

FORMFUSION

Installation Manual

Document version 1.9.4 – Unix/VMS/NT

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NOTES FROM THE PROGRAMMING STAFF

Thank you for choosing FormFusion as your Banner[®] document enhancement and management solution. Please contact us at any time during the installation process with questions or to report errors in the documentation or operation of FormFusion.

Please be sure to subscribe to our Listserv forums to be notified of future releases.

Web site support: <http://www.evisions.com/support>

HelpDesk: <http://helpdesk.evisions.com>

Phone: 949.833.1384

Who should perform this installation?

We recommend that your system DBA or host system administrator perform this installation. The person installing the software should have a working knowledge of Banner and the editor used on their system. When necessary, we will instruct the person performing the installation to make back-up copies of any files that will be edited so they can be restored if a mistake is made during installation.

We welcome your suggestions and ideas!

As we continue to enhance this program, we will need end users' input on how to make it better. As software developers, we try to identify the best solution to a problem without having the opportunity to use the application in all of the "real world" situations and configurations.

We would welcome your feedback on how we can make our software work best for you. We are always interested in improving and adding features that make the end user's life easier—and the application better. If you have suggestions for improving FormFusion or ideas for additional products that you would like to see, please contact us at the website or phone number above.

System Requirements

Client: Win 95, 98, ME, 2000, XP
SQL-Net or Net80 or higher
10 MB of hard drive space available
256 MB RAM (minimum)
Laser printer (PCL-5 or better)

Server: Version: Any version of Banner
Platform: Any platform (NT, Unix, VMS)
Oracle Tablespace Size: Approximately 70 MB



BEFORE YOU BEGIN: A BRIEF OVERVIEW

There are two major components to the FormFusion software solution – the client and the server.

Client Component

The client is a forms development tool that enables the user to specify which Banner processes should be enhanced by the FormFusion server. The client component is used to design the layout of the template and change the way the server component will alter the reports.

The client software does not actually perform any of the processing of the printed output files (report files, **.lis** files, etc.). The client stores design and output rules in a number of Oracle FormFusion tables on your server host. All of these tables begin with the prefix **EVI** and you control their size and location.

The FormFusion client component executes on any 32-bit Windows[®] based operating system, and can be installed on individual workstations or as a network application.

Server Component

If the process has been configured in the client as a FormFusion process, the server takes the baseline output file generated by Banner and adds graphical elements, remaps data, etc. depending on how the template was designed using the client.

The FormFusion server process that performs the processing of the report files is named **evilp**, which stands for Evisions LP (lineprinter). In general, the **evilp** command replaces the print command in your Banner **gjajobs** or **sctban.pm** file. When a user executes a print job from Banner's Job Submission form, **evilp** analyzes whether it should modify the print job and then either performs the modifications or passes the input file directly to your print spooler. This makes FormFusion invisible to the end user.

The server uses the special print parameter from your Banner **GJAPCTL** form to determine what processing to perform on the file that is being sent to the printer. This enables the end user to control which format FormFusion should use for a particular process.



STEP 1: INSTALLATION

- 1.1 Place the FormFusion setup file you downloaded from the Internet (www.evisions.com/support/formfusion) on your client workstation or network.
- 1.2 When you execute this file, the FormFusion application will begin installing. Follow the InstallShield[®] prompts.
- 1.3 When you are asked to choose the **Setup Type**, we recommend the following selections:
 - For an Administrator's installation, choose the **Full** install option.
 - For a workstation that is not be expected to perform any administration of FormFusion, choose the **Typical User** option.
- 1.4 We recommend that you accept the defaults for all other steps. If you choose the **Custom** option and choose to place the software in a directory other than the default (**C:\Program Files\Evisions\FormFusion**), please note the directory into which you are installing the software.
- 1.5 If FormFusion is installed as a network application, each client workstation will need to contain a link to the network version of FormFusion. In addition, a file named **network_install.bat** is located in the directory where FormFusion was placed. This file needs to be run on each workstation accessing the network application.



STEP 2: CONFIGURING FORMFUSION

Several configuration steps must be performed for each new installation of FormFusion to communicate correctly with your Oracle database. The first step is to properly configure your current Oracle Network Client. This configuration is beyond the scope of this document and should be performed by a DBA familiar with configuring Oracle clients.

NOTE: ONCE THE ORACLE NETWORK CLIENT IS CONFIGURED CORRECTLY, YOU MAY CONTINUE IN THE TASK OF CONFIGURING FORMFUSION DEVELOPER.

Full and Typical User Installations

- 2.1 Launch FormFusion Developer.
- 2.2 On the FormFusion menu, click on **Tools** and select **Administration Wizard**.
- 2.3 Select the database to administer.
- 2.4 FormFusion makes use of Banner Security. After clicking **Seeds**, please read the ***Determine the Banner 2000 secret seeds*** section at the top of the screen. It will give you valuable information on how FormFusion interacts with Banner Security.
- 2.5 Click **Find Seeds** and log in as a DBA user. The Banner Security seeds will be determined and the two fields **SEED1** and **SEED3** will be populated. If the database does not make use of Banner Security then check the **Do not use Banner Security** check box.

NOTE: STEP 2.5 IS THE FINAL CONFIGURATION STEP FOR A TYPICAL USER INSTALLATION. EACH DATABASE THAT WILL BE USED BY FORMFUSION MUST BE CONFIGURED SEPARATELY. CLICK CLOSE IF YOU DO NOT NEED TO CONFIGURE ANOTHER DATABASE OR CLICK BACK TO REPEAT THE CONFIGURATION STEPS FOR ANOTHER DATABASE, BEGINNING WITH STEP 2.3.

Full (Administrator) Installations

For Full (Administrator) configurations, please proceed with steps 2.6 through 2.16. Once you have configured the security settings, click **Finish**.

- 2.6 You need to create the **EVISIONS** user for this database. Click **User** to enter the page that creates the Evisions Oracle user. From this screen you can edit the script used to create the user by clicking on **Edit Script**. Here you will be able to set the user password and the default and temporary tablespaces, and add any other settings required by your institution.
- 2.7 When finished editing the script click **Create User**.

- 2.8 The **EVISIONS** user will require specific permissions to use your Banner environment successfully. To review the permissions and add others if necessary, click the **Edit Script** button next to the **Grants** button. When satisfied with the permissions, click the **Grants** button. Click the **Finish** button to continue.
- 2.9 Now you will need to create the tables that are required for FormFusion to operate. Click the **Tables** button to proceed to the table creation form. At this point you will be required to log in as the **EVISIONS** user.
- 2.10 If you want to edit the creation scripts before creating the tables, click the **Edit Scripts** button. When satisfied with the creation scripts, click the **Create Tables** button.
- 2.11 Exit FormFusion completely. Open FormFusion, click on **Tools** and select **Administration Wizard**, then the **Tables** button.
- 2.12 After you create the tables, you need to create public synonyms. Click the **Synonyms** button and **Finish** to proceed.
- 2.13 Next, click on the **Create Sequence** button and press **OK** on the window. NOTE: This step requires the EVISIONS user to have the CREATE SEQUENCE privilege in Oracle. If the EVISIONS user does not have this privilege the message window will say the sequence was created, but an error will occur when updating existing templates or importing new templates saying sequence not found. See Appendix D for more info on creating sequences.
- 2.14 You will now need to create and manage the security objects that FormFusion uses within the Banner environment. Click **Security** to continue.
- 2.15 If the FormFusion server code does not exist on the server, you will be prompted to install the source. Click **Yes** to install the server source code. This does not compile the source code but will allow you to compile the source later. Click **Next** to continue.
- 2.16 After the source code has been added, you will be given an opportunity to configure Banner Security as it pertains to FormFusion. You need to add three new security objects to Banner Security:
 - **FORMFUSION**
 - **FORMFUSION_SERVER**
 - **FORMFUSION_ARCHIVER**

You can manage FormFusion security objects from this screen or from normal Banner Security (Banner **GSASECR** Form). Click **Show Me** for instructions on how to add the security objects using Banner.

- 2.17 To use this form to create the security objects, select the security object to configure from the drop down list of available objects and press the **Log On** button. Enter the user name and password of the Banner Security Officer. Answer **YES** to create the new objects. This will also grant access for the **EVISIONS** user to the **FORMFUSION** security object.
- 2.18 To add permissions for users who do not have access to the security object you are configuring, double-click on their user names in the **Non-members** list on the left side of the screen. This drop-down list displays all users who have not been granted permission to access the security object. The user names you select will move to the **Members** list on the right that displays all users that have been granted permission to use the security object.
- 2.19 When prompted, assign the default role of **BAN_DEFAULT_M**. Repeat for any user who needs access to the selected security object.

The **FORMFUSION** object should only be given to users or classes of users that require the ability to log into the FormFusion Developer tool to make changes to the FormFusion templates.

The **FORMFUSION_SERVER** object should be given to a user or class that will need to have the ability to run a template from Job Submission. In other words, most people will need access to the **FORMFUSION_SERVER** object. Many DBAs assign this object to a generic class that all Banner users are members of. This eliminates the need to have to manually remember to add individual users to this object as you add them to your Banner system.

The **FORMFUSION_ARCHIVER** object needs to be assigned to the users who will need to create archived documents. The same general rule applies to this object that are outlined above. Many DBAs will assign this object to a generic class that all Banner users are members of.

- 2.20 Click **Finish** to end the FormFusion Administration Wizard.

You have completed the steps for configuring a database for use with FormFusion. To configure another database, repeat the configuration process beginning with step 2.3 above.



STEP 3: LICENSING

Every FormFusion Developer client needs to be updated with the license for your institution. The license controls the features that are enabled as well as other status information.

- 3.1 From within FormFusion Developer choose **Help** from the application menu.
- 3.2 Next choose **Licensing**.
- 3.3 Enter the **Organization Name** and **Licensing Key** you received via e-mail EXACTLY as it appeared in the e-mail. Both fields are case sensitive.
- 3.4 Click on the **Check Key** button to verify which modules and plug-ins have been licensed.



STEP 4: COMPILING FORMFUSION SERVER ADMINISTRATOR

When the client installation is complete, you will find a directory under the FormFusion folder called **Server**. The default path is **C:\Program Files\Evisions\FormFusion\Server**.

You need to transfer the **eviadm.pc** file in this directory to your Unix/VMS/NT host. This file is the source file needed to create the FormFusion Server Administrator, which in turn is used to compile the FormFusion server application (**evilp**).

Unix Installation

- 4.1 Log on to the Banner account. Answer all prompts with information specific to your system. Make sure you are connected to the database that contains FormFusion. Change to the **\$BANNER_HOME** directory and create a new directory called **evisions**.

```
cd $BANNER_HOME
mkdir evisions
cd evisions
```

- 4.2 FTP the **eviadm.pc** file from the **C:\Program Files\Evisions\FormFusion\Server** workstation directory into the newly created **evisions** directory using ASCII transfer mode.
- 4.3 Verify that your environment is pointed to the proper ORACLE_SID. Then compile the **eviadm.pc** program by executing the following command:

```
make -f $BANNER_LINKS/sctproc.mk eviadm CHECKOPT=sqlcheck=limited
```

VMS Installation

- 4.1 Log on to the Banner account. Answer all prompts with information specific to your system. Make sure you are connected to the database that contains FormFusion. Create an **evisions** directory within **BAN_HOME** and open the new directory.

```
create /dir BAN_HOME:[evisions]
set def BAN_HOME:[evisions]
```

- 4.2 FTP the **eviadm.pc** file from the **C:\Program Files\Evisions\FormFusion\Server** workstation directory into the newly created **evisions** directory using ASCII transfer mode.
- 4.3 Compile the **eviadm.pc** program by executing the following command:

```
@gen$com:sctproc eviadm "limited"
```

NT Installation

- 4.1 Change to the **\$BANNER_HOME** directory on your NT server that is your Banner host system and create a new directory called **evisions**.
- 4.2 Copy or FTP the **eviadm.pc** file from the **C:\Program Files\Evisions\FormFusion\Server** workstation directory. If using FTP, transfer the file in ASCII mode.
- 4.3 Open the newly created **evisions** directory and set the following environment variables by typing the text below, replacing **PROD** with the appropriate database instance. For example, **PPRD**, **TRNG**, **SEED**, etc.

```
ORAENV PROD
```

- 4.4 Set your path according to the specifics of your system. Make sure to use the short directory name if there are spaces or any directory names exceeding eight characters.

```
set EVIPATH=c:\sct\banner\evisions
```

- 4.5 Enter the text below:

```
set INCLUDE=%EVIPATH%;%INCLUDE%
```

- 4.6 Compile the **eviadm.pc** by entering the command below ON ONE LINE with no carriage returns. The text appears on multiple lines below for illustration purposes only!

```
perl %BANNER_HOME%\general\misc\sctproc.pl  
-prog="%EVIPATH%\eviadm.pc"  
-checkopt="sqlcheck=limited include=%EVIPATH%"
```



STEP 5: COMPILE FORMFUSION SERVER

After you have successfully compiled **eviadm**, you can compile the FormFusion Server files. Before you launch **eviadm**, make sure you are in a directory that will allow for the creation of temporary files.

- 5.1 Start **eviadm** by completing the following steps for your system.

Unix Installation

Enter the following text at the command prompt from **\$BANNER_HOME/evisions**:

```
$EXE_HOME/eviadm
```

VMS Installation

Enter the following text at the command prompt from **BAN_HOME:[evisions]**:

```
run GEN$EXE:eviadm
```

NT Installation

NOTE: IF YOU INTERRUPTED THE INSTALL PROCESS AFTER EXECUTING THE PREVIOUS STEP, BE SURE TO RE-ESTABLISH THE PROPER ORACLE AND BANNER ENVIRONMENTS BY EXECUTING THE EVIPATH AND INCLUDE COMMANDS IN STEPS 4.4 AND 4.5.

Enter the following text at the command prompt from **e:\sct\banner\evisions**:

```
e:\sct\banner\general\exe\eviadm
```

NOTE: IN THE TEXT ABOVE, **E:\SCT\BANNER** REPRESENTS YOUR SYSTEM'S PATH TO THE **GENERAL\EXE** DIRECTORY.

- 5.2 You should now see the FormFusion Server Administration menu. This menu will allow you to compile the **evilp** server software. The main menu will present you with two options:

"A" - Import Tables

"B" - Compile FormFusion Software

Select option **B** unless Evisions Technical Support provides you with other instructions.

- 5.3 After selecting option **B**, you will be prompted for how you wish the seed values to be detected.
1. Manually type these values
 2. Automatically detect (requires a DBA user)
 3. Reference seed values in "guassed.h"
 - X. Cancel compile

We recommend option **2, Automatically detect**.

- 5.4 Next, you will be presented with the different versions of **evilp** that exist in your FormFusion program table (EVIPROGRAM). You will be prompted to enter the version you would like to install. The latest version will be listed as the default.

You should select **version 1.9.x.xxx**. If you do not see this version or a newer version than this one, please contact Evisions technical support.

- 5.5 Once you have accepted the default or typed in the version to compile, you will be prompted with the following.

Choose the operation to perform:

- A. Compile/Execute all**
 1. Execute "sh comppcl.shl"
 2. Compile "evilp"
- X. Exit this menu**

Select option **A** unless Evisions Technical Support provides you with other instructions. The **eviadm** program will extract from the database the version you have typed and compile the source code into an **evilp** executable.

NOTE: PLEASE LET US KNOW IF THE COMPILATION DID NOT COMPLETE SUCCESSFULLY. WE MAY NEED TO SPECIFY ADDITIONAL FLAGS TO COMPLETE THE COMPILATION PROPERLY ON YOUR SYSTEM.



STEP 6: ADDING EVILP TO JOB SUBMISSION

In order for FormFusion to process your files, you will need to make some changes to the **gjajobs.shl** (Unix), **gjajobs.com** (VMS) or **sctban.pm** (NT) file. These changes will allow Banner to process any job from **GJAPCTL**, even those modified by FormFusion.

If you have separate directories or code trees for different Oracle instances, please edit this file in your PRE-PRODUCTION ENVIRONMENT and test before implementing in a production environment.

NOTE: OTHER BANNER USERS ON YOUR SYSTEM MAY BE UNABLE TO PRINT WHILE YOU ARE EDITING THIS FILE. IF YOU ARE ON A PRODUCTION SYSTEM, PLEASE PERFORM THE MODIFICATION AND TESTING OF THIS FILE DURING A TIME PERIOD IN WHICH NO ONE ELSE NEEDS TO PRINT. IF SOMEONE MUST PRINT WHILE YOU ARE EDITING, YOU CAN COPY THE SAVED GJAJOB FILE BACK TO ITS ORIGINAL FILE NAME TO RESTORE PRINTING CAPABILITIES.

Unix Installation

In this step, you will edit the **gjajobs.shl** file in the **\$BANNER_LINKS** directory.

- 6.1 Make a backup copy of **gjajobs.shl** by typing:

```
cd $BANNER_LINKS
cp gjajobs.shl gjajobs_orig.shl
```

- 6.2 Edit your **gjajobs.shl** file and find the section of code where **LANDSCAPE** and **PORTRAIT** are defined. It should look similar to:

```
case `echo $7 | tr "[a-z]" "[A-Z]"` in
  LANDSCAPE) FORM=" -o land";;
  PORTRAIT) FORM=" -o port";;
  " ") FORM=" -o land";;
  *) FORM=" $7 ";;
```

Add the **PROBABLY_FF** line after the ***)** as shown below.

```
case `echo $7 | tr "[a-z]" "[A-Z]"` in
  LANDSCAPE) FORM=" -o land";;
  PORTRAIT) FORM=" -o port";;
  " ") FORM=" -o land";;
  *) FORM=" $7 "
     PROBABLY_FF="YES";;
```

- 6.3 Next find the section of code where **PRNTOPT** is passed the print command used at your site. The section should start with:

```

if [ "$6" = "default" ] || [ "$6" = "" ]
then
    PRNTOPT="lp $FORM"
else
    PRNTOPT="lp -d$6 $FORM"
fi
    
```

- 6.4 Change both the **then** and **else** part of the command by adding a line to each section. Copy and paste the **PRNTOPT** line in each section and change the variable name to **PRNTFF**. Then, remove the **\$FORM** variable from the new **PRNTFF** variable and add a **-c** flag.

Also, add a check for the GLRLETR process so that FormFusion will handle it properly. The entire **if** statement should now read:

```

if [ "$6" = "default" ] || [ "$6" = "" ]
then
    PRNTOPT="lp $FORM"
    PRNTFF="lp -c"
else
    PRNTOPT="lp -d$6 $FORM"
    PRNTFF="lp -c -d$6"
fi

if [ "$PROG" = "GLRLETR" ] && [ "$FORM" = "$7" ]
then
    EXT="doc"
else
    EXT="lis"
fi
    
```

NOTE: A SPACE BEFORE AND AFTER THE EQUAL SIGN IS REQUIRED. A SPACE BEFORE AND AFTER EACH BRACKET IS ALSO REQUIRED.

When a user requests a report process from Job Submission, and FormFusion does NOT process the file because no Special Print command has been specified, FormFusion passes the input file to the **PRNTOPT** command.

When FormFusion DOES process an input file, FormFusion passes the new output file to the **PRNTFF** command. This ensures that FormFusion forms print properly without affecting the Banner baseline printing process.

Please contact us if graphics printed from FormFusion appear garbled or run onto many pages. We can give you the required flags to add to the **PRNTFF** variable in the section above so your graphics will print properly.

Above example assumes use of **lp** print command. If you use **lpr** or **qprt** print commands, please refer to the following examples:

```
lpr -P$6
qprt -P$6 -c -dp -Bnn -j0 -J! -Z!
```

- 6.5 Immediately after the **fi** command at the bottom of the statement in step 6.4, add the line of text shown below. Enter the text ON ONE LINE with no carriage returns. The text appears on three lines below for illustration purposes only!

```
EVIPRINT="$EXE_HOME/evilp -eviuser $3 -evipass $4 -eviproc $1 -
evispp $FORM -evilis $H/$TEMP.$EXT -eviout /tmp/ -evipthru
$PRNTOPT -eviprint $PRNTFF"
```

- 6.6 You will then need to find the line that contains the **export** command and add the new **EVIPRINT** variable to the list of other variables being exported.

```
# Export all variables so they can be accessed by submitted shl
script
#
export JOB PROC UID PSWD UIPW PRNTOPT PRNT FORM LOG TEMP ONE_UP
SUBTIME PROG H EVIPRINT
```

- 6.7 Next, find the portion of your **gjajobs.shl** that actually creates the command to print the file. Find the section that reads:

```
if [ "$6" != "NOPRINT" -a "$6" != "DATABASE" ]
then
    echo 'if [ -r $H/$TEMP.lis ]'           >> $H/$TEMP.shl
    echo 'then'                             >> $H/$TEMP.shl
    echo '$PRNTOPT $H/$TEMP.lis 1>>$LOG 2>&1' >> $H/$TEMP.shl
    echo 'fi'                               >> $H/$TEMP.shl
fi
```

Replace **echo '\$PRNTOPT \$H/\$TEMP.lis 1>>\$LOG 2>&1' >> \$H/\$TEMP.shl** with the Evisions mod for FormFusion as shown:

```
if [ "$6" != "NOPRINT" -a "$6" != "DATABASE" ]
then
    echo 'if [ -r $H/$TEMP.lis ]'           >> $H/$TEMP.shl
    echo 'then'                             >> $H/$TEMP.shl
    # Evisions mod for FormFusion
    if [ "$PROBABLY_FF" = "YES" ]
    then
```

```

    echo '$EVIPRINT 1>>$LOG 2>&1'    >> $H/$TEMP.shl
else
    echo '$PRNTOPT $H/$TEMP.lis 1>>$LOG 2>&1'>> $H/$TEMP.shl
fi
echo 'fi'                            >> $H/$TEMP.shl
fi

```

NOTE: A SPACE BEFORE AND AFTER THE EQUAL SIGN IS REQUIRED. A SPACE BEFORE AND AFTER EACH BRACKET IS ALSO REQUIRED.

6.8 Find the section **Undefine all variables that were set by this process.** Add **EVIPRINT=""** to the list.

6.9 Below that you will find the line that contains the **export** command to export the cleared variables. Add the **EVIPRINT** variable to the list:

```

# Export cleared variables
#
export JOB PROC UID PSWD UIPW PRNTOPT PRNT FORM LOG TEMP ONE_UP
SUBTIME PROG H EVIPRINT

```

6.10 Save and exit.

VMS Installation

In this step you will be editing your **gjajobs.com** file in the **GEN\$COM** directory.

6.1 Create a backup of the **gjajobs.com** file by typing:

```

SET DEF GEN$COM
COPY GJAJOBS.COM GJAJOBS_ORIG.COM

```

6.2 Locate the parameter that reads:

```

$ FORM :=

```

Add another line beneath it that contains a new **EVIFORM** parameter that reads:

```

$ EVIFORM :=

```

6.3 Locate the section of code that reads:

```

$ NO_FORM:
$ FORM:= "/FORM=' 'P7' "

```

Add another line directly beneath the **FORM** variable definition that reads:

```

EVIFORM:= " ' 'P7' "

```

NOTE: *THERE ARE NO SPACES BETWEEN THE SINGLE QUOTES.*

6.4 Find ALL the lines that read:

```
$ WRITE COMFILE "$ PRINT/DELETE 'PRNT' 'FORM' 'TTIME'.LIS"
```

Change them to the following lines:

```
$ WRITE COMFILE "$ DEASSIGN SYS$INPUT"
$ WRITE COMFILE "$ EVIPPGRM ::= $GEN$EXE:EVIPPGRM"
$ WRITE COMFILE "$ EVILP ::= $GEN$EXE:EVILP"
$ WRITE COMFILE "$ EVILP -EVIUSER 'P3' -EVIPASS 'P4' -EVIPROC
'P1' -"
$ WRITE COMFILE " -EVISPP 'EVIFORM' -EVIPTHRU PRINT/DELETE
'PRNT' -"
$ WRITE COMFILE " 'FORM' -EVILIS 'TTIME'.lis -EVIPRINT -"
$ WRITE COMFILE " PRINT/PASSALL/DELETE 'PRNT'"
```

6.5 Save and exit.

NT Installation

6.1 Locate the **sctban.pm** file in the `\sct\banner\general\misc` directory.

6.2 Edit the file and locate the **PRNT** command in the `sctban_do_non_db_print` function. The **PRNT** command reads:

```
open(PRNT, "|print \D\:${sctban_printer_name}
${sctban_file_name}.lis >${sctban_file_name}.stdout
2>${sctban_file_name}.stderr");
```

6.3 Change the **PRNT** command as shown in the example on the following page while ADDING your path to the `general\exe` directory. In the example, we are using `E:\sct\banner\general\exe` as the directory containing the **evilp.exe** file.

Notice how you need two `\\` for each literal `\`. This is because PERL interprets `\\` as `\` when executing the statement below. Enter the text of this statement ON ONE LINE with no carriage returns. Your text editor (such as Notepad) may wrap the lines but will not put a carriage return at the end of each line.

```
open(PRNT, "|e:\\sct\\banner\\general\\exe\\evilp \-eviuser
${sctban_user_id} \-evipass ${sctban_password} \-eviproc
${sctban_process_name} \-evispp ${sctban_form} \-evilis
${sctban_file_name}.lis \-eviprint print
\\D\\:${sctban_printer_name} \-evipthru print
\\D\\:${sctban_printer_name} >>${sctban_file_name}.log
2>>${sctban_file_name}.log");
```

NOTE: AGAIN, PLEASE MAKE SURE THAT YOU MAKE THIS MODIFICATION AT A TIME WHEN TAKING DOWN THE PRINTING SERVICES FROM BANNER WILL **NOT** BE A PROBLEM. IF YOU MAKE A MISTAKE OR A TYPOGRAPHICAL ERROR, YOUR BANNER PRINTING COULD BE NEGATIVELY AFFECTED.



ADDITIONAL HELP

If you are having problems, please search our Knowledge Base at <http://helpdesk.evisions.com>. If you are unable to find the solution, submit a HelpDesk request with a detailed explanation of the problem and all information/errors from the **.log** file of the Banner process you are running.

Please do not hesitate to contact the Evisions HelpDesk if any questions or problems arise. We are here to help you and have performed this installation at numerous Banner sites.

Also, if you find that areas of this documentation require additional detail or clarification, please let us know. We are constantly trying to improve the installation process to make it as easy as possible.

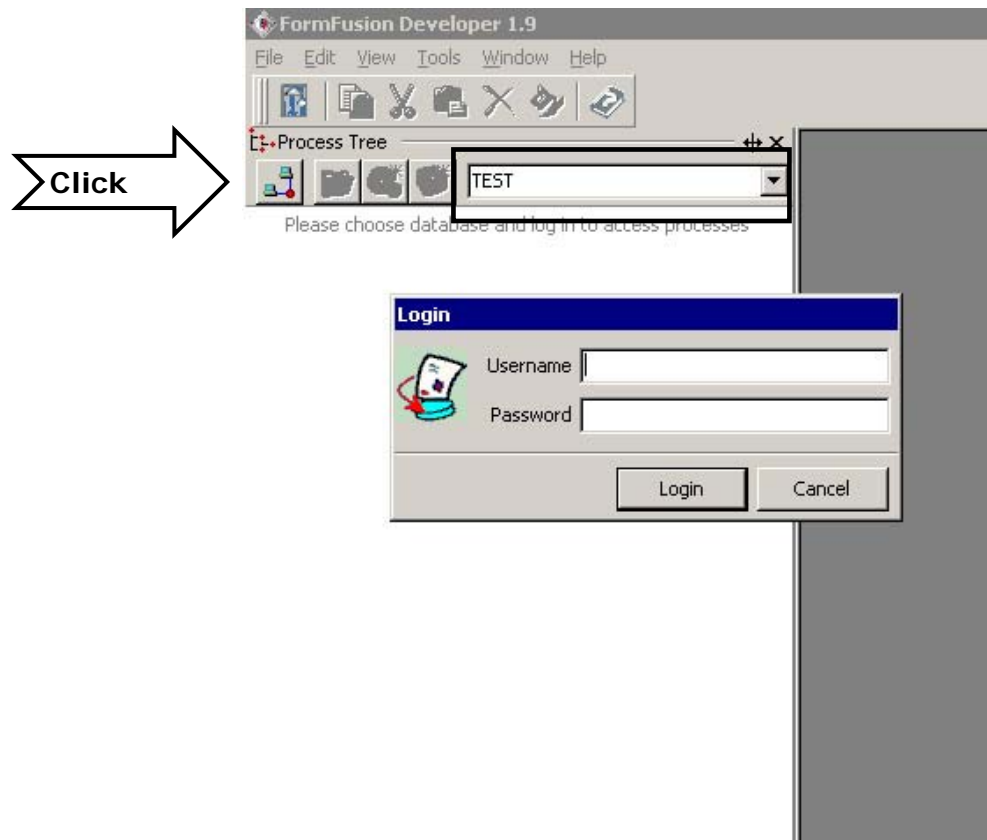
As an informational aide, there are a series of Lotus© ScreenCam™ Tutorials on the Evisions website at <http://www.evisions.com/support>. These tutorials feature technical demonstrations—complete with narration—that show you how to use the various functions of FormFusion.



APPENDIX A: IMPORTING SAMPLE TEMPLATES

Sample FormFusion templates are available on the Evisions website at <http://www.evisions.com>.

Start FormFusion Developer and select the Oracle Instance in which you installed FormFusion using the dropdown box that contains the word **TEST** in the illustration below. Then, click on the **Log in to the Oracle instance** button and enter the user name and password.



Choose **Tools** from the menu and then choose **Import From File**.

Browse for the appropriate folder where the downloaded templates were saved and open the file to import. FormFusion import files have an extension of **.ffe** (FormFusion Export).



APPENDIX B: RUNNING A FORMFUSION PROCESS WITHIN BANNER

You will need to run a process from Banner for which you have a template in FormFusion. A template would exist in FormFusion by either importing one of the sample templates (see Appendix A) or by creating your own template or form within FormFusion. We recommend initial testing be done with one of our templates.

IMPORTANT NOTE: *ON THE BANNER JOB SUBMISSION FORM, YOU MUST SELECT A PRINTER. DATABASE AND NOPRINT WILL NOT USE FORMFUSION.*

In FormFusion, the name next to the printer icon and directly beneath the process name is called the special print parameter. When you are running a process from Banner Job Submission you will need to enter that special print parameter in the field to the right of your printer selection (refer to Appendix C for a diagram). This field is titled **Special Print** (no coincidence!) in the Job Submission form.

FormFusion then confirms the special print parameter you entered matches a valid special print parameter in FormFusion for the process you are running. If it finds a match, FormFusion will process the output file from the Banner process you are running. If it does not find a match, FormFusion will send the baseline output to the printer and place a message similar to the following in the **.log** file:

```
The process name "actualprocessname" (using spp "sppname") is not a
FormFusion controlled process. Sending "actualprocessname_123456.lis"
through normal print command.
```

Using the special print parameter field, you can create an unlimited number of templates for any specific process. This enables users to access the template they need to use by entering its special print parameter. See Appendix C to learn more about what the special print parameter field is and how it relates to Banner.

If you have entered a valid special print parameter for a process that exists in FormFusion, the form should print properly. If you are not getting FormFusion output, look at the **.log** file created from the process and see if there are any FormFusion messages that identify the problem. The table below provides troubleshooting strategies for FormFusion messages you may receive.

FormFusion Message	Troubleshooting
<p>FormFusion cannot access tables or Table or view not found</p>	<p>Chances are that you need to create the Banner security object called FORMFUSION. Please refer to Step 2 of this installation manual for instructions on creating a FORMFUSION Banner security object.</p>
<p>The process name "xyz" (using spp "abc123") is not a FormFusion controlled process. Sending "xyz_###.lis" through normal print command.</p>	<p>You have specified a special print parameter that does not exist for the process you are running.</p> <p>Start FormFusion and open the tree for the process you are trying to run. Directly under the process name in the tree, find the name you have assigned to the special print parameter. This value must be typed exactly in the Banner Job Submission form as it is in FormFusion.</p>
<p>enq: lp: error: file called: 1 does not exist or a similar message</p>	<p>Job Submission is NOT using the gjajobs file that you have modified to call FormFusion.</p> <p>Please create a Help Desk ticket to request how to diagnose and detect which gjajobs file your system is using.</p>
<p>Unable to access "123" - No such file or directory</p>	<p>An error was made when modifying the gjajobs file.</p> <p>Review changes, checking for spelling or syntax errors.</p>



APPENDIX C: HOW THE FORMFUSION PARADIGM TIES INTO BANNER

The screenshot shows the Banner GJAPCTL 6.0 interface on the left and the FormFusion Developer 1.9 interface on the right. A red arrow points from the 'Process' field in Banner (containing 'FPAPORD') to the 'fpapord' folder in the FormFusion Process Tree. A blue arrow points from the 'Special Print' field in Banner (containing 'PO_Evisions') to the 'PO_Evisions' folder in the FormFusion Process Tree.

Banner GJAPCTL 6.0 Interface:

- Process: FPAPORD Purchase Order Form Print
- Printer Control: local1 (Printer), PO_Evisions (Special Print)
- Parameters:
 - 01 Purchase Order Number
 - 02 Status
 - 03 Purchase order print option
 - 04 Include E-Procurement PO's?
- Save Parameters: Save Parameters As: _____

FormFusion Developer 1.9 Interface:

- Process Tree:
 - Internal Groups
 - Literature Samples
 - Purchase Order
 - fpapord
 - PO_Evisions
 - CaptureForm
 - MapForm
 - 0_PO Main
 - 1_Vendor Copy
 - 2_File Copy
 - README
 - PO_2_1
 - Testing
 - Training
 - Web Demo



APPENDIX D: CREATE SEQUENCE

FormFusion creates a sequence in Oracle to generate internal ID numbers. Creating a sequence requires the EVISIONS user to have the corresponding privilege in Oracle. If the EVISIONS user does not have this privilege the following error will occur when importing new templates or making updates to existing templates:

ORA-02289 – sequence does not exist

To fix this problem first grant CREATE SEQUENCE to the EVISIONS user. This will need to be done with a DBA login for Oracle. The following SQL command will grant this privilege:

```
GRANT CREATE SEQUENCE TO EVISIONS
```

Once the EVISIONS user has the CREATE SEQUENCE privilege the following steps will create the sequence.

1. On the FormFusion menu in Developer, click on **Tools** and select **Administration Wizard**.
2. Select the database instance to administer.
3. Now click the **Tables** button. This area of the Administration Wizard will update the existing tables of FormFusion to the newer format. At this point, a prompt will appear to log in as the EVISIONS user.
4. Next, click on the **Create Sequence** button and press **OK** on the window.