you should use /AE to include extended information in a typical STAT report. At this time, only the number of extents is included in the CSV output format.

**/F (File Formats):** This option displays the file version information. It properly reports file versions as old as 3.x, although all versions prior to 6.x are called "pre-6.x" by the BUTIL program. (This value should indicate the OLDEST version of Btrieve which can be used to properly access the file, with the exception of the 13.x file format, which actually requires v13.30 or higher, and v9.5 files with long owner names, which require a v10 or higher engine.)

**/G (Generate Description File):** This option generates an output that is compatible with the Description Files used by the BUTIL -CREATE and BUTIL -INDEX functions. For best results, this should be done with a single file at a time. Note that if an ACS is used in a file, this command will ALSO extract the ACS structure and create it in the current directory with an ACS extension.

**/I (Ignore Errors):** Normally, if ListStat encounters an error opening a file, it will report it as an error. However, this can be excessive when searching an entire

folder structure with wildcards. Adding the /I will ignore these errors and report ONLY on those files that open correctly. This may lead to missing some files!

/P (Page Sizes): This option displays the page size of the file.

/R (Record Count Information): This option displays the number of records currently in the file.

/V (Variable Record Information): This option displays the information about Data Compression, Variable Length Records, VATs, Blank Truncation, and Free Space Threshold, if appropriate.

/T (Key Total Information): This option simply provides the total number of keys and segments for the file.

/K (Detailed Key Information): This option enables the display of the key/index information in the file. An example is shown below:

| Key | Seg | Position | Length | Type     | Flags | Nulls | Unique | Values | ACS |
|-----|-----|----------|--------|----------|-------|-------|--------|--------|-----|
| 0   | 1   | 1        | 20     | String   | I M   | --    |        | 22     | --  |
| 1   | 1   | 28       | 25     | String   | IRMD  | --    |        | 22     | --  |
| 1   | 2   | 53       | 4      | Unsigned | RMD   | --    |        | 22     | --  |
| 2   | 1   | 57       | 8      | Unsigned | M     | --    |        | 22     | --  |

You'll note that there is NO legend for the key flags. The legend from BUTIL can be used, which includes the following:

Legend:  
< = Descending Order  
D = Duplicates Allowed  
I = Case Insensitive  
M = Modifiable  
R = Repeat Duplicate  
A = Any Segment (Manual)  
L = All Segments (Null)  
-- = Not Specified

/U (Omit Unique Record Count Data): If you are comparing record structures of files between two different versions, or for building DDF's, you may want to omit the unique record count data so that a text comparison tool will work more effectively. Use the /KU switch to show all key data, but omitting these extra counters.

/N (Start Output on a New Page): This option forces a FORMFEED character to the output screen after each file is processed. This provides a very simple way to create printed reports.

/W (Fixed Width): This option forces the comma-delimited filename column to print as 20 characters wide, and the record count to print as 12 characters wide. This helps when reading the output on-screen.

In addition to these command options, the following macro options are defined:

/1 (/AMN): This option generates printed STAT reports very easily.

/2 (/FPRCM): This option generates a comma-delimited file containing common data needed to review a data set prior to a file conversion. This data includes the file name, file version/format, record count, and page size.

/3 (/RM): This option is used to quickly generate a list of files with their record counts.

### \*\*\* LISTSTAT PROCESSING OPTIONS \*\*\*

These options affect the way that LISTSTAT handles its search for files and how it handles the data once it finds a file.

/M (Suppress 'Processing' Messages): LISTSTAT sends its output to the console, otherwise known by developers as stdout. It also sends periodic progress information to the error console, or stderr. When you are dumping a large amount of file statistics, you can redirect stdout to a data file by using the redirection command, as shown below:

```
LISTSTAT filename /A >REPORT.TXT
```

This command dumps the information to the file REPORT.TXT. (You can go directly to a printer on LPT1 by using ">LPT1:" instead.) The other data, which is sent to stderr, is still visible on the screen so that you can watch the systems' progress. However, this gets very annoying if you just want to view something on the screen. Use the /M switch to disable these messages.

/S (Recurse Subdirectories): When the /S option is used, the given filespec will be applied to the current (or specified location) and all subdirectories of that directory. This adds another level of power to the system, since the command:

```
LISTSTAT F:\*.* /S /2
```

will scan an entire file server looking for Btrieve files. Of course, this will take some time to complete, but the resulting data will include all Btrieve files that could be found and their versions, page size, and more! Use this option with caution...

/O (Specify Btrieve Owner Name): Some database files are protected by owner names. In these cases, you may get a Status 51 (Invalid Owner) when you attempt to open the data file. The workaround to this is to provide the owner name to LISTSTAT so that it can properly open the file. The proper syntax is:

```
LISTSTAT filename /A /O=Owner
```

You can also provide hexadecimal owner names as part of this option if you preface the owner name with "0x", as in this example using "Owner":

```
LISTSTAT filename /A /O=0x4f776e6572
```

The /O option can NOT be concatenated with other options, and the "=" is required to make sure that you intended to specify this option. Text owner names are case sensitive, but hexadecimal owner names are not.

/C (Output in Comma-Delimited Format): Last, but certainly not least, is this option that completely reformats the output from LISTSTAT. Instead of a report-like format, the information is displayed in comma-delimited format. As an example, the command:

```
LISTSTAT dept.mkd /CFPR
```

will result in the output of:

```
DEPT.MKD,1,9.5,4096,22,
```

While not all that valuable in itself outside of saving bytes written to the screen, this is extremely powerful when used with wildcards, as in:

```
LISTSTAT *.mkd /CFPRM
```

```
FileName,Extents,Version,PageSize,RecordCount
BILLING.MKD,1,9.5,4096,1315,
CLASS.MKD,1,9.5,4096,211,
COURSE.MKD,1,9.5,4096,145,
DEPT.MKD,1,9.5,4096,22,
ENROLLS.MKD,1,9.5,4096,6570,
FACULTY.MKD,1,9.5,4096,96,
PERSON.MKD,1,9.5,4096,1500,
ROOM.MKD,1,9.5,4096,149,
STUDENT.MKD,1,9.5,4096,1288,
TUITION.MKD,1,9.5,4096,8,
```

```
Statistical Output Complete for 12 Files.
```

This output data can be quickly imported into an Excel spreadsheet, where the data can be put into columns (with headers) for further analysis. Note that the data columns are always output in the same order, regardless of the order of the parameters on the command line.

## Other Information

ListStat for Win32 is provided as a registered 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](http://www.goldstarsoftware.com)

## Version History

Version 2.3: First Documented Version

Version 2.4: Minor Bugs Fixed When Using Owner Names

Version 2.5: Added support for Extended Filename Display (/E) and the display of System Key Information (also /E) and addressed another owner name issue.

Version 2.6: Added support for /G switch for creating DDF's with DataExchange.

Version 2.7: Added compile switches for Linux version.

Version 2.9: Addressed owner names and special handling for USER.DDF.

Version 3.0: Fixed bug in reporting ACS keys as Case Insensitive.

Version 3.1: Added support for v9.5 File "Page Compression" Flag.

Version 4.0: Added GSLicense support.

Version 4.1: Fixed minor bug in determining the version of files with owners.

Version 4.2: Added support for new PSQLv10.20 data types.

Version 4.41: Fixed display of v9.5 file formats.

Version 4.42: Fixed display of Page Compression on v9.5 file format.

Version 4.43: Added /I option to ignore errors opening files.

Version 4.50: Adding the /U option to ease DDF building.

Version 4.51: Removed the /G option used for DataExchange 1.x CREATE scripting, and replaced it with the ability to generate Description Files.

Version 4.52: Updated licensing code.

Version 4.53: Added ability to display ACS name instead of only the ACS number, and also completed the ACS piece of the /G option.

Version 4.54: Address exclusivity between ACS and CASE flag.

Version 4.60: Added extended statistics types 4, 5, and 7 to the output format. Enabled support for URI strings (for a single file, useful for testing rights).

Version 4.61: Implemented new BTRVEX function call to support record counts over 4G. Added display of page compression block size.

Version 4.62: Added 32-byte owner name and AutoTimeStamp field support.

Version 4.63: Expanded ability to handle files with many key segments and ACS; Added header row to CSV output format; Ensured that CSV-formatted rows are identical, regardless of file version.

Version 4.64: Display Page Size for PhysBlockSize for older files.

Version 4.65: Added support for TimeStamp2 data type.

Version 4.66: Added support for SysData2.

Version 4.70: Added support for hex owner names and a display of the encryption type for owner-encrypted database files.

### **Known Problems**

The /G option currently handles files with up to 10 ACS/ISR definitions. We have not seen any test data for ISR structures, so this may be a bit flawed yet, too.

We have found a bug in the PSQL/Zen Client that makes it impossible to retrieve STAT data over 33455 bytes, so very large file structure definitions may not report all data properly. Once Actian fixes this, we will re-test and make sure it works up to 420 key segments and 100 ACS structures.