



Fast DBTools

User Guide

Important Notice

TaiRox does not warrant or represent that your use of this software product will be uninterrupted or error-free or that the software product can be run with any other version of Sage ERP Accpac other than 5.6A, 6.0A, or any version of Sage 300 other than 2012, 2014, 2016 or 2017 or that the information in this document is completely accurate. TaiRox warrants that any media by which you have received this software is free from defects. TaiRox will replace any such defective media. TaiRox expressly disclaims all other warranties, representations, conditions and guarantees of any kind including, but not limited to warranties for merchantability or fitness for a particular use.

TaiRox Fast DBTools User Guide

Summary & Overview

Fast DBTools is a SQL Server specific program that performs Sage 300 DBLoad, DBDump and DBCopy operations, copying data between a Sage 300 dataset and a SQL server database. A Sage 300 centric view of SQL Server databases and Sage 300 datasets supports operations not otherwise available, facilitating database clean-up and disk space management.

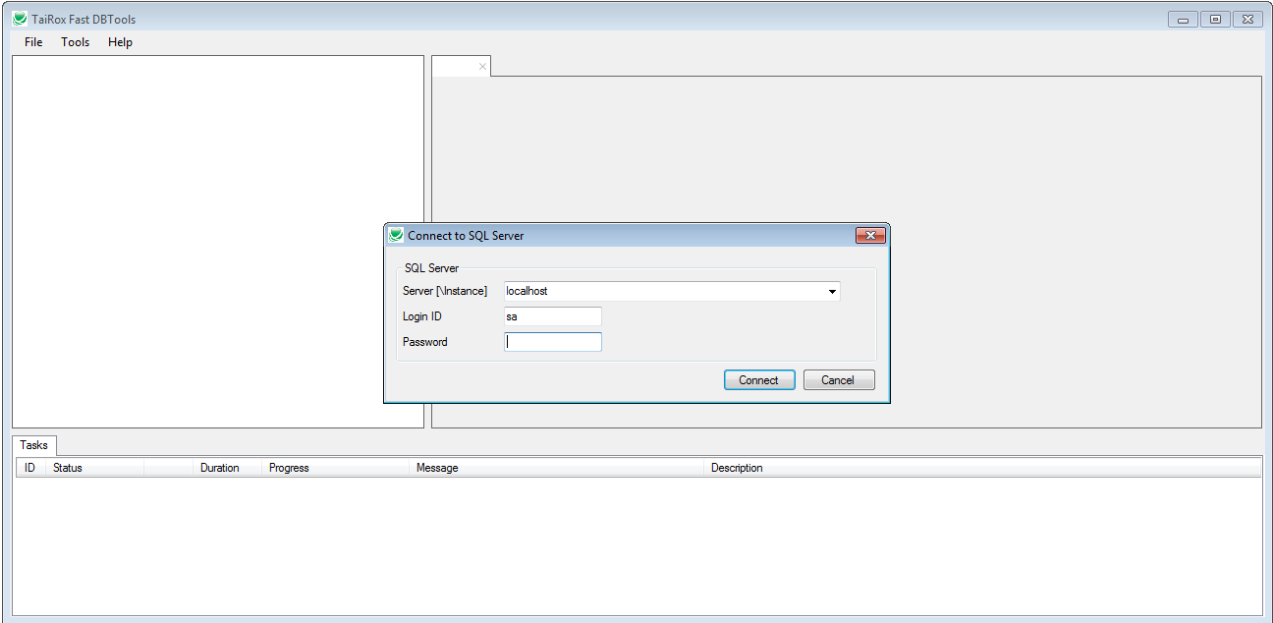
Key features and benefits:

- **Fast Load:** A database load will take a fraction of the time taken by the standard utility, typically 3x to 4x faster.
- **Fast Dump:** Any number of Sage 300 databases can be dumped in a single, unattended operation. Dumps are performed with multiple threads, speeding up overall operation.
- **Fast Copy:** Database copy operations will take about 60% of the time taken by the standard utility. Further, databases can be copied from one SQL Server instance to another, eliminating
- **Safe:** A "Require Exclusive Access" checkbox has been added to the Dump & Copy forms. When checked, a dump will not proceed unless exclusive access to the database can be acquired. When unchecked, Fast DBTools will still attempt to get exclusive access, but will proceed if unable to do so. A dumped or copied database may not be consistent if users are able to make entries during the dump.
- **Safe: New** - You will be warned if a database being dumped has stored procedures, views, triggers, extra tables or extra columns that will not be saved in a dataset.
- **Safe: New** - A database's collation is now recorded in the dataset. If a user tries to load a dataset into a database that has a different collation, a warning will be presented.
- **Visibility:** Fast DBDump will dump data in a readable CSV format as well as to the standard REC format.
- **Visibility:** All Sage 300 databases are displayed in a sortable, Sage 300 centric grid with Collation, Recovery Model and Log Space Available columns. Icons on the display separate Sage 300 and non-Sage 300 databases (e.g. CRM or Portal databases). The icons also indicate whether or not a Sage 300 database is connected and usable (a Database Setup entry is present).
- **From One Place: New** - A new Sage 300 database can be created or deleted without using the SQL Server Management Studio. When creating using an existing database as a model, a Database Setup entry will be created with the same credentials. When deleting a Database Setup entry will be deleted.
- **From One Place:** A Shrink Log button quickly recovers unused space in database logs without using the SQL Server Management Studio.
- **From One Place:** A convenience feature when loading a database allows you to set the Common Services company name to match the description in the database setup tables - saving time when repeatedly loading a test copy of a database.
- **From One Place:** When creating a new database using an existing database as a model, you can enter the database description which will be used in the Database Setup entry.
- **No Other Way:** A deactivation operation cleans up tables created by old, unused modules. Two character prefixes being used in a database are shown for selection.
- **No Other Way:** A Dataset Explorer will open and display REC (or CSV) files without loading the entire database into SQL Server, which may take minutes or hours for large databases. If you associate DCT files with Fast DBTools in Windows then opening a dataset results in Fast DBTools being started and the Dataset Explorer being opened to the folder containing the dataset.

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Using Fast DBTools - Exploring

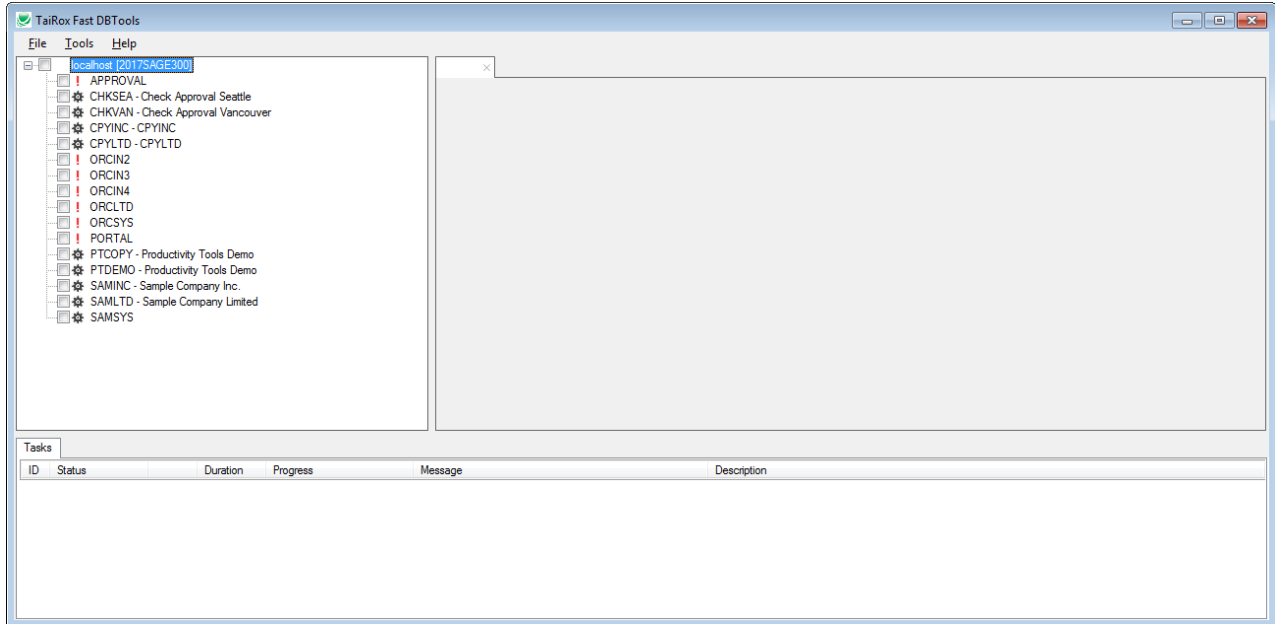
Fast DBTools is launched like any Windows program. When launched, Fast DBTools displays a blank window and asks for a connection to a SQL Server instance. Connections can also be made through the File, Connect to SQL Server menu choice.



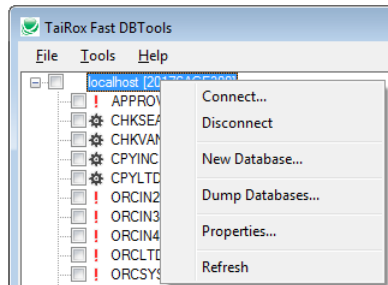
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Using Fast DBTools - Exploring

When connected to a SQL Server instance, all databases are shown. Non-Sage 300 databases show a red icon (!). Sage 300 system and company databases show a "gear" icon if a Database Setup entry is present. Company databases display the company name. Connections to multiple SQL Server instances will show the trees stacked vertically.



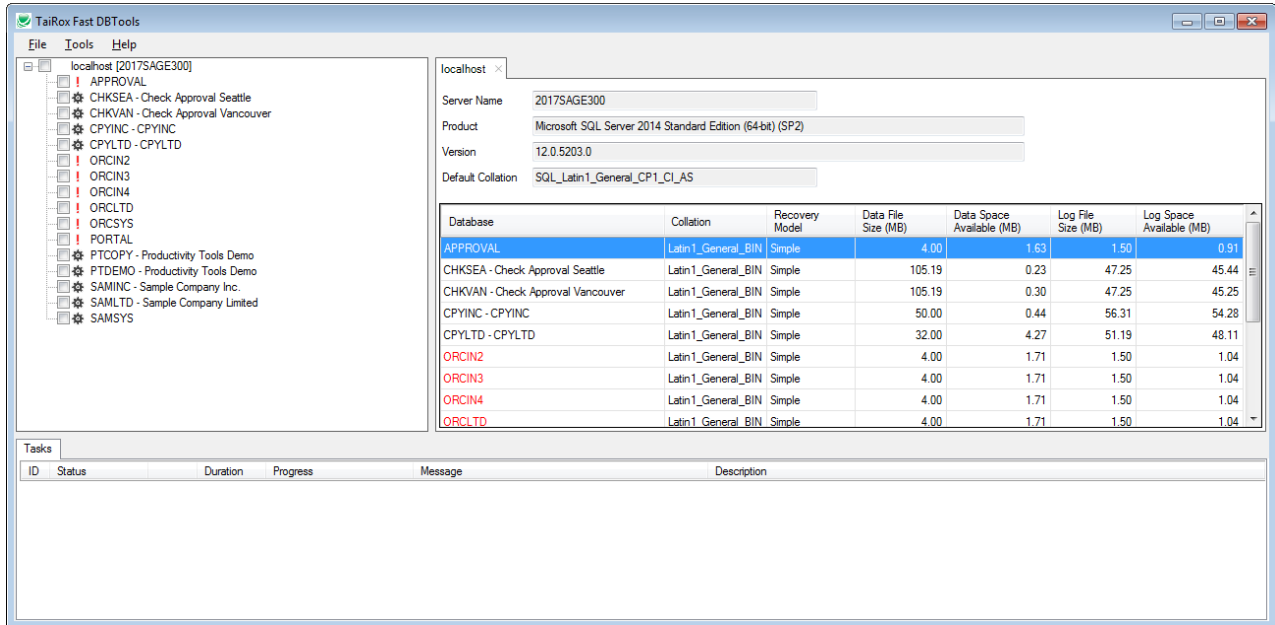
Right-clicking on a SQL Server instance name will display operations that can be performed on with that instance:



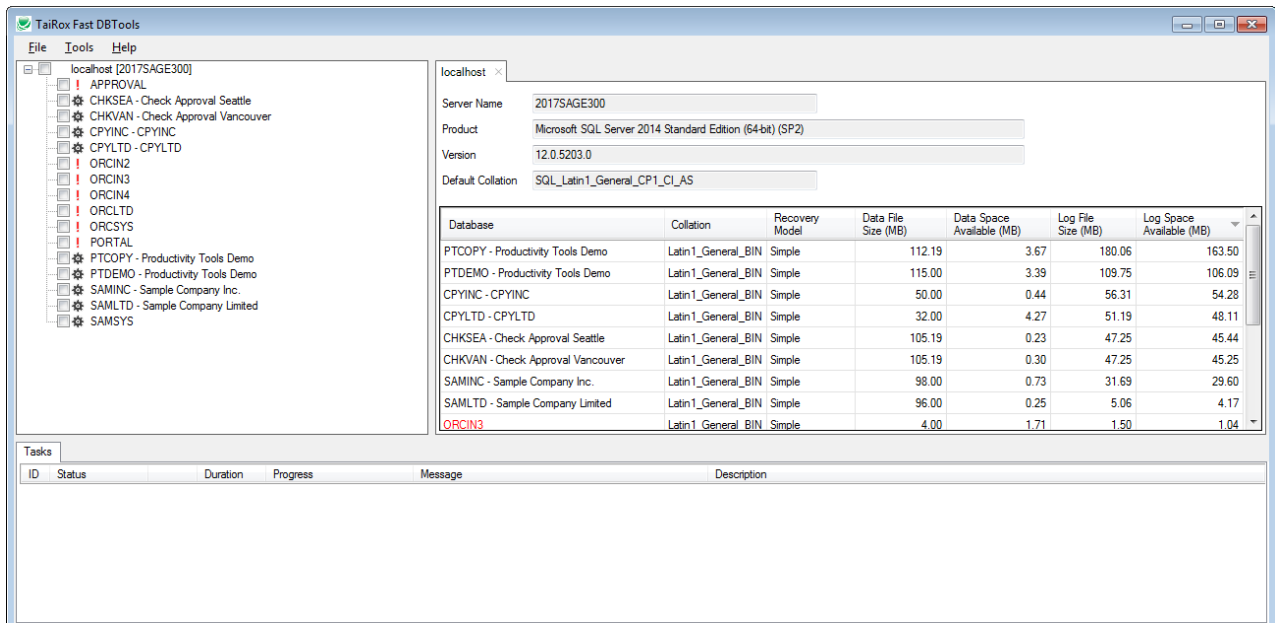
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Using Fast DBTools - Exploring

Selecting the Properties operation will display details about the SQL Server instance and about each database in the instance in alphabetical order.



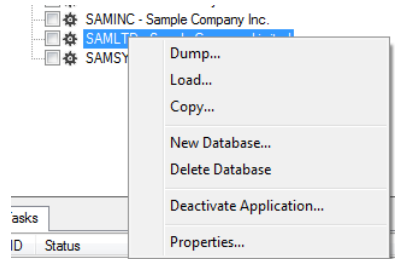
Clicking on a column will sort by that column. Sorting by one of the Size or Space columns can be useful when managing disk space.



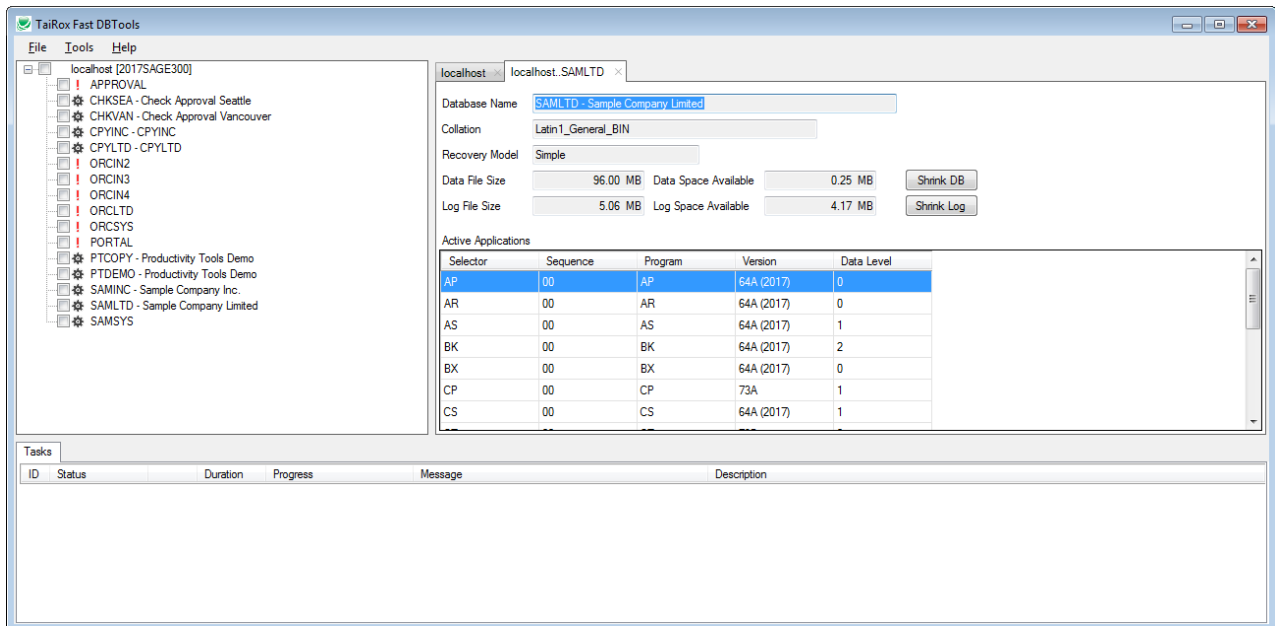
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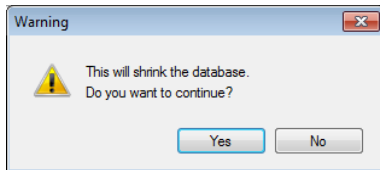
Right-clicking on a database name will display operations that can be performed on that database:



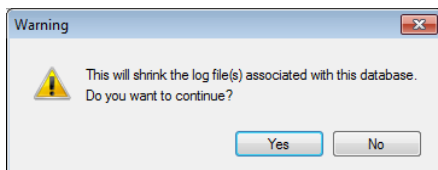
Selecting the Properties operation will display details about the database:



A Shrink DB button will reduce the database file after first displaying a warning message:



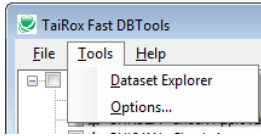
A Shrink Log button will reduce the Log file after first displaying a warning message:



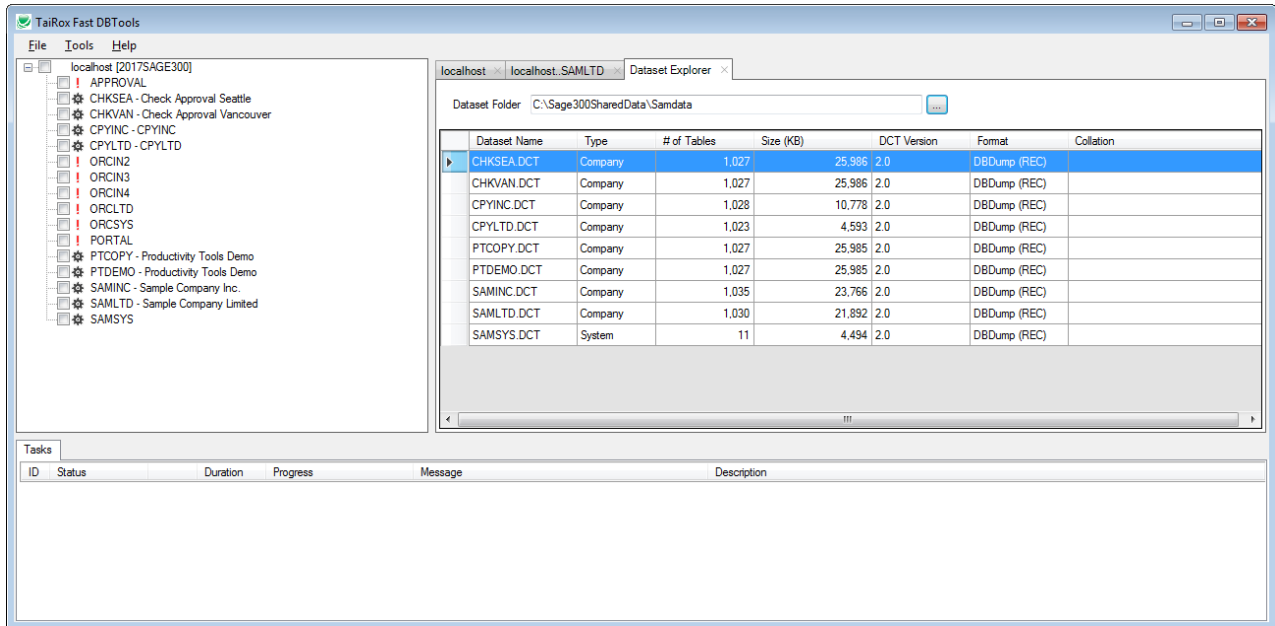
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Using Fast DBTools - Exploring

Fast DBTools also supplies a way to explore datasets:



The Dataset Explorer provides a way to browse to a directory where datasets are stored and see directory details in a convenient way:

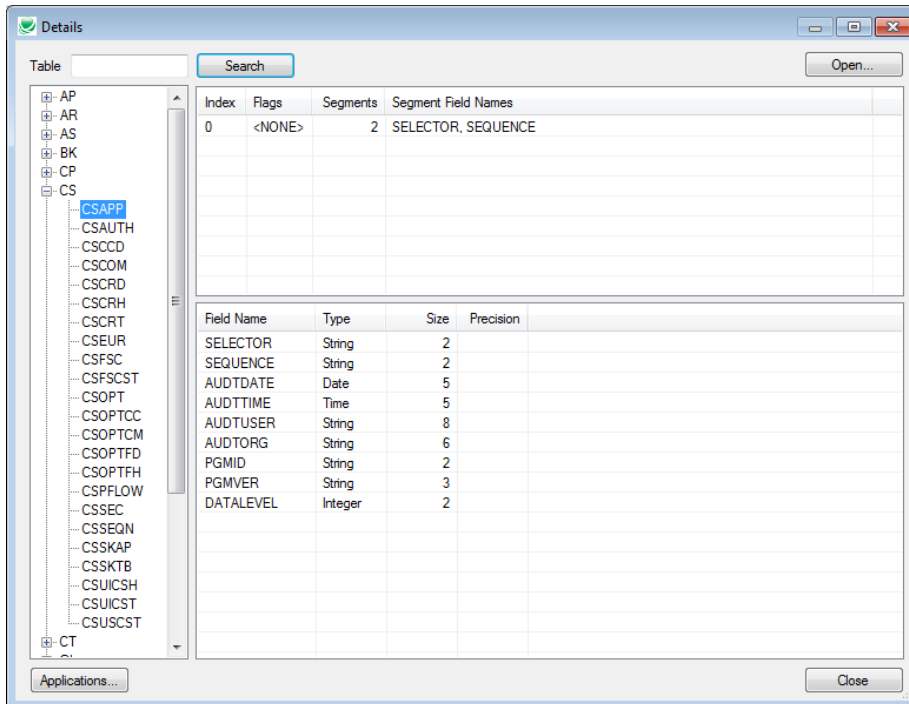


Note that if the database has been dumped using Fast DBTools the Collation column will display the database collation when the database was dumped. Databases dumped with the standard utility will have a blank Collation column.

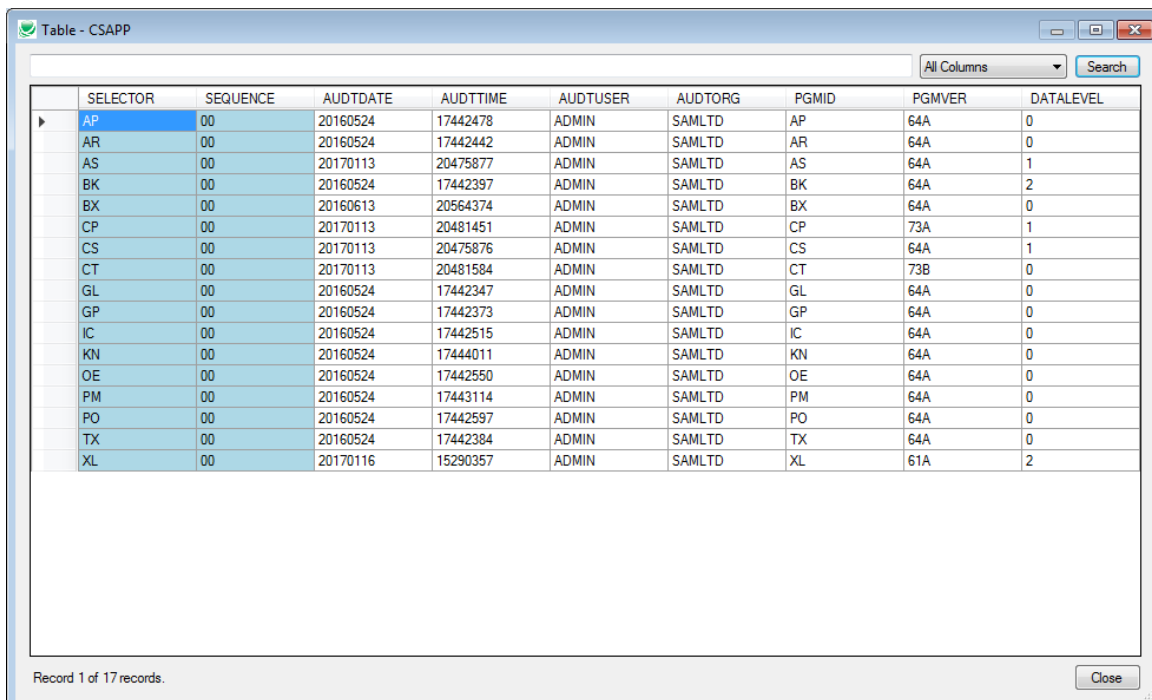
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Using Fast DBTools - Exploring

Double-clicking on a dataset name will pop up a window showing all active modules in the dataset. The structure is shown, including keys:



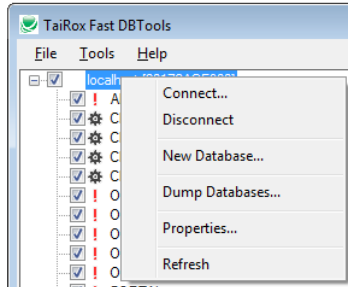
Selecting an individual table name and clicking on the Open button will show the rows that are in the dataset. Clicking on a column will sort by that column. Displaying REC files without loading the entire database into SQL Server may save many minutes or hours for large databases.



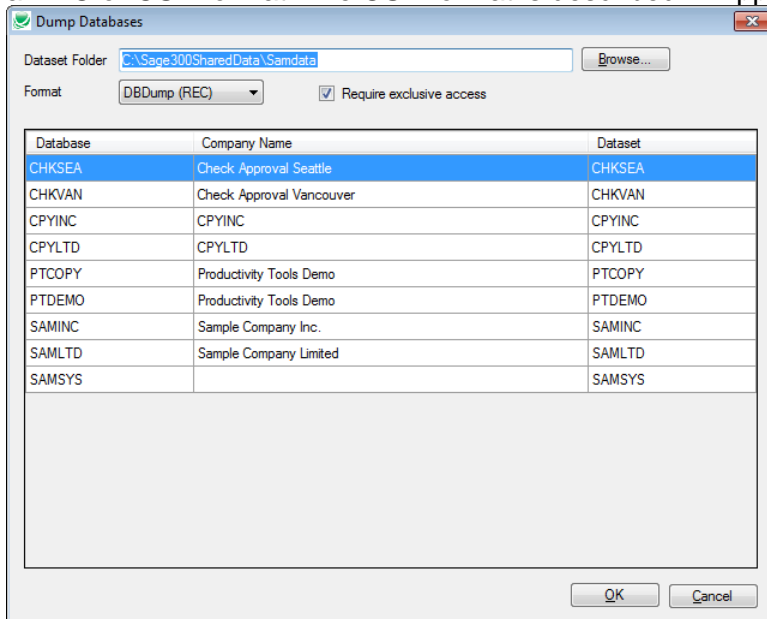
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Using Fast DBTools - Dumping Databases

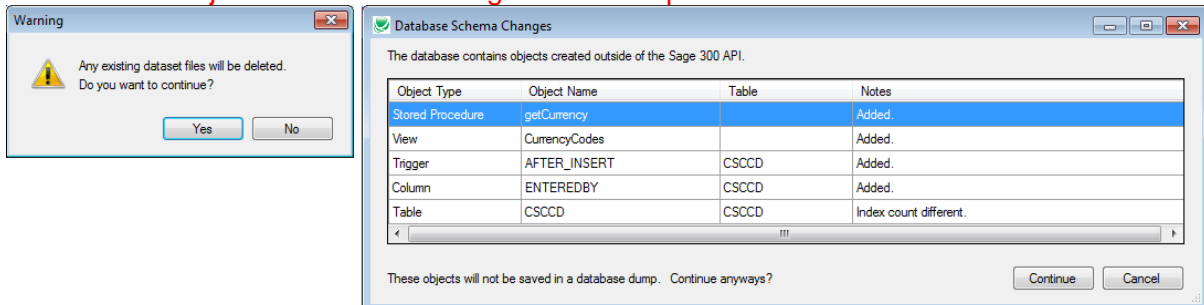
Select the Dump Databases operation after selecting some or all of the Sage 300 databases. You can also right-click on an individual database:



You may then Browse to a folder that will contain the datasets and select whether the dump is to a REC or CSV format. The CSV format is described in Appendix A of this document:



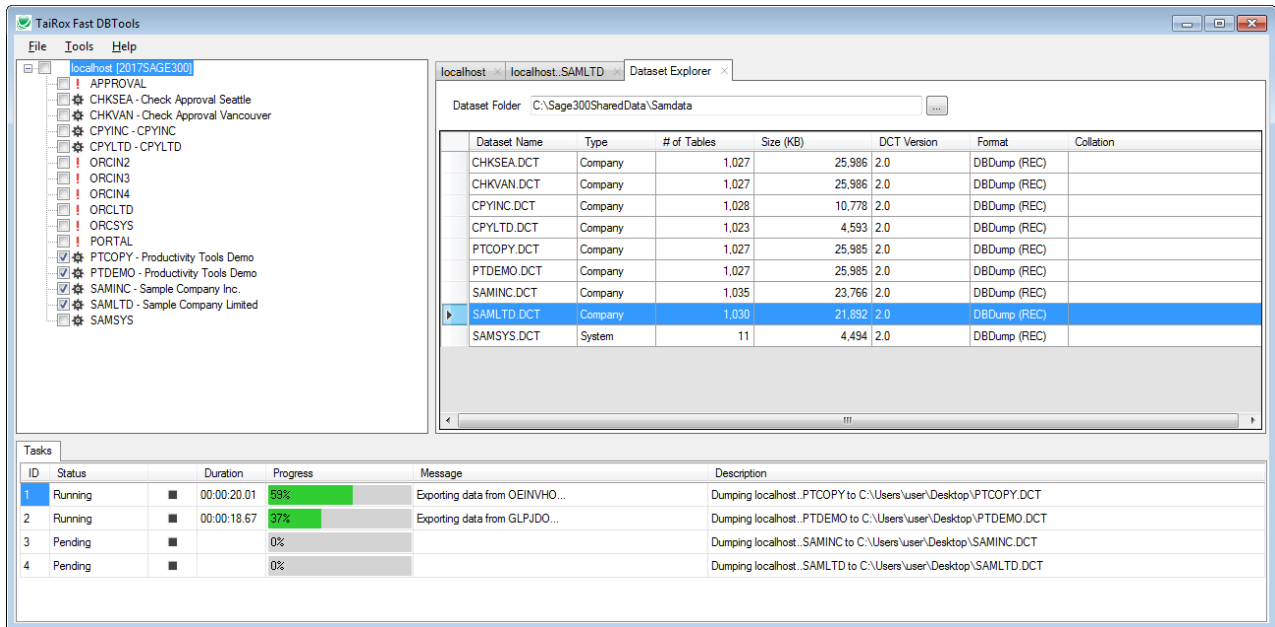
A warning will be displayed before the dump proceeds. **NEW: For single database dumps, if SQL Server objects not saved in a DBDump are present an additional warning will appear. Note that table-related objects will be lost during a DBLoad operation.**



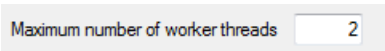
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Using Fast DBTools - Dumping Databases

A progress window show the operations being performed. **Note** that multiple databases are being dumped at the same time, which significantly speeds up the operation.



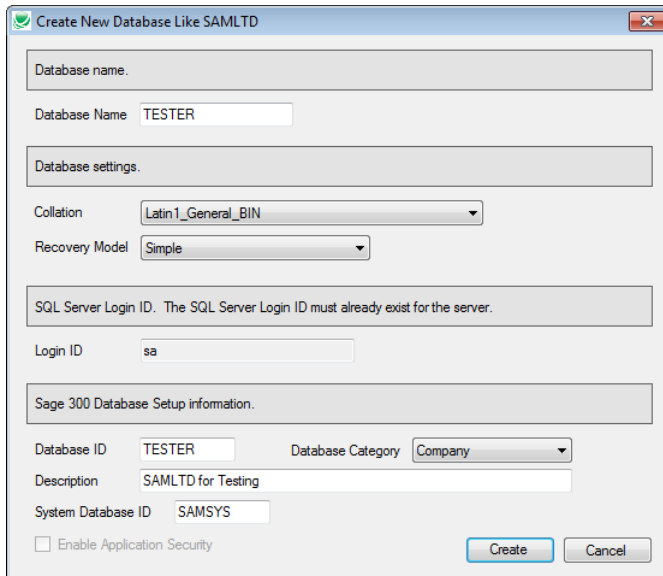
The number databases dumped at the same time is controlled by an option (Tools, Options). An optimal number will depend on computer and network characteristics, particularly number of CPU cores and disk drive characteristics:



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Using Fast DBTools - Creating New Databases

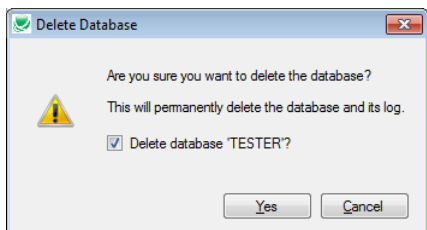
Select the New Database operation by right-clicking on a database name to be used as a model. In this example, SAMLTD is used as a model for a new database TESTER:



A new database is created without using the SQL Server Management Studio, using the settings of an existing Sage 300 database which is known to operate correctly. This avoids the possibility of forgetting to override certain instance defaults that are important to Sage 300. The need to run Database Setup is eliminated (the password for the new database is set to be the same as the model database). When a first database is created this way in an instance - or - when there is a reason to change the Collation and Recovery Model settings, these settings can be changed from the drop-downs.

Using Fast DBTools - Deleting New Databases

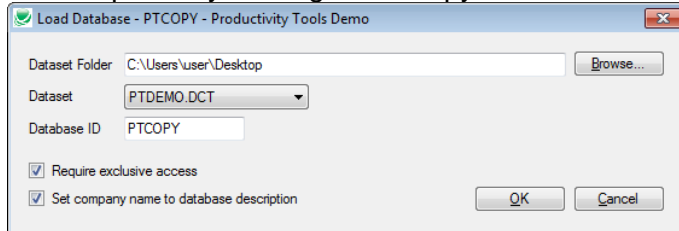
A database can also be deleted. Before doing so you may wish to take an offline backup. You will be warned and as an additional protection mechanism, you will have to confirm by clicking on the checkbox as shown:



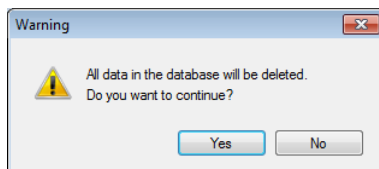
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Using Fast DBTools - Loading New Databases

Loading multiple databases at the same time is not currently implemented. Select the Load Database operation by right-clicking on a database name. An option is provided that will set the common services company name to the description in the database setup tables - saving time when repeatedly loading a test copy of a database.



A warning message will appear before the operation starts:

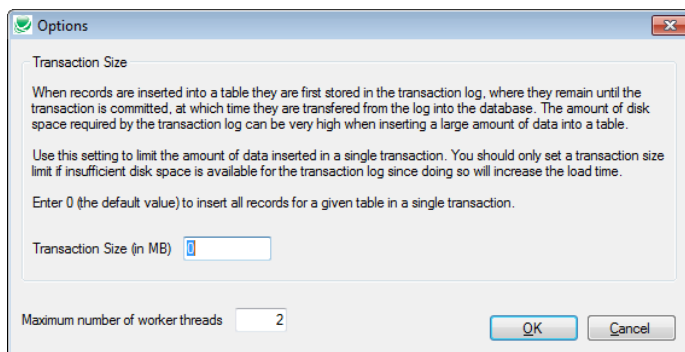


Fast DBLoad will operate in a fraction of the time taken by the Administrative Services ("AS") program. In a production-like network environment, a load time of 90 minutes was reduced to 22 minutes on a 10.8 GB database with 384 tables.

Fast DBTools will load a REC file or a CSV file produced by a Fast DBDump operation. If the CSV file is edited, the formatting rules specified in Appendix A must be strictly followed.

Loading Large Databases with Limited Disk Space

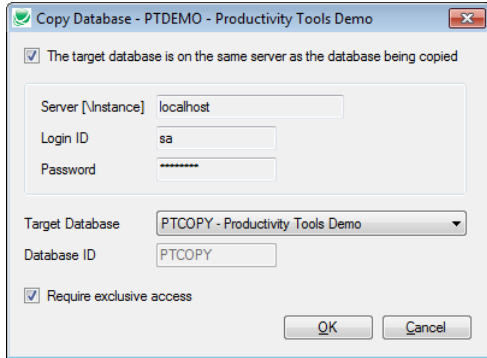
Fast DBLoad gets its performance boost by committing many table rows at a time. Until rows are committed, they reside in a transaction log, using up disk space. It is possible to cause a disk-full condition when loading a very large table onto a disk with a limited amount of free space. The Transaction Size setting limits the amount of disk space used for large tables. See the explanation on this form for more details:



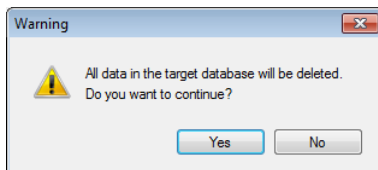
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Using Fast DBTools - Copying Databases

Copying multiple databases at the same time is not currently implemented. Select the Copy Database operation by right-clicking on a database name:



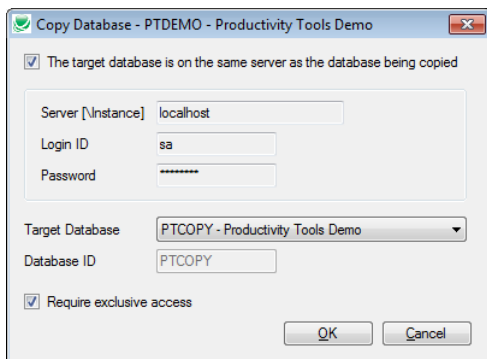
You must enter the Target Database and its Sage 300 Database ID. A warning message will appear before the operation starts:



Fast DBCopy will perform the same operation as AS DBCopy, reducing the time taken by about 40%.

Copying a Database to Another SQL Server Instance

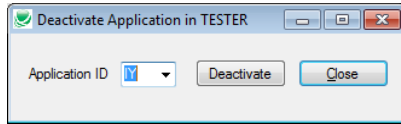
Note that when the target database is not on the same server as the source database, you must clear the checkbox and enter the target SQL Server instance. Copying across SQL Server instances takes about the same time as a DBDump and DBLoad operation:



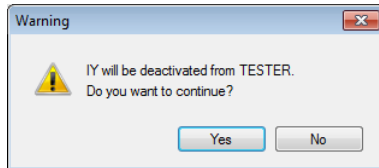
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Using Fast DBTools - Deactivating an Application (Module)

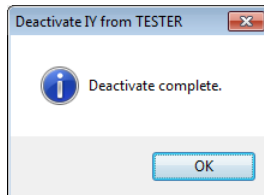
Select the Deactivate Application operation by right-clicking on a database name. You must select the two-character Application ID to be deactivated:



A warning message will appear before the operation starts:



A message appears when the operation is complete:



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Appendix A - Format of CSV files

Formatting rules:

1. The record separator is a linefeed (or carriage return / linefeed pair).
This means one record per line.
2. The field separator is a comma.
Blanks before and after the separator are significant - they will not be discarded.
3. Each record must specify all fields.
4. Text fields containing record or field separators must be enclosed in quotes.
5. If a quoted text field contains a quote then it must be escaped (ie doubled up)
6. The first row is a header row. It specifies the field (column) names.

Example:

```
CURID,AUDTDATE,AUDTTIME,AUDTUSER,AUDTORG,CURNAME,SYMBOL,DECIMALS,SYMBOLPOS,THOUSSEP,DECS
EP,NEGDISP
ATS,0,0, , ,Austrian Schilling,AtS,2,1,"",,,3
AUD,0,0, , ,Australian Dollars,$,2,1,"",,,3
BEF,0,0, , ,Belgian Franc,BeF,2,1,"",,,3
CAD,0,0, , ,Canadian Dollars,$,2,1,"",,,3
CHF,0,0, , ,Swiss Francs,SwF,2,1,"",,,3
CNY,0,0, , ,People's Rep of China Renminbi,RMB,2,1,"",,,3
DEM,0,0, , ,Deutsche Mark,DM,2,3,"",,,1
ESP,0,0, , ,Spanish Peseta,Pta,2,1,"",,,3
EUR,0,0, , ,Euro,€,2,1,"",,,3
FIM,0,0, , ,Finnish Markka,FiM,2,1,"",,,3
FJD,0,0, , ,Fijian Dollars,$,2,2,"",,,3
FRF,0,0, , ,French Francs,F,2,1,"",,,3
GBP,0,0, , ,Pound Sterling,£,2,1,"",,,3
GRD,0,0, , ,Greek Drachma,DR,2,1,"",,,3
HKD,0,0, , ,Hong Kong Dollars,$,2,1,"",,,3
IDR,0,0, , ,Indonesian Rupiah,Rp.,0,1,,,"",3
IEP,0,0, , ,Irish Punt,Ir£,2,1,"",,,3
ITL,0,0, , ,Italian Lira,L.,0,1,,,"",3
JPN,0,0, , ,Japanese Yen,¥,0,1,"",,,3
JPY,0,0, , ,Japanese Yen,¥,0,1,"",,,3
KIP,0,0, , ,Laos Kip,KIP,2,3,"",,,3
LUF,0,0, , ,Luxembourg Franc,LuF,2,1,"",,,3
MXP,0,0, , ,Mexican Pesos,$,0,1,"",,,3
MYR,0,0, , ,Malaysian Ringgit,RM,2,1,"",,,3
NLG,0,0, , ,Netherland Guilders,f.,2,1,"",,,3
NTD,0,0, , ,New Taiwan Dollar,NT$,0,1,"",,,2
NZD,0,0, , ,New Zealand Dollars,$,2,2,"",,,3
PGK,0,0, , ,Papua New Guinea Kina,K,2,2,"",,,3
PTE,0,0, , ,Portuguese Escudo,Esc.,2,1,"",,,3
SGD,0,0, , ,Singapore Dollars,S$,2,2,"",,,3
SLR,0,0, , ,Sri Lankan Rupees,Rs.,2,1,"",,,3
THB,0,0, , ,Thai Baht,฿,2,3,"",,,3
USD,0,0, , ,U.S. Dollars,$,2,1,"",,,3
VND,0,0, , ,Viet Nam Dong,VND,0,1,"",,,3
ZAR,0,0, , ,South African Rand,R,2,2, ,,,3
```