

*Miracle Service* **Accent**<sup>™</sup>

# How the update process works in Miracle Service Accent

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## Understanding the structure of Miracle Service Accent

The product is in two parts: the application itself which lives on your local hard disk and the database and other shared files which live on your file server or other shared folder on the network. The name of this folder is, by default, AccentDB.

### The application

The application is made up of the executable (accent.exe) and various libraries (DLL files). Like all applications, all these files live on your local hard disk in the C:\Program Files\Miracle Service Accent folder (this is the default, but might be different depending on your configuration of Windows and what was selected during the installation).

The update installer will overwrite any or all of these files as necessary in order to install the latest version of Miracle Service Accent. All files that are overwritten on your local hard disk are first copied to a backup area. This backup area is a folder called Updates which lives in your Miracle Service Accent folder. If you take a look in this folder, you will see more sub-folders, each having a name of the date the update was installed. If you look in one of these folders, you will see one or more folders, each having a unique (and not particularly friendly) name. This is because you may install more than one update on the same day, in which case, each set of files backed up are placed in a separate folder.

If you now look inside this folder, you will see a file called UpdateLog.Txt; this file is the results of the update performed, so you can see exactly what was installed and copied. There is also another folder called Backups; this folder contains all the files that were subsequently overwritten by the update installer. Files in this folder were originally located in your Miracle Service Accent folder. There may be other folders here, the name of which reflect the original location of any files they contain.

When installing an update, it is important to run the update on all of your workstations otherwise you will be running different versions of Miracle Service Accent; this is not recommended.

### The database

The database is made up of four separate type of files: the data files (files with a .BTR extension), the data dictionary (files with a .DDF extension), report files (files with a .RPT extension that live in the Reports sub-folder) and initialisation & configuration files (most of which will have a .INI extension).

Report files and configuration files (.RPT and .INI) can simply be overwritten during the update process; however, the data files can not be overwritten and must be converted to conform with the latest version of Miracle Service Accent. Let's take a look at the structure of the database and how this is handled during an update.

## Updating the database

The data files (those with a .BTR extension) are those files that physically hold your data. So, for example, Customer.BTR will hold customer data, Work.BTR holds work data and so on.

If we take a simplified look inside the Customer file, we may see data following a structure like this

Field	Size
NAME	30
ACCOUNT NUMBER	10
CONTACT NAME	20

The data file doesn't physically hold this structure, it just holds the raw data, for example

A B SMITH	ABSM001	Mr A Smith	ANTIQUES LTD	ANTI001
Mrs R Roberts	BETTERBUY	BETT001	Mike Gateshead	

The structure we see above is held in the data dictionary (.DDF) files. These are the files that tell us that NAME is 30 characters in size, followed by ACCOUNT NUMBER, which is 10 characters in size, followed by CONTACT NAME, which is 20 characters in size. So, the data dictionary files describe the physical structure of your database. Without these files, it would be impossible to determine what data was where in the file.

Now let us assume that in the latest version of Miracle Service Accent, we have added a new field, PHONE NO at the end of existing structure. That's easy to define, we just add a new field to the definition of the data structure. However, if we look at the physical data file, we see that there is no space to actually hold the new data: as soon as one record finishes, the next begins. Somehow, we need to reformat the data so that we make space after CONTACT NAME and before the next record begins to hold our new field.

This is what happens when the update installer migrates your database. You may find, as you install an update, that you are informed that the update needs to migrate your database, and to continue, you have to agree to certain conditions and click certain buttons (see Figure 1 below). The update installed has determined that in the version of Miracle Service Accent it is installing, the data structure required is different from the structure that your database is currently in (for example, we have added the new PHONE NO field).

How does the installer determine this? Quite simple, by comparing the date of your existing data dictionary files (the .DDF ones) with the date of the dictionary files contained in the update. If the dictionary files in the update are newer than the ones you are currently running, something must have changed.

When the migration starts, the installer firstly creates a backup folder in your AccentDB folder called DATA.nnn, where nnn is a 3 digit number starting with 001 and moving sequentially forward. If a folder of the same name already exists, the number is moved forward, so the first time your database is migrated you will find a DATA.001 folder, the next time you do it, you will find a DATA.002 folder and so on.

**Note** If you delete a DATA.nnn folder that folder name may be used again in the future, For example, if you have a DATA.001 folder and a DATA.002 folder, and you then delete the DATA.001 folder, the next time you run an update, it may create a folder called DATA.001. The number is not an indication of when the update was run; you must use the date of the folder for that.



Figure 1 - The update is about to migrate the database

The first thing the update installed will do is to move your existing data dictionary files in to the DATA.nnn folder. Then the new dictionary files are installed in to the AccentDB folder (see figure 2 below)

The update will now open the old dictionary files and the new dictionary files to compare each table in turn. That is, the update will compare the structure of each of the existing data files with the structure required by the new version of Miracle Service Accent. If the data file's structure hasn't changed, it is ignored.

If the structure has changed (for example, in the customers data file, we have added a new PHONE NO field), the data file must be restructured as we mentioned above. To do this, it moves the existing data file to the DATA.nnn folder and creates a new, blank data file in the new structure in the AccentDB folder.

Once it has done this, it opens the old data file and the new data file; it then copies each record, one by one, from the old file to the new file. Remember, because the new file is in the new structure, when we copy a record in to the new file, we only copy the original fields, thus leaving a space at the end of each record for the new PHONE NO data.

Once all the data files have been checked for structural differences, the database is closed and the rest of the update can continue. Afterwards, you will find in your AccentDB folder a new DATA.nnn folder with the date and time you ran the update. If you look in this folder, you will see five files with a .DDF extension (the original data dictionary) and one or more data files (those where the data structure changed) with a .BTR extension (the original data file from before the update).

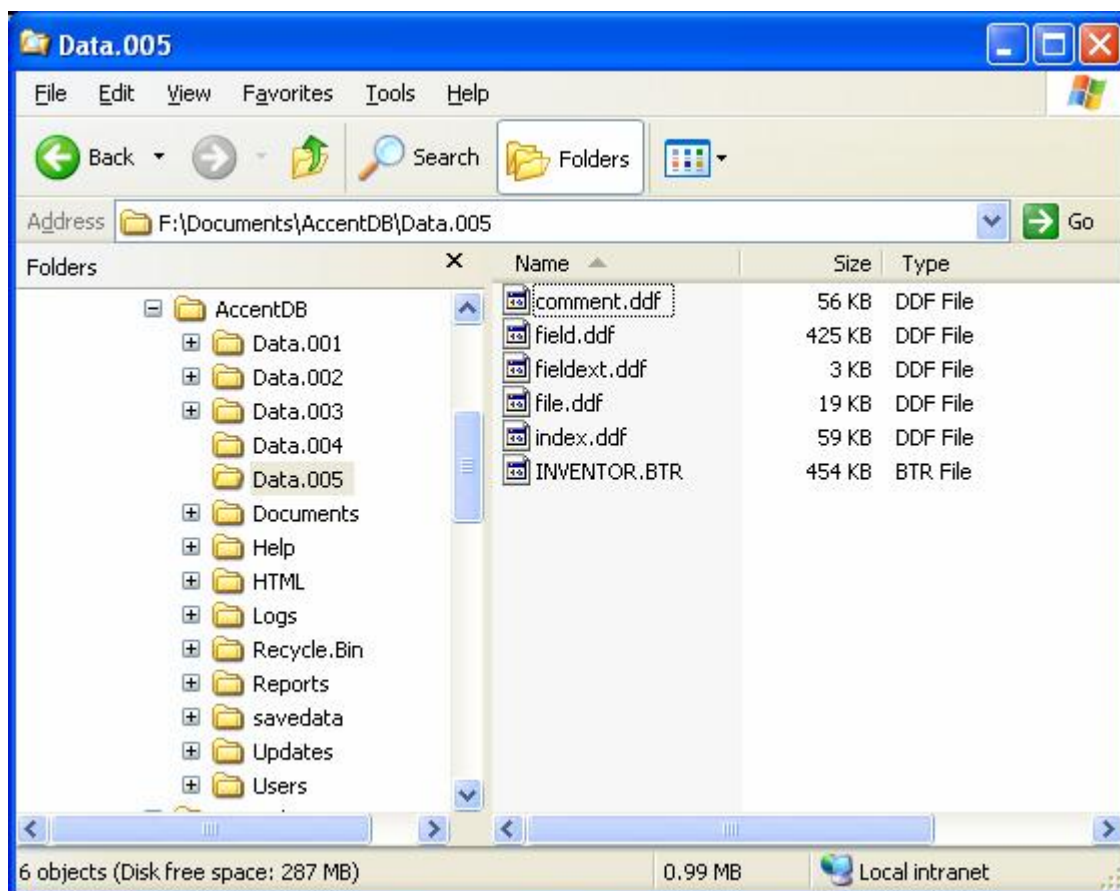


Figure 2 - Data.nnn backup folder showing original DDF files and a BTR file

## Restoring your database

It can be seen that the database can be restored to its original pre-update format by copying in the files from the relevant DATA.nnn folder to the AccentDB folder. This will restore the data files and data dictionary files to the condition they were in before the update was run.

**Note** Restoring the database to a pre-update format by copying in the files as described above may lead to errors when running a version of Miracle Service Accent that expects the database to be in a different format. For example, if you restored the database such that it no longer contained the PHONE NO field, but ran a version of Miracle Service Accent that expected to find that field, you may receive errors or observe erroneous data.