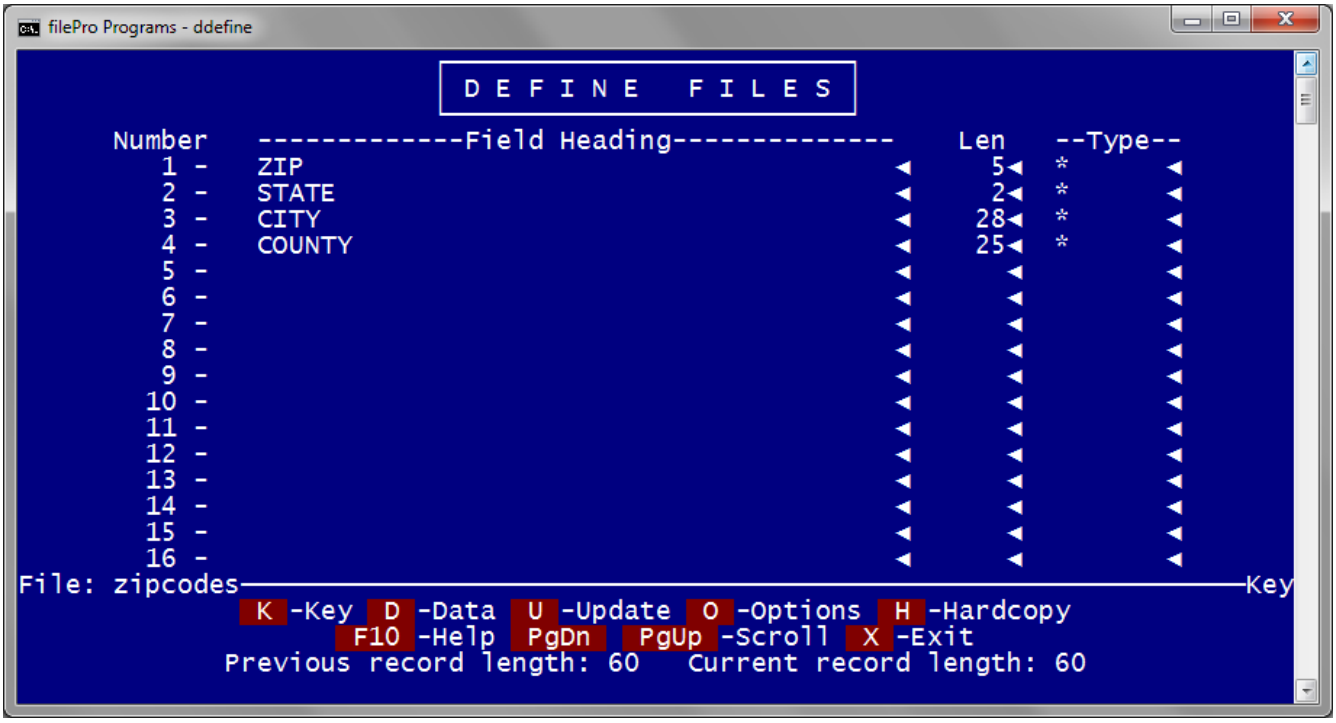
Encrypted filePro files.

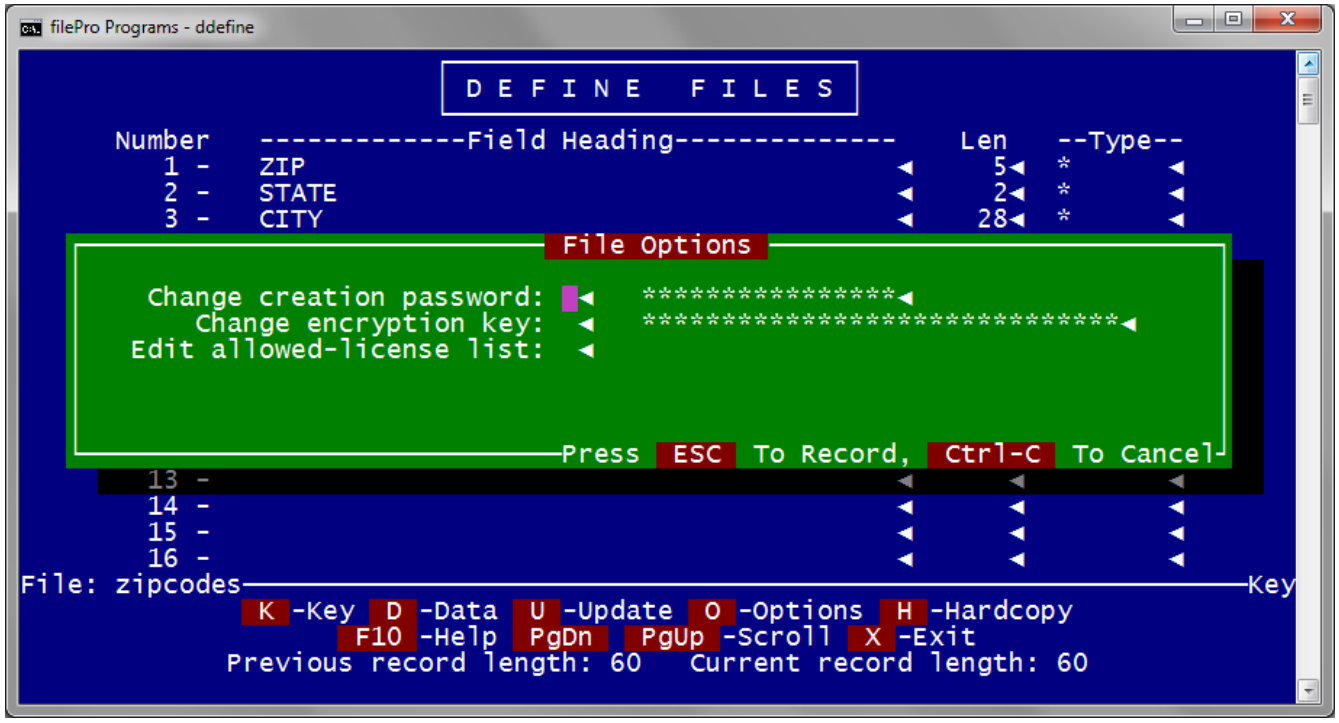
Starting with version 5.7.01, filePro supports encrypted data files. Once a filePro file is encrypted, all parts of filePro can access it just as unencrypted files. The fact that a file is encrypted is "invisible" as far as the developer and user are concerned. However, anything outside of filePro will not be able to access the data within the file. Also, earlier versions of filePro will fail with an "invalid map" error if you attempt to access an encrypted file.

Define files

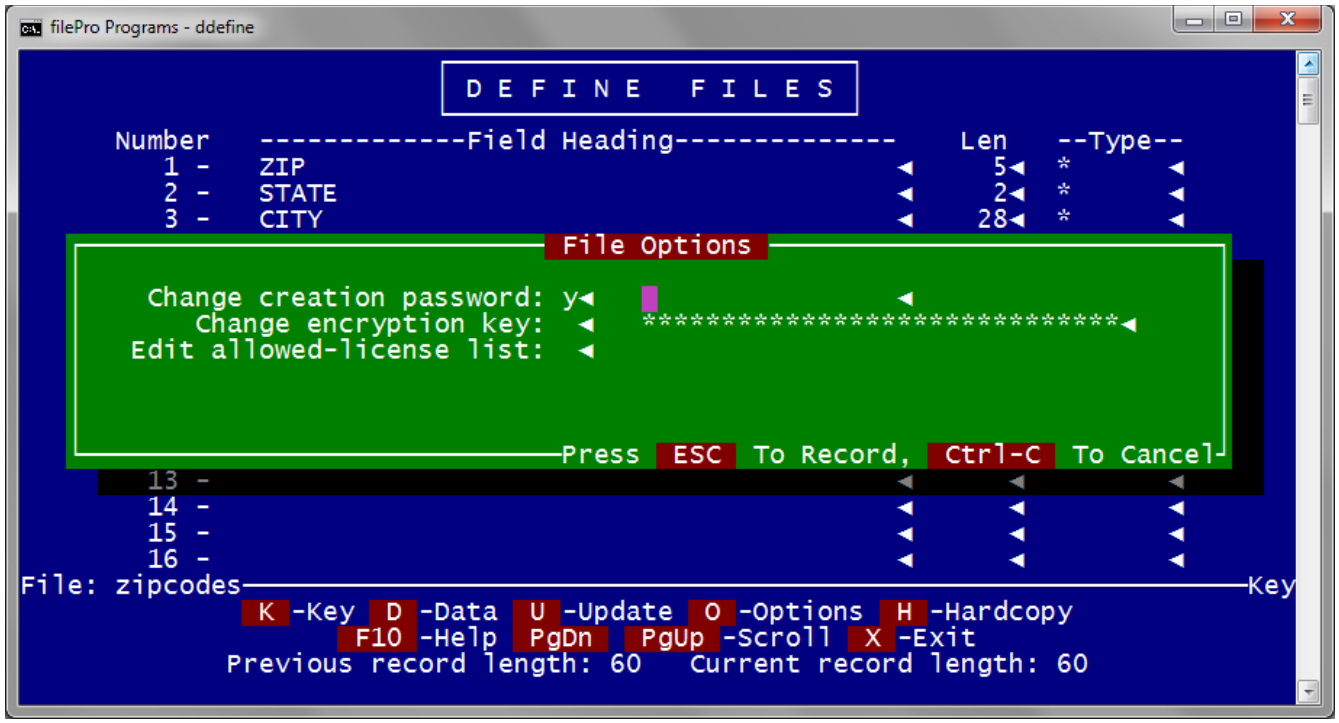
Version 5.7.01 of Define Files now includes an "O-Options" menu choice:



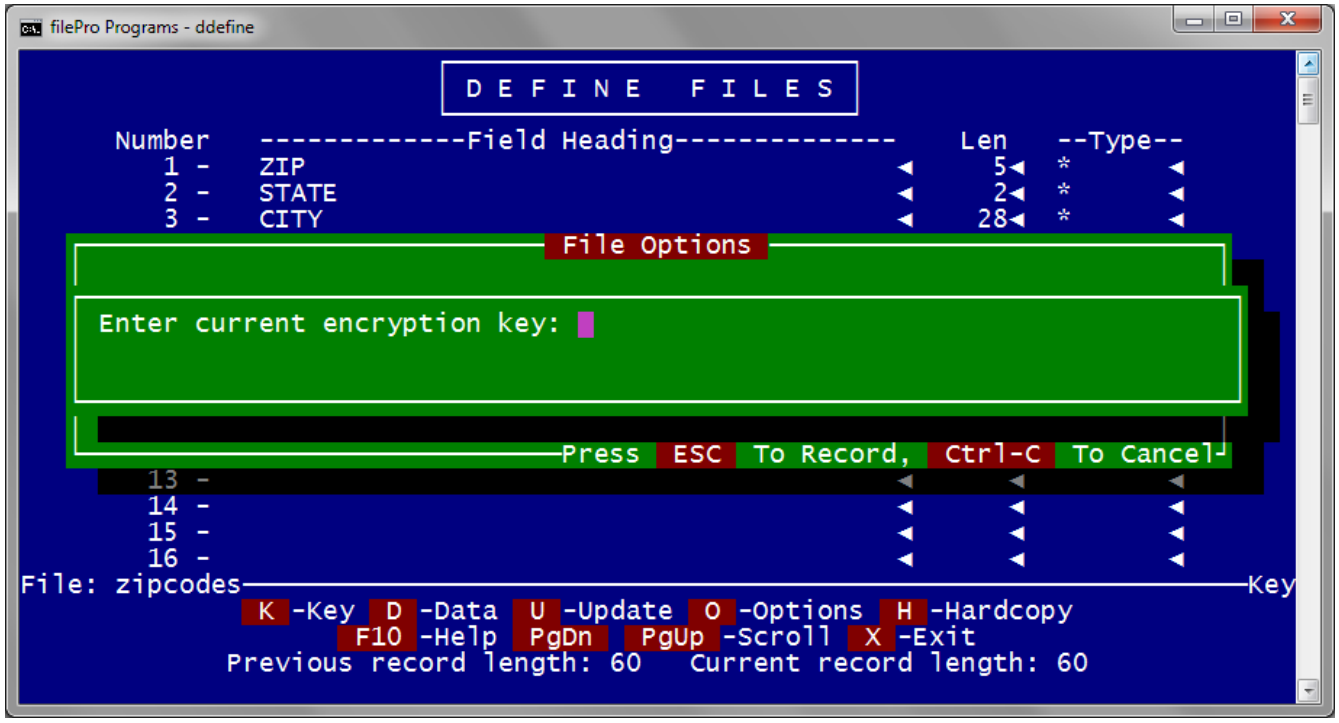
The Options dialog currently has three choices – change the creation password, change the encryption key, and manage the allowed licenses:



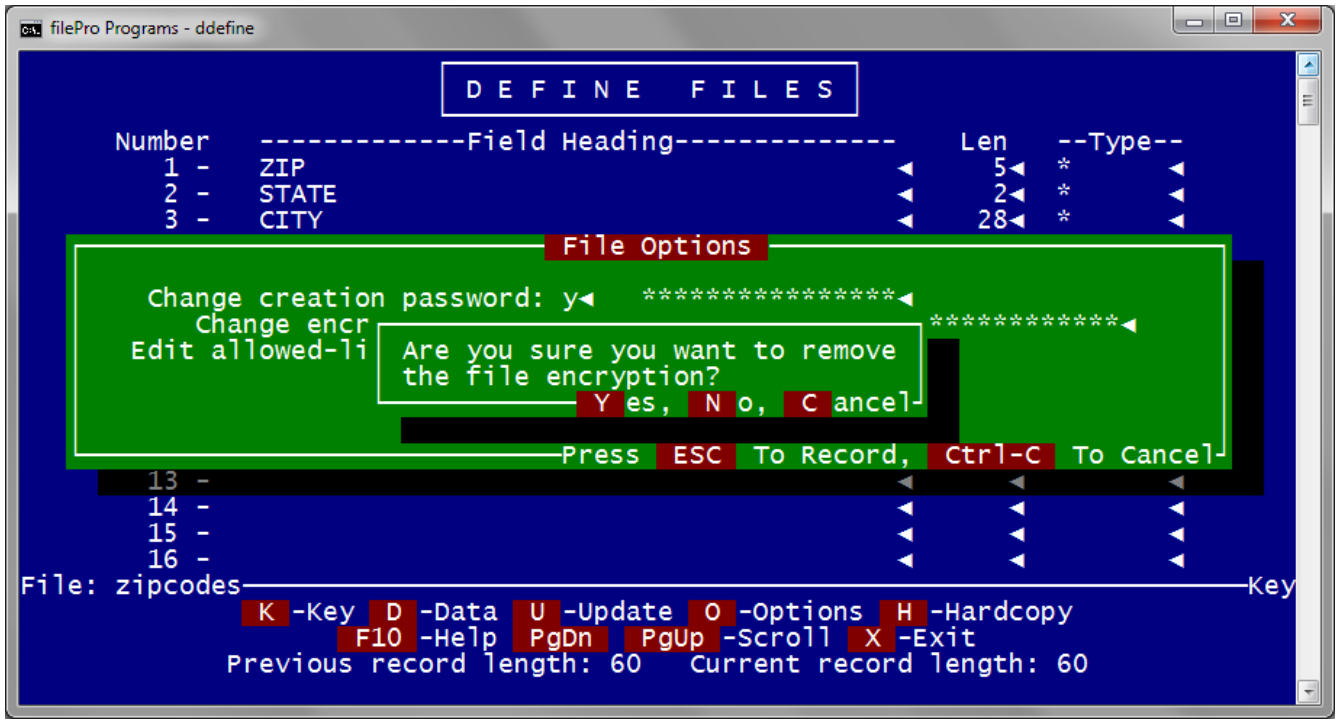
To change the password or encryption key, type "Y" into the field. At that point, the cursor will be allowed into the "masked" field, allowing you to update it:



Note that, if the file is already encrypted, you will need to enter the current encryption key before being allowed to change it:

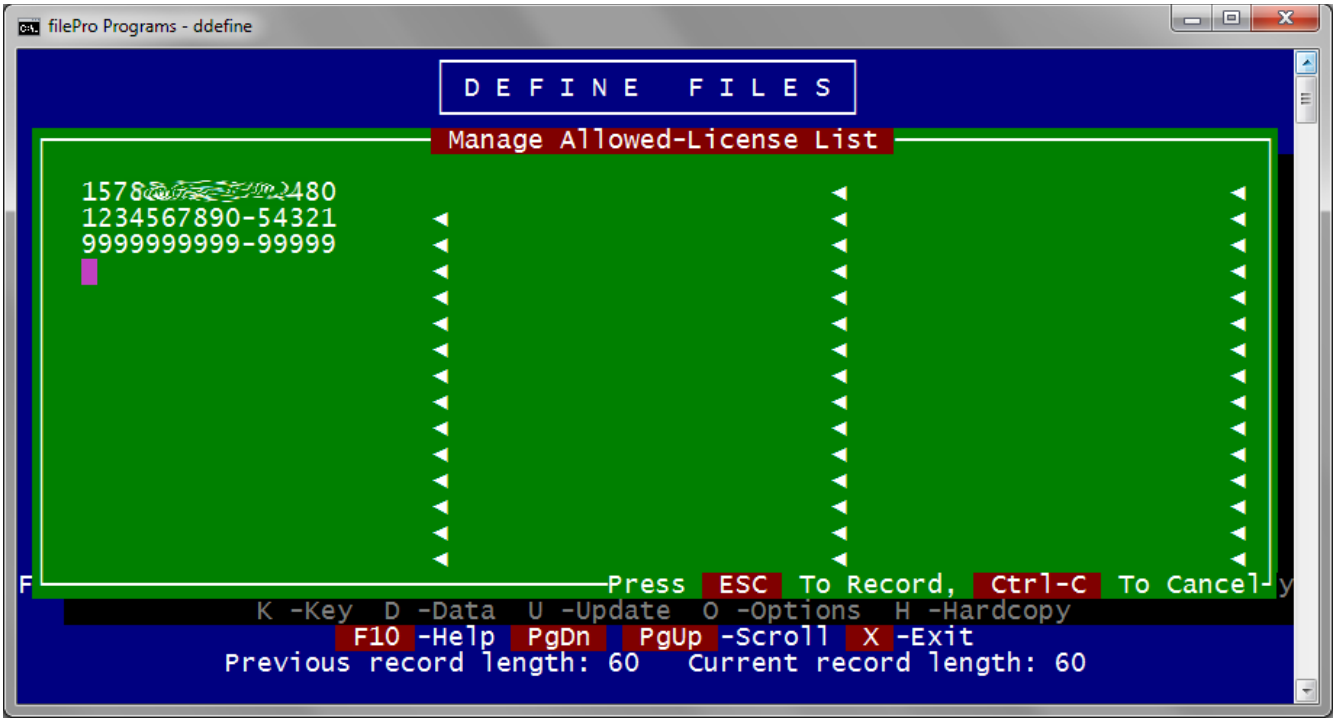


Once a filePro file is encrypted, it cannot be accessed from outside of filePro, nor can it be accessed by earlier versions of filePro. If necessary, you can decrypt a file, making it accessible to external programs and earlier versions of filePro, by changing the encryption key to blank:



Finally, there is the "allowed-license list". When a file is encrypted, you can lock access to the file to a particular set of filePro licenses. This would allow, for example, the file to be accessed on both the developer's system and the client's system. Or, it could allow the file to be shared among several offices in the same company. Define files will always put the current system's license first on the list, and you

cannot edit that entry.



Moving between systems

Once you add a license to the "allowed" list, the file can be copied or moved between any of the listed systems. For example, if you have a separate server where you want to keep a web-accessible copy of the file, add that server's license, and from then on, you can simply copy the file to the web server. Or, you can add the license of your own system to a client's file, and you can take a copy back to your office to work on. However, you will not be able to access the file on any system not listed in the "allowed" list.

Backup servers

If you have a system crash, and need to use a backup server, as long as you have a valid backup license from the original server (the same one you would need in order to run in "grace period" mode), you will be able to access the file on the backup server. However, before being allowed access to the file, you first need to go into Define Files and enter the encryption key. Until you do so, the rest of filePro will not allow you access to the file. This "grace-period mode" copy of the file will then only run on the given system with the given backup license. Moving the file to another system, or replacing the license with a "valid" one for this system (that is, taking it out of "grace period" mode) will again require entering the current encryption key into Define Files. Note that this is a one-time thing for any given system. Once the key has been entered into Define Files, you will have full access to the file from the rest of filePro.

Processing

There is a new processing command which can be used to determine if a file is encrypted or not:

```
If: ENCRYPTED(lookupname)
```

```
Then: ' file is encrypted
```

Note that "`lookupname`" can be "`-`" to specify the main file.

Blobs/memos

In addition to the key and data files, the blob file is also encrypted.

Indexes

In this initial release, indexes are not encrypted, even for encrypted files. A future update will include the option to encrypt indexes.

fPTransfer and fPCopy

Both fPTransfer and fPCopy do not yet support copying of encrypted files. If you have a need to do so, you can work around this for now by using Define Files to remove the encryption, make the copy, and then re-encrypt the file.

Lost/Forgotten Encryption keys

If the encryption key is lost or forgotten, you can continue to access the file from within filePro. However, you won't be able to change/remove the encryption or copy the file elsewhere.

With proof of ownership of the data, fPTech will offer a service to help recover the lost/forgotten key. Contact filePro sales for details.

Technical notes

Whether a file is encrypted or not is "invisible" to the developer and end-user. With the exception of Define Files, where you need to know the current encryption key to change it, and the notes regarding fPTransfer/fPCopy, all of filePro treats encrypted files just as it does unencrypted ones. Encrypting the file prevents anything outside of filePro (as well as older versions of filePro) from accessing the data.

Possible future enhancements

The ability to export/import the "allowed license" list.

The ability to import an "allowed license" item from the other system's license file.

A utility to handle multiple files when copying to a backup server, rather than having to individually go into Define Files for every file.