

Trams Back Office

Installing Trams

This chapter contains:

- Minimum Hardware Requirements
- Directions for Installation
- Directions for Conversion from Trams for DOS (if applicable)
- Troubleshooting
- For Agencies using ClientBase and Adding TBO
- Trams License Manager
- Alias Utility
- Credit Card Encryption

Minimum Hardware Requirements

Trams Back Office requires a minimum 256MB (megabytes) of RAM. You also need a Pentium III, IV or above processor and internet connection. The *Trams Back Office* program files take approximately 41MB of hard disk space. For each million dollars of business volume, *Trams Back Office* uses about 3MB additional space. Windows XP, Vista, or Windows 7 are required operating systems. Older versions of Windows may be compatible for single user (check with support@trams.com).

Trams Back Office utilizes Windows printer drivers and as such cannot be used with dot matrix printers. If you are purchasing a new printer, best recommendation is getting a Laserjet rather than a Deskjet printer.

TBO Installation

NOTE to XP Users: Before installing *Trams Back Office* on XP and you already have Interbase, you have to go to **Start|Control Panel|Admin Tools|Services** and stop the IBGuard and IBServer.

Note to Trams for DOS Users: Before installing *Trams Back Office*, complete these things *if you are on Trams Back Office for DOS*:

1. Update to the most current version of *Trams Back Office for DOS*.
2. Download and Process all interface records. These records do not convert if they aren't processed.
3. Go to **Utilities|Setup|Global Defaults** and check to make sure that the *Multi-User* entry is set to either *Read-Only* or to *Full*. (If set to *NO*, you will not be able to do the conversion.)
4. Go to **Utilities|Setup|Hardware**. Press *ALT I*. Write down your current interface settings. This will help

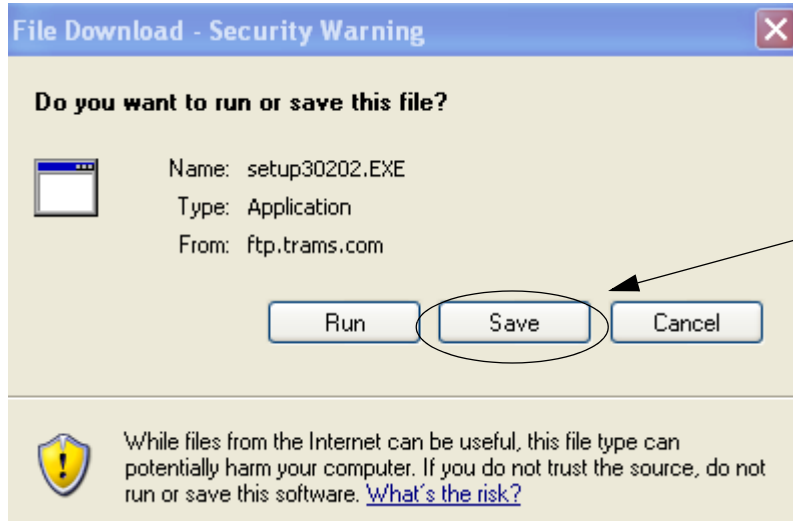
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you and/or the support desk setup your interface in Trams Back Office once the conversion is complete.

5. Back up your current version of *Trams*.

Trams Back Office Installation

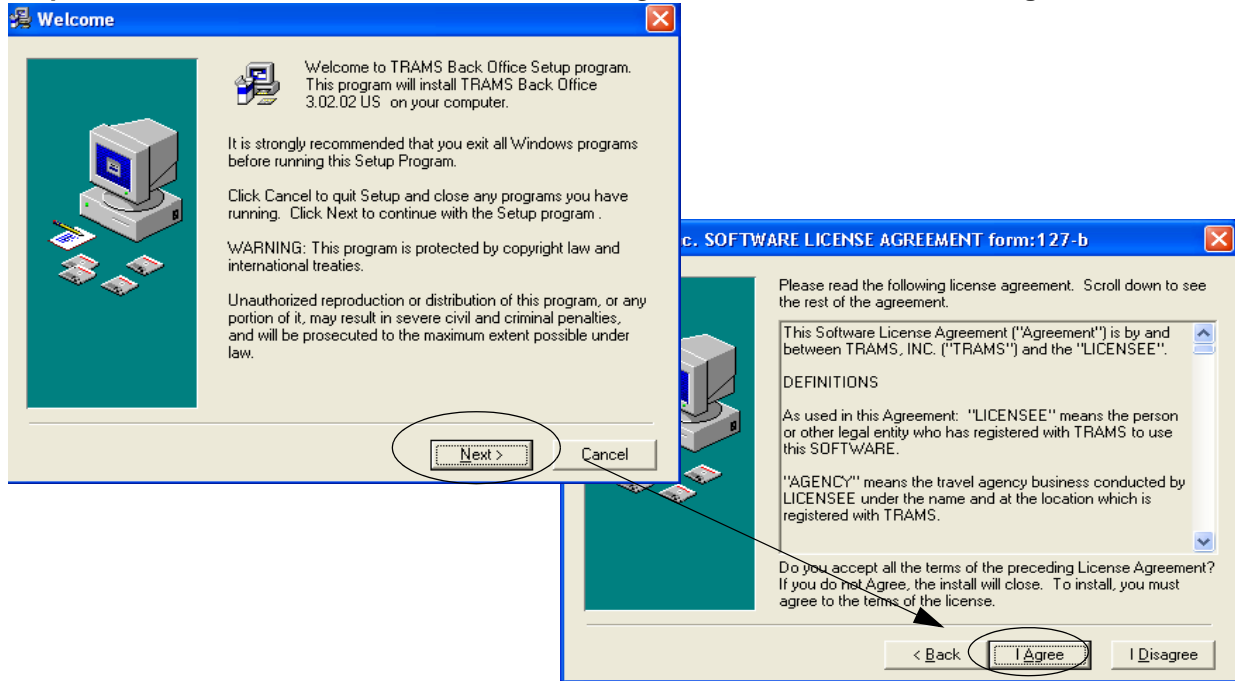
Step 1: Download the Program File. After selecting the computer that functions as your Trams Back Office computer, download the Trams Back Office installation .exe file onto a folder on your computer's hard drive. You have received this link in an email sent out when you signed up for the TBO program. (If you are going to network this program, make a shared folder that can be accessed from the workstations on the network.) The file is quite large so this may take some time to download if you have a slow connection. Someone from the Trams implementation team will be calling you to help you with this process and to get started. If you don't get a call, just email implementation@Trams.com.



Download the file to a folder on your computer. Depending on connection speed, this may take some time.

Step 2: Run the *setup.exe*. Go to **Start|Run** to browse to the folder that holds the file you just downloaded. Double-click the file to be launched into an installation wizard. Click *Run*.

Step 3. Select *Next* at the Welcome Screen and *Agree* at the Software License Agreement form.



Step 4. Select the Destination folders (where you want the *Trams Back Office* files loaded). We strongly recommend using the default destination folder:

For XP/2003 Server, the path would be this:

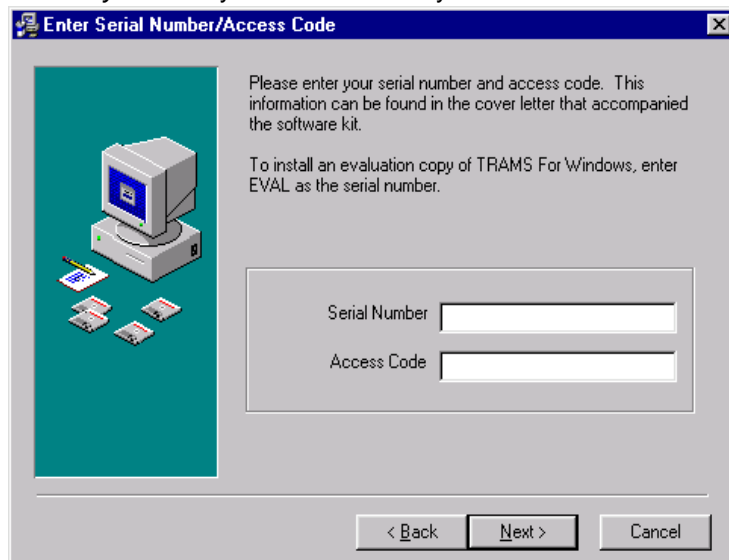
C:\Documents and Settings\All Users\Application Data\Trams\Database\Trams.ib

For Vista, Windows 7 and Windows 2008 Server, the path would be:

C:\ProgramData\Trams\Database\Trams.ib

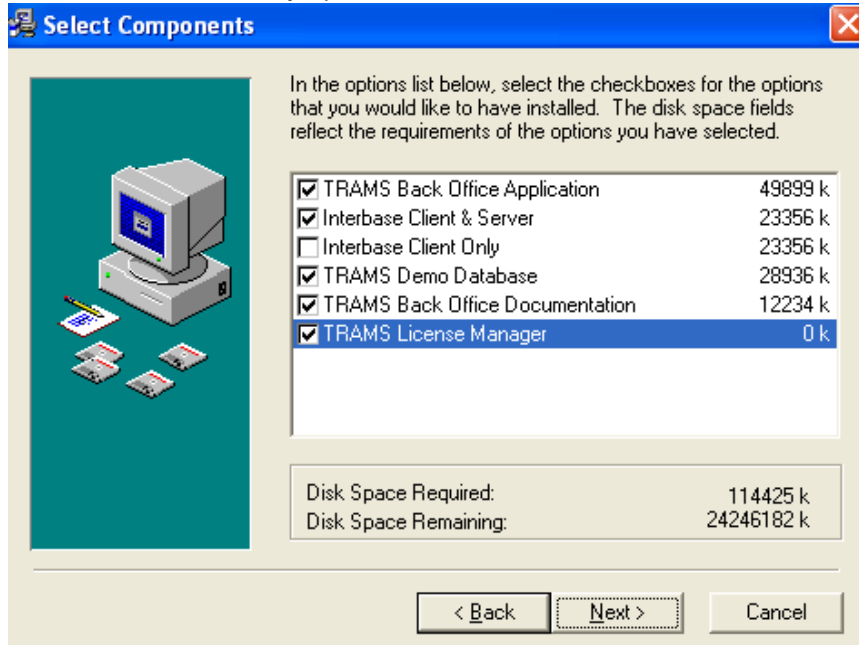
Click *Next*.

Step 5. Enter your serial number and access code found in the welcome e-mail you received from *Trams*. Please contact the *Trams* Marketing Department or visit www.Trams.com, click on Support, and select *MyTrams* if you cannot locate your serial and access numbers. Click *Next*.

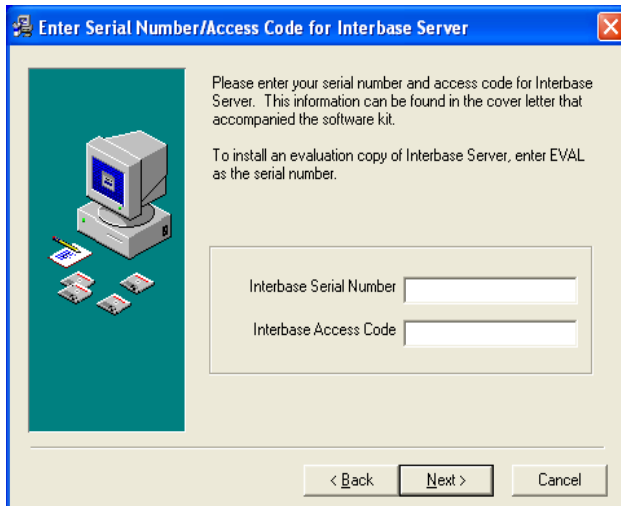


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Step 6. Select the components to install (default selections are already checked for stand-alone users and servers). Select *Trams License Manager* only when you install program on server (a single computer is Interbase Client/Server. If you already have ClientBase installed on server, you will be IB client only.) The server installs *Interbase Client & Server*. If you are setting up multi-user workstations, select the *Interbase Client Only* option for the workstations.

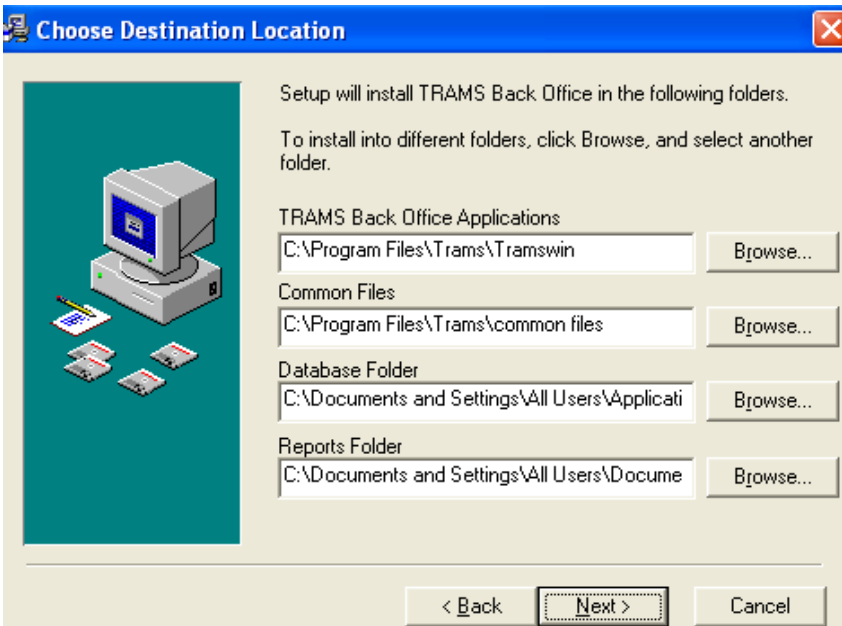


Step 7. Enter the serial number and access code for Interbase Server. Clicking *Next* verifies your access code, and serial number for the number of users and CPUs for which you have purchased Interbase (this serial number and access code are in the welcome e-mail). Click *OK*. Another screen pops up that says you are now ready to install Interbase.



Step 8. The next screen indicates where by default program files will be installed. Our suggestion

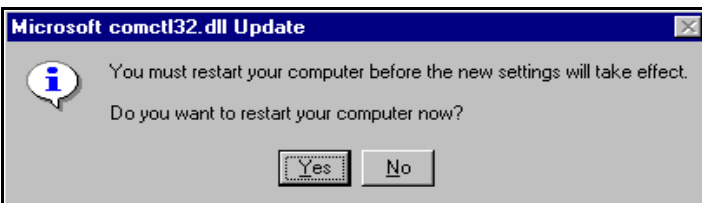
is to leave the defaults if possible.



Step 9. Select *Next* to install files.

After all the files are copied, you are prompted to put the *winint32.exe* file in your startup directory. This is the file that accepts interface records if you interface by cable. If you selected *Yes*, the program automatically starts every time you turn on your computer. If you select *No*, you must manually start this program by going to the Start menu, then to **Programs|Trams Back Office|winint32.exe**.

Step 10. Restart your computer before continuing.



This completes your installation if you are using the local version. (Continue with converting your data from Trams for DOS version 3.02.09 if you are not a new Trams Back Office user.)

Multiuser Installation

Go to each workstation and browse to the shared folder where the *Trams Back Office* installation setup.exe. Use the install components of *InterBase Client Only*, *Trams Back Office*, and *Trams Back Office Documentation* on each of the computers with access to *Trams Back Office*.

After each workstation has *Trams Back Office*, point the Alias to the correct database file. Go to **Start|Programs|Trams Back Office|Alias Utility**. Go into the *Trams* Alias, change the path to point to the *Trams.ib*, located on your server using the format required for your network:

Remote via TCP/IP

For XP/Windows 2003 Server, the default path is this:

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Server Name: C:\Documents and Settings\All Users\Application Data\Trams\Database\trams.ib

For Vista/Windows 7/2008 Server, the default path is this:

Server Name:C:\ProgramData\Trams\Database\trams.ib

Steps to Upgrade Interbase to IB2007

Upgrading your Interbase to IB2007 will improve the performance of your database. Contact Trams Support at **support@Trams.com** or 310-641-8726 to obtain the download files' paths, the Interbase serial number and access code for the upgrade to Interbase2007.

Minimum Versions

TBO 2.09

CBW 3.01

IB 7.1 (do not upgrade if IB version is 6.X)

Recommended Versions

TBO 3.02

CBW 3.05

IB 7.1

The download includes the **IB2007server.exe** and the new backup files (**ibbackup.exe** and **backuplib.dll**). These need to be saved to your server. Save the ib2007server.exe to the desktop of the server or somewhere else easily accessible.

Note: If you have already upgraded to ClientBase 3.05, the ibbackup.exe and backuplib.dll have already been installed, so just download the IB2007server.exe.

1. Make sure all users are logged out of Trams Back Office and/or ClientBase Windows.
2. Save the new ibbackup files to **C:\Program Files\Trams\Common Files**. (Skip if you have already installed the CB 3.05 update.)
3. Do a full backup of the Trams database. You can store the backup either on the server or on external media.
4. Rename the database file (i.e. add .old to the end of the filename). This will serve as a second backup after the upgrade. Once you are satisfied that the system is functioning properly, the old database file can be deleted.
5. Install IB 2007. Enter the Interbase serial number and access code you were given when prompted
6. After installing, either reboot the server or manually start the IB 2007 service.
7. Launch IBBackup and restore the backup that you created in **Step 3**. Make sure you specify a page size of 16K for optimal performance.
8. Log into the database with Trams Back Office and ClientBase Windows.
9. Install the IB 2007 client on the workstations. Use the same IB2007server.exe but do a client-only install (leave the serial number and access codes blank).

For Agencies Currently on TFD- Converting Your Data From 3.02.09

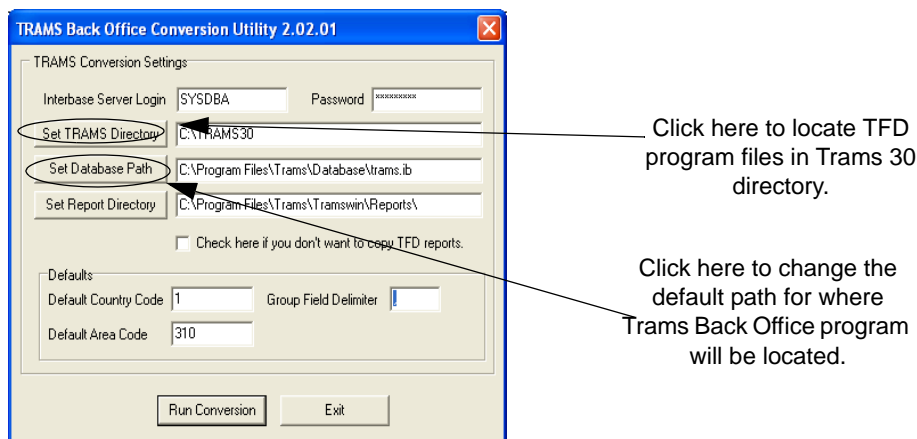
A conversion program copies *Trams Back Office for DOS* information in your 3.02.09 (you must be on this version of DOS) directory, converts the data, and places a copy in the *Trams Back Office* directory for *Windows*.

This process could take a long time, depending on the amount of data on your system. We recommend starting the conversion at the end of your work day and letting it run overnight.

Before you start the conversion, make sure that both the *Trams Back Office* and *Trams for DOS* programs are closed. The conversion program is found under the **Start Menu|Programs|Trams for Windows|Convert**.

Note: Make sure to backup Trams for DOS before starting the conversion.

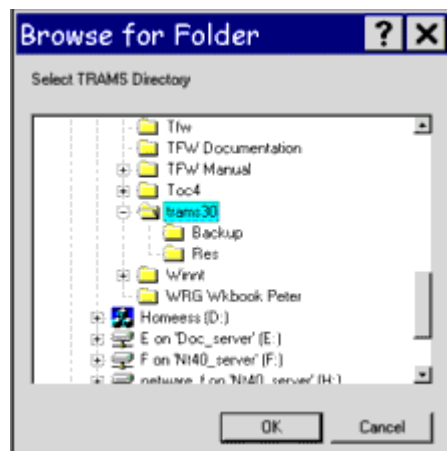
Converting Data



Enter the SYSDBA login and the associated password. Click on the *Set Trams directory*. Select the drive and directory for *Trams Back Office* for DOS. To select the drive, double-click the root directory, find the correct folder, and double-click on the folder.

The folder appears opened. Check the path at the top of the screen before clicking *OK* to continue.

Select Trams Directory



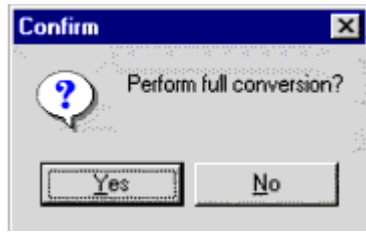
Notice the box you can check. If you **don't** want to copy the Report Generator reports from *Trams* for DOS, put a check mark in the box. Enter your default area code. This helps translate phone numbers into an area

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code and phone number format. Enter your three-digit area code. Click *OK* to continue.

Click on the *Run Conversion* button and select *Yes* from the Perform full conversion screen.

Confirm Data Conversion



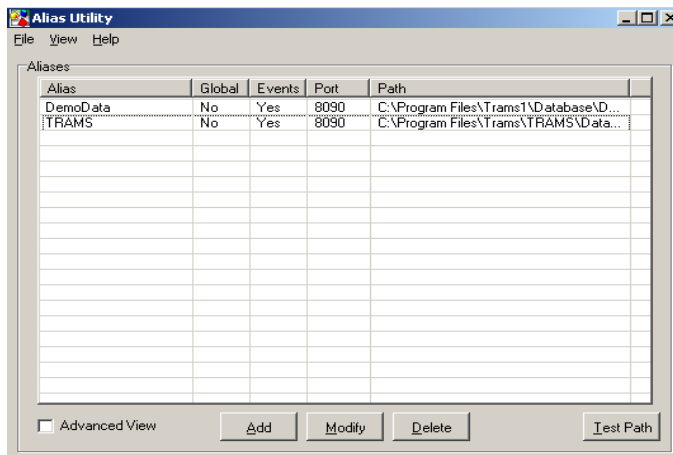
A conversion log is created. When you scroll to the bottom of this report, you see a message saying, *FULL CONVERSION COMPLETE*. (If you don't have this message, there has been an error in the conversion. Save your log file. Give us a call or e-mail support@Trams.com. We may have you send both your *Trams.log* file and the *result.txt* files from your *Trams Back Office* directory to us for review.)

Note: You may receive a "phone warning" in the conversion log. This means one (or more) of your profiles' phone number formats did not successfully convert. Check the profiles in *Trams Back Office* for any such inconsistencies by printing out a client list.

Changing the Trams Alias

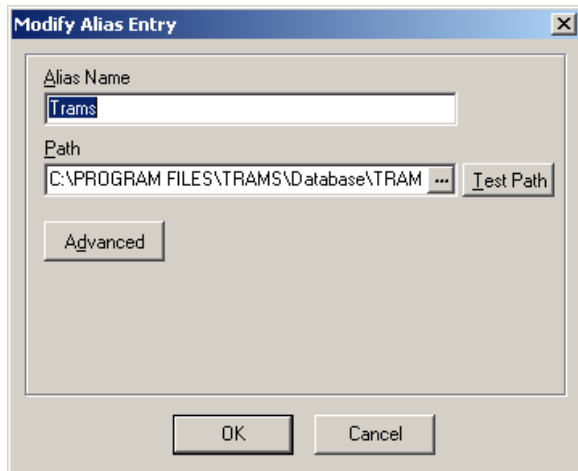
An "alias" provides the connecting link between the *Tramswin.exe* and the *Trams.ib*. (It's the short name to the long path that leads to the database, so that everytime you want to enter the program, you can just enter the Alias instead of the path.) The Alias Utility is automatically installed into your \Program Files\Trams\Common Files folder during the Trams Back Office server and workstation installation routine. Since the installation wizard sets up your Alias for you, you do NOT need to run the Alias Utility unless you make a change in the location of your database and need to update your Alias Path accordingly.

If you make a change to your database location and need to update your Alias, you can start the alias utility by going to **Start|Program Files|Trams Back Office** and select Alias Utility. You can Add, Modify, or Delete Aliases from this screen.



Click *Add* or *Modify* to bring up the screen where the alias path is entered. The Alias Name is simply a name

used to recall the path to the database.



Note: Formats for the path to the database if on a network are:

TCP/IP Servername:drive:\directories\databasename.ib

Netbeui \\Servername\drive:directories\databasename.ib

Program Components

This program is made up of the following pieces: The *InterBase Server*; *Trams.ib*; *ibbackup.exe*; *Tramswin.exe*; *convert.exe*; *wintint32.exe*; *download.exe*, *tfwhelp.hlp* and *tfwup.exe*.

The InterBase Server: The database operating system behind *Trams Back Office*.

Trams.ib: The database backbone, holding all the data and tables where data resides. **Note:** Older versions of TBO, had an filename of *Trams.gdb*.

Tramswin.exe: The actual program file that coordinates the InterBase server and the *Trams.ib* - what you see on the screens of *Trams Back Office* and data manipulation.

Convert.exe: Converts all your data from *Trams* for DOS. **Each time you run this program it overwrites the previous *Trams.ib* with the data you are converting.**

Wintint32.exe: The program receiving interface data from a GDS.

Download.exe: The program converting GDS interface data into the *Trams* format.

IBBackup.exe: The program used for backing up *Trams Back Office*.

TFWhelp.chm: The help files linked to screens.

TFWup.exe: Updates the database structure when needed for program enhancements.

Program Changes/Enhancements in TBO for TFD Users

As with most Windows products, there are a variety of ways to get to menu items and to the data the program holds. *Trams Back Office* is menu-and tab-driven, for easy movement throughout the program. If you are accustomed to using the mouse in other Windows-based programs, the same point-and-click features apply in *Trams Back Office*, but hot keys and use of the keyboard for navigation is also available.

Notice the tabs at the bottom of the main screen. With Windows, you can keep multiple queries open simultaneously. Use these tabs for quick access to the query screens or use the menu options located at

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the top of the screen as you do in *Trams* for DOS.

Query Screens

By clicking on the column headers, you sort all the data being displayed by the fields underneath that header. The columns in these grids are **scalable** by sizing the columns with cursor, and you can choose which columns you want to see in the results screen. There is a *General* and *Advanced* query option for *Invoices*, *Payments* and *Profiles*.

If you want to query using multiple values for a field while in the query screen, click the down-arrow for your options, and click in the boxes to choose the values. Using the *right* mouse button, you can *Select All* or *Unselect*.

Entering Data Into Grid

Most of the data displayed in a grid format has a data entry section at the top. You can enter a new item at the top in each field and click *Add* to add the information to the grid. If you want to make a change, click on the item, which highlights it. You see it displayed at the top where you can then edit the information. Click *Update* to paste the changes back into the grid.

Profiles and GL Account Numbers

To create greater flexibility in the *Trams Back Office* program, during the conversion from *Trams Back Office* for DOS to *Trams Back Office*, each profile is assigned a unique number, thus avoiding the possibility of duplicate numbers. The Interface IDs are not affected by this change.

Profiles and GL account numbers can be entered as the first few letters or numbers. As you type the first few letters/numbers, a down-arrow appears at the right-hand side of the field. Click on the arrow and select the profile or account from the drop-down list.

Help Screens

On-line help is available throughout the entire *Trams* program by clicking on **Help|Trams Help** or pressing *F1*. Also under the Help menu, is *Table Version* which provides information on program basics such as Interbase Version, database location, program location, number of users, etc. which can be used when contacting support. **Help|Table Version** also provides program version information.

Menu Options for Trams for DOS Users

Now, let's review the menu options.

1. Click *File* in the upper left-hand corner. From this pull-down menu, you can Login and exit the program. When *Login* is selected, the description line shows the version of *Trams Back Office* and requires a password. Use this feature for switching between multiple databases.
2. Clicking *File*, then the *Printer Set-up* option in the File Menu lets you select the appropriate printer, paper size and printing format.
3. Click on *Invoices* for the menu options exactly as they appear in the DOS version. Notice the Finance Charges feature in *Trams Back Office*.
4. *Payments*: Notice that the ARC or BSP Balance Adjustment and Agent Commission Adjustment are no longer under this menu item. ARC or BSP Balance Adjustments are now made through the Debit and Credit

Memos and the ARC|BSP Settlement. Agent Commission Adjustments are located under the *Adjustments* menu option. Notice, too, an electronic **Pegasus|GCP formerly NPC|CommTrak (and more) Import** feature. There is also an Agent Reconciliation feature under *Reconciliation*.

5. *Profiles*: The same DOS menu options are available under the *Profile* menu selection with the addition of a *Group* tab with a pull-down menu selection. See Utilities below for more information to create group codes for drop-down list selection.

6. *General Ledger*: There are two types of End of Period entries. The first is **Pseudo End of Period**. This is appropriate when using *Trams* in MultiUser mode. This option lets you create an End of Period entry without all users being locked out of *Trams* invoices, or payments. The Pseudo End of Period creates a “normal” journal entry. You must void the Pseudo End of Period entry before creating a full End of Period or it distorts your financial statements. You are prompted to void the Pseudo End of Period each time you use this feature. (See Troubleshooting Section for more information). The second option is the **Full End of Period**. This is the final End of Period reflected on financial statements.

7. *Interface*: Access both *Download* and *Processing* from this menu. The *Import From File* Menu option is used for importing data from other back office systems when converting to *Trams Back Office*, or can be used to import records for a Host/IC setup.

8. *Reports*: The same DOS menu options are available under Reports with a *Profile* report, formerly listed under **Client|List and Labels** and **Vendor|List and Labels**. You will recognize all the standard reports in *Trams Back Office* because they are the same ones in the DOS version.

9. *Profile Report*: This menu option allows you to run lists and labels for all profile types including *Agents* and profile type of *Other with operators such as “Starts With”, “Contains”, “Is Equal to”, etc.*. All “activity” reports have the added feature of presenting information in graph form, as well as, the usual format. *Trams Crystal Reporting (TCR)* is available for download. This *Trams Back Office* add-on feature contains a growing library of additional reports.

10. *Utilities*: The same DOS menu options are available under the Utilities menu selection with three additional options: *Printer Defaults*, *Headers/Footers*, and *Groups*. The *Printer Defaults* pull-down menu offers an extensive menu of printer options. *Headers/Footers* provides an area for you to customize with your own Invoices, Statements and Reports. *Groups*: After establishing Group fields, the pull-down menu indicates names that have been assigned to groups, making for consistency among profiles belonging to any particular group. Establishing these *Group* categories greatly enhances reporting and payment capabilities. From the *Groups* pull-down menu, select the group type (agent, client, other, vendor, payment, invoice/payment) and the group category which makes, for example, receiving commission payments from an entity such as Pegasus or GCP (formerly NPC) or others much easier to apply. Also under this menu option, you find *Back-up (which you faithfully do each day)*, *Restore* and the *Calculator*. *Backup* can be done from within the *Trams Back Office* program or through **Start|Program|Trams Back Office|Trams Backup/Restore**. To restore data, close *Trams Back Office* and use the **Start|Programs|Trams Back Office|Trams Backup/Restore** menu option. Open the calculator (**Utilities|Calculator** or F5) when you *Login* and then minimize it. You can use it while working in any screen without returning to the Main Menu.

Troubleshooting Trams Back Office Installation

There are several different levels to check if the workstation is not connecting to the server. Let’s start with some high levels checks first:

1. Make sure you can still get into Trams Back Office on the server
2. Verify the password you are using. Remember it is case sensitive.
3. Next, verify that Interbase client and Trams Back Office are installed on the workstation
4. On the workstation, verify the path in the Alias Utility. Review the previous section about the alias utility.
5. Check that TCP/IP is enabled - this should be completed by your Network administrator

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6. Is your Network communicating between the two machines? If using TCP/IP, see Pinging the server.
7. Do you have the HOSTS file installed? (See directions below.)
8. Do you have the right port request entry in your services file?

To Check if Interbase is Installed and Running

You must be on Interbase version 6.0 or higher to run Trams Back Office. Go to your server. If you are Windows NT, Windows 2000/2003, or Windows XP, on Trams Back Office version 2.02.02 or higher, click **Help|Table Version** to view the Interbase version.

Network Protocol

Check that TCP/IP or Netbeui is one of the protocols:

1. Go to **Start|Settings|Control Panel**
2. Select Network
3. Make sure the appropriate protocol is showing as an option under protocols

Pinging the Server

1. If Win NT, Win 2000, or Windows XP, go to the DOS prompt and type ip config
2. Get the IP address
3. Go to workstation and to DOS prompt
4. Type in ping *IP address* (replace IP address with the numbers you get from the winipcfg) - see if you get a response. If you receive a response, the network is recognizing the server

Creating a HOSTS File

A message saying "host or domain services not found" indicates a hosts file needs to be put on the client machine.

1. Go to DOS prompt.
2. For Windows Millennium Edition type *CD\Windows* and press Enter. For WinNT and Win 2000, or Windows XP, type *CD\WinNT\System32\Drivers\etc*.
3. Type *edit hosts* and press Enter.
4. Add a line with the address of the server, then tab once and type the name of the server
5. Save the file, then exit.
6. Re-try the Trams Back Office login

Editing Services File

1. Go to DOS prompt.
2. The file should be in the *c:\winnt\system32\drivers\etc* directory. Do a *dir services*.**
3. Type *edit services*
4. Add a line to the following line to the file: *gds_db3050/tcp*

For Agencies Using ClientBase and Adding Trams Back Office

If you have been using ClientBase and have decided to add Trams Back Office, follow these instructions:

1. Upgrade you ClientBase program to latest version.
2. On the Server, proceed with the Trams Back Office Installation as outlined above (make sure you are installing latest version.)
3. When installation is complete on Server, go to **Start|Programs|Trams Back Office** and run the utility **TBO Update**.
4. Proceed to install Trams Back Office as outlined above on all workstations.
5. The older versions of ClientBase have the database of Trams.gdb as a filename. You will still be seeing this filename after installing TBO.

For help, please email implementation@Trams.com.

Trams License Manager

The software license manager monitors the number of users logged into the database, and compares it to your Access Code which reflects the number of users your agency is licensed for with Trams, Inc. When accessing the Trams database using any of Trams applications, the Trams License Manager verifies that connection can be made to the Trams database (.ib or .gdb in some cases) and that a current version of the License Manager is enabled.

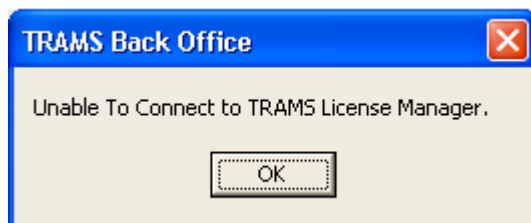
The Trams License Manager utilizes for communication Port 8090. This port must be opened on any firewall that a company may be utilizing to filter traffic internally. It also must be opened externally, for remote users, in their network configuration.

If your licensed number of users is exceeded, you get the message:

Your Trams User License is currently set for X Users. You are the Xth User logging into your database. Please contact Trams Marketing to modify your User Licenses and obtain a new Access Code.

This means you have exceeded your User Licenses and can either have someone else log out of the program or contact Trams Marketing at 310-641-8726 or marketing@Trams.com to obtain additional licenses.

No Version of Trams License Manager

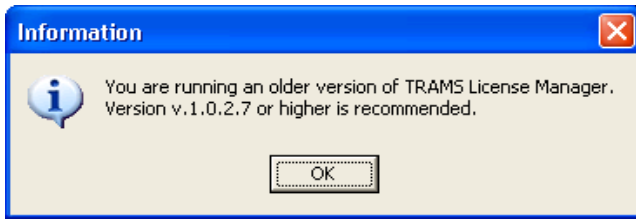


If the Trams License Manager is not running on the remote server, the following error screen is displayed. The License Manager does not allow remote connection to the Trams database unless the Trams License Manager is running. If the Trams License Manager is running, and you still get this message, check to see that the Alias is mapped correctly. A firewall, too, may be blocking the License Manager as well. If you need assistance in troubleshooting this, e-mail support@Trams.com.

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Older Version of Trams License Manager

If you are running version 1.0.2.2 or an older version of the Trams License Manager, the following error is displayed:



You are not allowed access to Trams database with an older version of the License Manager. To get the latest version, please run the latest Trams Back Office/ClientBase update file located at www.Trams.com under the Support tab.

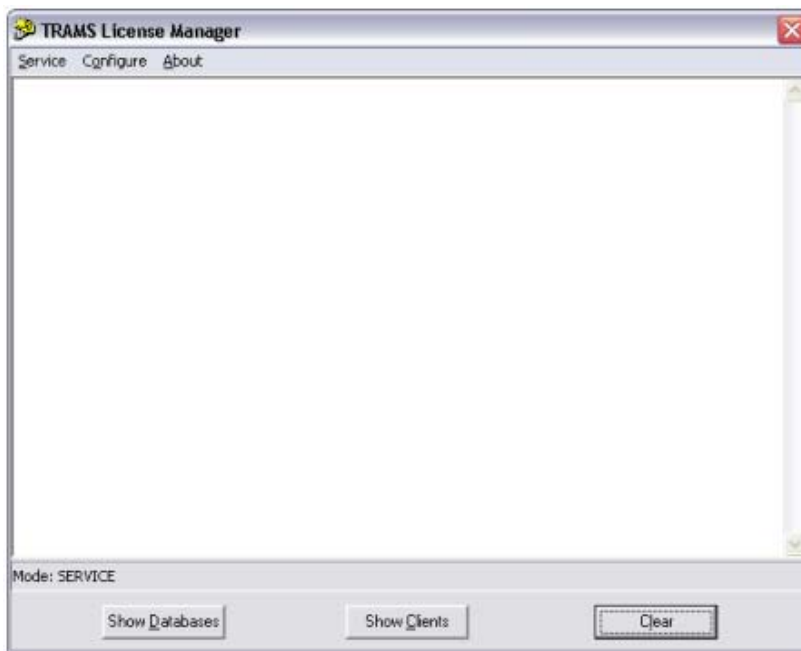
Stopping the Trams License Manager

Due to maintenance and/or trouble shooting issues, it may be necessary to stop/start the Trams License Manager service. Below are the steps for doing such on the indicated operating systems. In Windows 9X, the Trams Console Manager is the application that is running that the clients are connecting to. For Windows XP, 2000, NT, and 2003, the Trams License Manager is running as a service.

Stopping/Restarting the Trams License Manager on Windows ME

- 1) Go to the systray located at the bottom right of the toolbar. Right-click on the TLMGR icon and then left-click on EXIT.
- 2) Go into C:\Program Files\Trams\Common Files (default installation path and this may vary depending on where the Trams software is installed) and double-click on TLMGR.exe and to re-start it.

Stopping/Restarting The Trams License Manager on Windows XP, 2000, NT:

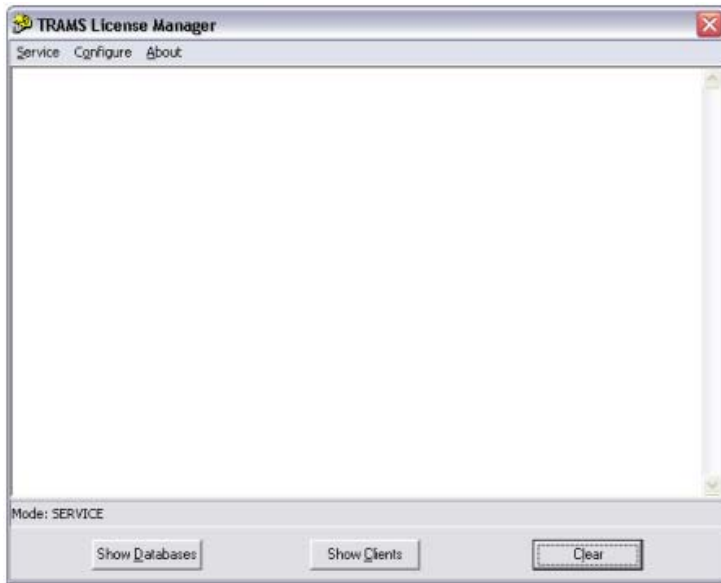


- 1) In the Systray, double-click the TLMGR icon.

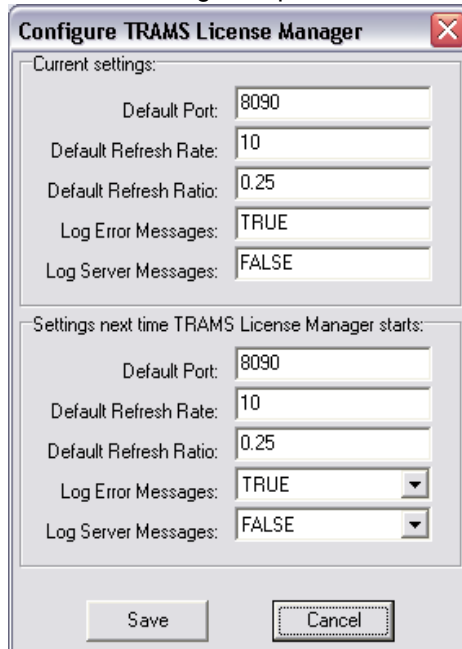
2) Click the word *Service* in the Menu Bar, and select *Stop*.

Trams License Manager Default Settings

A new way has been made to change default settings for the Trams License Manager. Before you had to do the arduous task of editing the registry to change the settings. Now you can use the Trams Console Manager to make these changes for you. On the Trams Server machine, double click the TLMGR Icon located in the systray.



Select the Configure Option in the menu bar:



The above screen is displayed showing your current settings.

Default Port: This is the Port that the Trams License Manager uses to communicate. This port needs to be opened to allow communication from the client to the server.

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Default Refresh Rate: This is the amount of time that the License Manager holds a user connected in the user pool, if a user has encountered an abnormal disconnection.

Default Refresh Ratio: This value is a multiplier for the default refresh rate. This determines how often the License Manager server sends out a refresh request to the clients to see if they are still active.

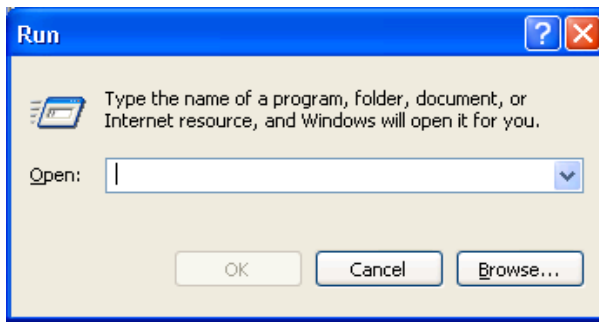
Log Error Messages: This selection allows the user to determine if they wish to log all or none of the error messages pertaining to the status of the connections of the clients to the Trams License Manager Server.

Log Server Messages: This value allows the user to configure the logging of all or none of the connections and disconnections to the Trams License Manager Server.

Manual Install/Uninstall of the Trams License Manager

To uninstall the Trams License Manager, follow these procedures.

- 1) Click the Start Button and select the "RUN" command.
- 2) From the Run command type in the full path of the Trams License Manager.



Make sure that you place "" Fields around the path of the exe. At the end of the path outside the "" the -uninstall feature is then placed.

- 3) After the -uninstall is finished a reboot needs to be performed to reload the cleared registry.
- 4) After that is finished a -install can be used to reload the Trams License Manager and create new default registry entries.

```
"C:\Program Files\Trams\Common Files\tlmgr.exe" -uninstall
```

```
"C:\Program Files\Trams\Common Files\tlmgr.exe" -install
```

Trams Alias Utility

The Alias Utility manages the location of your Trams database/s. An alias is simply a *shortcut* name to the long path which maps to the location of the database. By default you probably only have 2 aliases set up, *Trams* (your Trams database), and *DemoData* (a database with sample data in it that you can use to experiment with the program). But you can have as many databases as you want. Access the Trams Alias

Credit Card Encryption

Background

The payment card industry (PCI) compliance and validation regulations spells out what security measures must be taken to protect the private information during any transaction occurring with the use of a paycard. The PCI Data Security Standard is used by all card brands to assure the security of the data gathered when transacting on behalf of a customer. There are numerous regulations including encrypting the credit card numbers in the database. Encrypting this data makes it virtually impossible to decipher a credit card number without a decryption key which protects the credit card information in your database from fraudulent abuse. Future Trams Back Office development will implement additional enhancements to help agencies further comply with the PCI regulations.

How it Works

In Trams Back Office, credit card numbers will be encrypted in the database and masked throughout most of the TBO application upon new installation of TBO 3.01 or higher.

For older TBO users, encryption and masking occurs when the 3.04 ClientBase database update (CBPlusup) is run on the existing database, but will only encrypt if the Trams Back Office version is 3.01 or higher. The CBPlusup.exe can be downloaded from the link on the TBO download page. A new field will be added to the database to accommodate the encrypted credit card number the existing credit card field will contain a masked version of the number. A cleaning and masking routine takes place during the database update to standardize all of the credit card numbers so they can be properly masked for all applications utilizing the masked Credit card field.

Masked Credit Card numbers are displayed in the payment query screen and on most reports.

Masked Exceptions:

- ***Payments|Reconciliation|CC Merchant Reconciliation query screen (Payments|Reconciliation|CC Merchant Reconciliation)***
- ***Reports|Payments|CC Merchant Reconciliation***
- ***Reports|Payments|Credit Card Reconciliation***
- ***IC Export Utility***

Only valid credit card numbers will be cleaned and appear in the masked format.

Valid Credit Card Formats:

- Valid credit card numbers with spaces are considered valid
- Valid credit card numbers with letters (V11234123412341234)
- Valid credit card numbers with expiration date after a slash (CA5458004519231383 /1109)

Valid credit cards are standardized using these rules:

- Any non-numeric text at the beginning of the string up to the first digit is stripped out. AX 3782 078 234 0834/1008 becomes 3782 078 234 0834/1008.
- All spaces are removed. 3782 078 234 0834/1008 becomes 37820782340834/1008.
- The credit card string is truncated starting at the first non-numeric character, usually a slash, leaving only digits. 37820782340834/1008 becomes 37820782340834.

The new masking format used is:

- 2 letter card code + space + first 2 digits+ ?-XXXX-? + last 4 digits (i.e. MC 54-XXXX-2364).

- All credit card fields where a credit card number can be entered or modified will display the full credit card number (unmasked).
- Mask credit card numbers in the Payment Query results screen. The full credit card number can still be entered in the Payment Query Advanced tab to search for a specific card however; the masked version will be displayed.
- The Report Generator Fixed CC No. field name has been changed to Full CC No. and will display the full credit card number (unmasked).
- An indicator has been added to Help/Table Version to show if the database has been encrypted (Yes,No).

Technical Notes:

- The field name Credit Card Number will be renamed ?CCNUMBER?.
- Three changes to database fields takes place when the 3.04 CBPlusup has been run.
- Masked CC Number Field (CCNUMBER): Credit card number in masked format. Credit card numbers are standardized and validated. Valid credit cards are saved in its masked format and invalid credit cards are saved as is.
- Encrypted CC Number Field (NUMBERENCRYPT): Encrypted full credit card number entry (all numbers whether valid or not are encrypted).
- Hash CC Number Field (NUMBERHASH): Credit card number in hash format. This field is used for ?faster searching of credit card number?. Valid credit cards hash the standardized format. Invalid credit cards hash the number as is.

Use of Encryption Keys for Third Party or Custom Development

A unique key will be generated for each agency that can be used in product development for applications that will need to read the full credit card number. The key can be obtained by a SYSDBA log-in only by going to **Utilities|Credit Card Encryption Key** and entering a password provided by the Trams Support desk. Running the CBPlusup will also install a CCEncrypt.dll file that will allow access to the Trams database to view un-encrypted Credit card numbers. The intended audience is for the designers and developers of applications that reads credit card numbers from outside of the Trams database. Need information on how to un-encrypt the credit cards? Send a fax asking for this information to 310-641-8726. The fax should be on company letterhead and should have the signature of the manager or other higher up.

PCI Changes in TBO 3.03 Release

- A PCI requirement mandates logging when a full credit card number has been viewed. Therefore, new functionality was added to allow users to view a full credit card number provided the user is logged in as SYSDBA or the user profile has the permission to view full credit card numbers enabled.

Once enabled, in payments received and made, in the profile payment info tab and in the booking expanded fare tab CC Commtrack field, right clicking on the credit card number field displays a menu option to view the full credit card number. When the user selects it, the full credit card number is displayed in the payment field and a log event is created including:

Date/Time

Username

Credit Card number

Screen or report they were in when the full cc number was viewed

Payment/invoice/profile number

- Added a new user permission under **Utilities|User Profiles** in the permissions tab *Enable ability to run reports and exports with full credit card numbers. By default, this new option is disabled (unchecked) and can only be enabled when the option. Enable ability to view full credit card numbers* is also enabled. Once

Installation

this user permission has been enabled, any time a report is run or an export is performed, a log event is created.

- The permission setting *Enable ability to run Report Generator Reports//Exports with full credit card number* allows users to run the Prism Handoff and the CC Merchant report.
- The CC Reconciliation report mail merge format now contains masked Credit Card numbers. Users must have permission *Enable Ability to run Reports/Exports with full Credit Card Numbers* checked in order to run this report.
- An option to encrypt the backup file has been added to Database Backup/Restore Utility. If a password is specified during the backup and the backup is being compressed, the resulting zip file will be encrypted using AES 256 encryption.

When restoring a compressed backup that is password-protected, if the user specifies the wrong password (or leaves the password blank), then the restore will fail.

PLEASE NOTE: If the encryption password is lost, there is no method for recovering the password and the encrypted backup cannot be restored.

- Created a User Permission setting to enable viewing the full version of the credit card number throughout the application. The permission *Enable ability to view full credit card numbers* can be found under **Utilities|Setup|User Profiles** under the Permissions tab and is unchecked for all users by default. The credit card numbers are masked upon saving to the database. Users who have this permission enabled can right-click to view the full credit card number and select Show Full Credit Card numbers in the following areas:

On the Payment Screen - credit card number field

In Profiles - Payment Info Tab

In CC Merchant Reconciliation

Expanded Fare booking tab - Comm Track CC No field

Users with this permission can also run the CC Merchant report.

Users without this permission are unable to right-click to view the full credit card number in the above areas, and cannot access the CC Merchant report.