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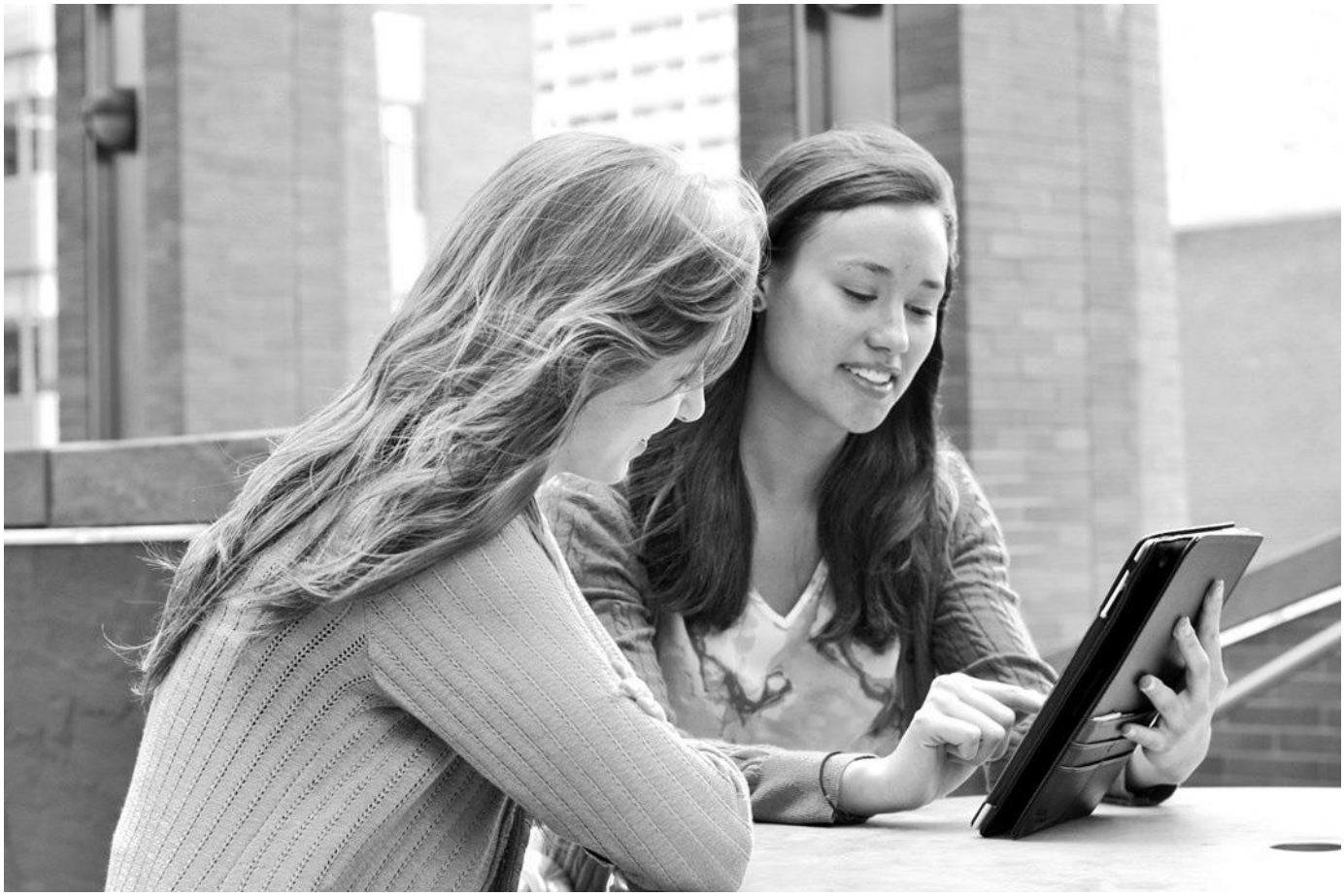
Banner Financial Aid Self-Service

Upgrade Guide

Release 8.25
January 2016



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Revision History

Publication Date	Summary
January 2016	New version that supports Financial Aid Self-Service 8.25 software.

Table of Contents

Overview

This document describes the unique steps required to upgrade Banner Financial Aid Self-Service release 8.24 or higher to release 8.25. It is designed to be used in conjunction with the *Banner Release Interdependencies* and the *Banner Media Unload Reference Guide* documents, which are available within Documentation Libraries on the Ellucian Support Center. Documentation Library Files can be found in the Ellucian Support Center under the Documentation Libraries tab or by using the Global Search Feature.

The *Release Interdependencies* document outlines the release interdependencies for all products within the Unified Digital Campus (UDC). Before you install or upgrade a product within the UDC, use this document to determine which other UDC products you must install first.

The *Banner Media Unload Reference Guide* describes the common steps that are required for every Banner upgrade. It also includes reference information about the symbols and conventions used throughout Banner upgrade guides.

NOTES:

1. **Any upgrade issues discovered and reported to the Action Line subsequent to the posting of this release will be documented in the "Banner Financial Aid Self-Service 8.25 Upgrade Issues" Article xxxxxxxxx and made available via the Ellucian Support Center (http://www.ellucian.com/Solutions/Ellucian-Client-Support/). It is required that you check this document prior to applying the release by querying for Article xxxxxxxxx.**

2. **This upgrade can be installed manually and is also available for installation using the Ellucian Solution Manager (ESM). See the "Banner Upgrades Support Status" document available within Documentation Libraries on the Ellucian Support Center, for a complete list of Banner releases that ESM supports for installation.**

Step Description and Dependencies Table

The following list of steps is consistent from release to release. Any steps that are not required are marked **N/A** in the "Applies to this Stage" column in this table.

Step	Applies to this upgrade	Description	Dependent on Step	Restart Notes
1		Distribute Release Documents	—	
2		Verify Environment Prerequisites	Previous	A
3		Upgrade Prerequisites	Previous	
4		Upgrade Preparation	Previous	A
5		Modify database objects (`gostage`)	Previous	B
6		Migrate from stage to permanent directories	Previous	A
7	N/A	Compile C programs	6	A
8	N/A	Apply required data changes	5	A
9		Update referential integrity constraints	5	A

10		Restart the `gostage` process	Previous	A
11		Verify the state of the upgraded environment	Previous	A

If any errors or problems occur during the upgrade process, login to the Ellucian hub at http://www.ellucian.com/Solutions/Ellucian-Client-Support/ to search for solutions or to submit a case for assistance with the issue. You can also report issues via telephone at 1(800) 522-4TCP (1-800-522-4827).

MULTI-ENTITY PROCESSING ALERT: This upgrade supports MULTI-ENTITY PROCESSING (MEP*) in your database and requires no manual modifications to the delivered scripts during the course of installation.

***MEP refers to MULTI-ENTITY PROCESSING with the use of Virtual Private Databases (VPD), enabled by the use of VPDI_CODE in MEP enabled tables.**

For additional information to determine if the database is MEP enabled, please refer to Article 1-19SKZXB.

Read All Instructions Before Beginning; Review the Contents of All Scripts (`SQL`, `SHL` and `PL` files).

Step 1 Distribute Release Documents

Distribute the enclosed Release Guide found in the doc subdirectory, to the appropriate departments. This document explains the modifications that have been made to the system in functional terms and explains those actions that must be taken by the users in preparation for or as part of the release upgrade.

Do not proceed until the responsible users indicate that any current processes or cycles have completed and will not be affected by the upgrade.

Step 2 Verify Environment Prerequisites

Part A This upgrade is recommended to be applied with Oracle Database Release 11.2.0.4.

Please refer to Article 000006696 for a complete list of support recommendations for Banner Oracle Database Supported Versions.

Be sure all Oracle users are logged off and cannot or will not log on. If you do this by starting the database in Restricted mode, then all user IDs used in the installation will need the Restricted Session system privilege for the duration of this upgrade. (For more information refer to the Oracle Server Administrator's Guide.) The user IDs affected may be found in the `bwrgivedba.sql` script and in the `login.sql` file delivered with this upgrade where the variables `BANNER_OWNERS, ARCHIVE_OWNERS, and UPGRADE_OWNER` are defined. Note that *all* Banner object owners are defined by these variables whether they pertain to your installation or not. Therefore, not all of the `BANNER_OWNERS,ARCHIVE_OWNERS, and UPGRADE_OWNER` defined will exist at your

installation. Under no circumstances should you create these user IDs unless specifically instructed to do so by these installation instructions—*if you do, you risk the chance or your upgrade failing.*

NOTE: The user IDs in the `bwrgivedba.sql` script will be given the DBA role as a default role, so a direct grant of Restricted Session is not necessary. The script is mentioned here only for completeness.

COMPLETE BACKUPS OF YOUR EXISTING SYSTEM BEFORE CONTINUING!

Make sure Oracle is down when the backup is taken. This ensures a consistent backup. Verify that all database files, redo logs and control files have been successfully backed up.

Part B Apply this upgrade to your SEED instance first. *Never* apply it to production without familiarizing yourself with the process by executing it against a non-critical database. This stage must be applied to all your Banner Financial Aid Self-Service environments.

For **all platforms** `set SQLPATH equal to ORACLE_PATH.`

If you are running under **UNIX**, be sure that the current directory (represented by a "`.`") is at the front of your `ORACLE_PATH,SQLPATH` and UNIX path to avoid any problems when starting some of the upgrade SQL scripts and shells.

If you are running under **MICROSOFT WINDOWS**, be sure that the `plus` subdirectory of Every Banner product you license has been added to the KEY_LOCAL_MACHINE\SOFTWARE\ORACLE\SQLPATH and/or the SQLPATH environment variable registry entry to avoid any problems when starting the upgrade SQL scripts. Please also note that the commands you use to import files and to start SQL*Plus will depend on the version of Oracle Server you are using. To perform an upgrade on the MICROSOFT WINDOWS platform, you must open up an MS-DOS window and execute all commands from the MS-DOS command prompt.

Step 3 Upgrade Prerequisites

Part A Installation requirements

The installation procedure assumes you are applying these modifications to Banner Financial Aid Self-Service release 8.24 or higher and that Banner General 8.6, Banner Student release 8.6, Banner Accounts Receivable 8.4.5, Banner Financial Aid release 8.25, Banner Web General release 8.6, Banner Student Self-Service release 8.6 and Banner Web Tailor 8.7 or path 8.6.1.1 (pcr-00108428_twb8060101) have been installed.

NOTE: Effective December 31, 2014, all Banner environments will require the application of the Banner Database Extension Utility. All releases at this point will only be delivered to work with an extended database.

For more information you may refer to the Release Interdependency Matrix, **Banner Release Interdependencies.pdf**, available for download from the Ellucian Support Center.

If you have ODS installed in your Banner database, please refer to Article 1-10FYAMQ - "Banner/BPRA/Oracle upgrades on an instance with Oracle Streams installed" prior to applying this upgrade.

Any modifications you have made to the base product will remain your responsibility. Each object that has been modified contains descriptive text about the purpose of the modification. This text can be found at the beginning of each object.

Part B This upgrade may be applied using the Automated Installer. This tool will allow you to apply an upgrade using a menu driven front end that follows each step contained in the upgrade guide. Use of this tool is optional. If you would like to apply this upgrade using the Automated Installer, please see the README.txt file for details regarding installer setup, system requirements and execution.

Use of the Automated Installer will save time doing the upgrade in terms of overall number of keystrokes, but PLEASE NOTE that it does not serve as a substitute for reading each section, step and/or part of the upgrade guide. Failure to read this upgrade guide could cause the upgrade process to be incomplete or unsuccessful.

Part C In this part, you will define several SQL*Plus variables that are used at various places in the upgrade process. These variables control where files are written and specify which options are to be used during this upgrade.

Delivered with the stage material is a file called `login.sql`. If you have your own `login.sql` file and need to have it executed, add the following define commands to your `login.sql` file and then remove the `login.sql` file delivered in the stage directory.

PLUS_CMD	The `plus_cmd` variable determines the command to be used to invoke SQL*Plus when executing a HOST started SQL*Plus task during this upgrade. The default value of this variable is 'sqlplus'
SPLPREF	The `splpref` variable defines the file prefix used by the steps in this installation process that generate listings or intermediate SQL routines. This provides a method to segregate the generated output when the stage has to be applied to more than one instance. Edit the `login.sql` file and set the value that gets assigned to `splpref`. The value could be set to the `ORACLE_SID` or to the name of a directory. The options you have with this feature are limited by the operating system you are running. Later steps in this document will tell you to review or modify the contents of a generated file. When you are trying to locate the generated file, don't forget that the value of `splpref` was added to the beginning of the file name
APPLYMOD	The `applymod` variable indicates whether or not modifications should be applied automatically. The variable has two valid values: `domod` or `nomod`. Choose `nomod` if you want to review the table alterations before they are applied. To understand the effect of this option, you must understand the flow of the `gostage` process. The first part of this process is an analysis and comparisons of the modifications that are to be applied by this release with the history of what modification have already been applied to your environment. The modifications that have not been applied to your environment are written to a file. The second phase of this process is to

	apply these changes and to record each one as it is applied. If the `applymod` variable is set to `domod`, the second phase is automatically executed. After the analysis of your environment is completed, the modifications that must be applied to your environment will be found in a file called `domod.sql`. If the `SPLPREF` variable was used to route generated files to another directory, the `domod.sql` file will be found there If you run `domod` and it fails: you may run `gostage` again to generate a new `domod.sql` file, or you *must* edit `domod.sql` by removing from it the steps that had successfully completed before rerunning it
UPGRADE_OWNER/ UPGRADE_OWNER PASSWORD	The variable `upgrade_owner` defines the Oracle account which will own the modification tables to be imported in Step 4 of the upgrade (previously, these tables were owned by `GENERAL)`. The `login.sql` file is delivered with a default `upgrade_owner` of `upgrade1`. The variable `upgrade_owner_password` is the Oracle password by which the `upgrade_owner` account will be identified. The `login.sql` file is delivered with a default text "#UPDATEME#" for the `upgrade_owner_password.` In the first part of Step 4 of the upgrade, you will be instructed to execute the General plus script `gupuser.sql` to verify that the `upgrade_owner` account of the name you have specified in `login.sql` exists. If it does not exist, `gupuser.sql` will create the `upgrade_owner` account identified by the `upgrade_owner_password` you have specified and will create under its schema all of the objects it will require to perform the upgrade. When the `gostage` process is started, you will be notified of the particular `upgrade_owner` account being used to perform the upgrade.
PASSWORDS	The next section of the `login.sql` files defines the passwords to all the Banner product owner accounts. Specifying them here prevents the scripts from prompting you for them each time they need to connect or switch from one account to the other. If you have any other Oracle IDs that own Banner tables, you will have to define their passwords as well. It will be a security problem for you to put your regular passwords into the `login.sql` file. We recommend that you temporarily change all the account passwords for the duration of the upgrade and set them back after the upgrade is completed.
TABLE AND INDEX SIZING MODELS	The next section of the `login.sql` file defines what tables and indexes are to be used as sizing and placement models for the new tables created during this upgrade. Each product has a definition for small, medium, large, and huge tables and indexes. If you do not feel the value specified reflects your environment, please feel free to change it.

	Definitions for products that you do not have will be ignored by the upgrade process.
CLOB/BLOB SIZING MODELS	The next section of the `login.sql` file defines the default clob/blob sizes which are to be used when creating new columns of these types during the upgrade. Again, if you do not feel the values specified for these variables reflect your environment, please feel free to change them. In addition, be sure to verify that the model "????_tablespace_name" of DEVELOPMENT is appropriate for your environment. Definitions that are not used by this upgrade will be ignored.
CLOB SIZING MODELS	The next section of the `login.sql` file defines the default clob sizes which are to be used as sizing models for new clob columns created during this upgrade. There is a definition for small, medium, large, and huge clobs. If you do not feel the value specified reflects your environment, please feel free to change it. In addition, be sure to verify that the model "clob_tablespace_name" of DEVELOPMENT is appropriate for your environment. Definitions that are not used by this upgrade will be ignored.
SECURITY_AUDIT	The `security_audit` variable is used to turn all Banner BANSECR security auditing on, off or leave them unchanged. Set this variable to "F" to log user date and time records for every change made to Banner Security tables during the upgrade process. Set this variable to "N" if you do not wish to audit changes to the Banner Security tables. If you have already defined which BANSECR tables will be audited and determined it should not be changed during the upgrade process, leave the current status set to "U" (default).
LOCAL_OWNERS	The `local_owners` variable specifies which non-standard Banner owners should be kept in sync with the modifications being delivered with this upgrade. For example, if you have cloned part of Banner Student under an Oracle ID called MARS and you want these tables to be kept in sync with the SATURN tables, add MARS to the `local_owners` variable. The owner IDs defined in this variable must be: (a) In upper case (b) Enclosed in single quotes (c) Separated by commas (d) The first entry must be preceded by a comma (e) The list must be enclosed in double quotes (f) Added to the `PASSWORDS` section mentioned previously (g) Possibly granted the restricted session privilege - refer to step 3 Examples: define local_owners = "" *(no additional owners)* define local_owners = ",'PLUTO','MARS'" *(two additional owners)*

ATTENTION: **A NOTE REGARDING DELIVERED ELLUCIAN CODE AND CLEAR TEXT PASSWORDS**	**In order to comply with *USA Federal Audit Standard GAO-09-232G*, ALL Ellucian releases, effective August, 2011, will no longer deliver code with clear text passwords.** **This affects the delivered file `login.sql`.** **You will now be responsible for editing the delivered `login.sql` script for every upgrade and replacing the string "#UPDATEME#" with whatever value the particular schema owner's password is in your environment. You will be required to do this for all Banner schema owners that exist in your particular environment.**

Step 4 Upgrade preparation

In this step you will perform several tasks in preparation for applying the upgrade.

WARNING: Before beginning this upgrade, please review Step 3 Part C for additional instructions regarding edits to the file login.sql.

Do not proceed until the necessary edits have been finished.

Part A In this part you will run a script that will:

- Verify that all necessary pre-requisite products have been applied to the environment.
- Verify that the `upgrade_owner` account specified in `login.sql` exists. If it does not exist, `gupuser.sql` will call `gcreuser.sql` to create the `upgrade_owner` account and all of the objects it requires to perform the upgrade. If it does exist, `gupuser.sql` will call `gchkuser.sql` to make sure it owns all of the objects required to perform the upgrade. If any objects are missing the script will inform you and terminate. At this point you may either drop the user with the cascade option, provided they do not own any objects, or you may create the missing objects by hand. Refer to the `gcreuser.sql` script for the required objects and their DDL. If you would like to use an `upgrade_owner` account other than the default owner of `upgrade1`, refer to Step 5.
- Create a script to be run by `bwrresroled` to restore the default roles assigned to the users used in this upgrade.
- Create a script to be run by `grestrigs` to restore the BANSECR security audit setting back to pre-upgrade status.
- Run `gsecaud.sql` which will turn all BANSECR security auditing on, off or maintain the pre-upgrade auditing status based on the `SECURITY_AUDIT` setting in `login.sql`
- Alter the default roles assigned to specific accounts used by this upgrade to include the DBA role. Refer to the `bwrgivedba.sql` script found in either the current directory or the plus subdirectory for this product for a list of accounts to be modified. These accounts will have their current default roles restored at the end of the upgrade when the `bwrresroled` is run.
- Drop the modification tables before importing them. This will assure you have the correct structure for these tables.

- It checks if Multi-Entity Processing has been implemented in your database and if yes, then warns the clients of the additional dependency for MEP aware installation.
- It verifies that user BANINST1 does not have any Fine Grain Access Rules in place that would prevent the inserting of MEP data.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @bwrruready Enter
```

Review: `bwrruready` listing

After this part is completed, you will have the following files in the directory that the `SPLPREF` variable points to.

File Name	*Description*	*Examine*
`bwrresrole.sql`	Script run by `bwrresroled` to restore the default roles assigned to the users.	Yes
`grestrig.sql`	Script run by `grestrigs` which restores BANSECR security audit settings back to pre-upgrade status.	Yes
`bwrgivrole.sql`	Script which altered the users to include DBA as one of their default roles.	Yes
`bwrgivrole.listing`	Spooled output from the `bwrgiverole` script.	Yes
`bwrruready listing`	Spooled output from the `bwrruready` script.	Yes
`bwrmepready.sql`	Script which invokes other scripts which verify the additional dependencies for a MEP client and also displays messages that are intended for a MEP client. This is spooled output from the `bwrruready` script.	Yes, if you are a MEP client.
`bwrmepready listing`	Spooled output from the `bwrmepready` script. The script verifies the additional dependencies for a MEP client and also displays messages intended for a MEP client.	Yes, if you are a MEP client.

Part B In this part you will import the new modification information: If you have chosen a different value for `upgrade_owner` other than the default of `upgrade1`, you ***MUST*** modify the `loadmods.par` file to specify this new value of the `touser` parameter.

```
imp upgrade_owner/password parfile=loadmods.par file=bwrweb82500.dmp
Enter
```

The import step will generate a warning stating that the file was exported by `BWRMGR`. This is expected and can be ignored.

Verify that the import completed successfully for all tables by comparing the number of rows shown on the terminal with the counts shown in the `bwrweb82500.log` file.

Part C In this part you will perform the tasks necessary that will enable you to run the GUASMOD form (described in restart code D) as `upgrade_owner` should the need arise. Specifically,

upgrade_owner will be given select privilege with grant option on the GURDMOD table, and the GUVMODS view will be dropped as BANINST1 (should it still exist) and recreated under the current upgrade_owner account.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @guovmods Enter
```

To run the GUASMOD form, use the userid and password defined by the upgrade_owner and upgrade_owner_password variables described in Step 3.

Part D In this part you will run the gurutlrp.sql utility script to compile database objects that are in an invalid state. The gurutlrp.sql script runs ORACLE's utlrp utility script (as SYS) and then displays a list of the remaining invalid database objects. This script is run to prevent the upgrade process from failing if it attempts to use one of the invalid objects. All errors should be investigated before continuing to the next step.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @gurutlrp Enter
```

 Review: gurutlrp listing

All errors should be resolved before continuing to the next step. You may need to repeat this process several times until all dependencies are validated

NOTE: The following Oracle error message may appear in the gurutlrp listing file. This is a known Oracle bug associated with Oracle's utlrp.sql process and a patch is available (Oracle patch number - 7707103). Applying this patch will resolve this issue. However, the process will complete the validation process and you may continue with the upgrade.

```
DECLARE
*
ERROR at line 1:
ORA-00904: "FALSE": invalid identifier
ORA-06512: at line 13
```

Step 5 Modify database objects

Part A In this part you will create all new Financial Aid Self-Service tables, modify existing tables, create or replace functions, views, packages and procedures, create database triggers and create new sequences as required. Changes that you have made may be affected by this process.

MULTI-ENTITY PROCESSING ALERT: This upgrade supports MULTI-ENTITY PROCESSING (MEP*) in your database and requires no manual modifications to the delivered scripts during the course of installation.

***MEP refers to MULTI-ENTITY PROCESSING with the use of Virtual Private Databases (VPD), enabled by the use of VPDI_CODE in MEP enabled tables.**

For additional information to determine if the database is MEP enabled, please refer to Article 1-19SKZXB.

Please refer to the Banner_Financial_Aid_Self_Service_Object_List_8.25.pdf object list report to review the list of objects changed that are specific to the Financial Aid Self-Service product.

The `gostage` process may exit and instruct you to execute some other step in this document. In this case, after executing the other step, *you must always restart the `gostage` script*. The `gostage` script will tell you when all steps of the installation process have completed.

After this step is completed, you will have the following files in the directory that the `SPLPREF` variable points to.

NOTE: ***VRRFF*** represents the release of Financial Aid Self-Service for which the files listed below are being generated, (where ***V*** is the major product version, ***RR*** is the product release level, and ***FF*** is the "fix level" or interim release level. For example, 70000 for the 7.0 release). If the upgrade is cumulative, and the initial releases of the upgrade have already been applied, scripts which were run during those releases will not be run again. Thus, there will be no spooled output to examine in the `splpref` directory for some scripts. For example, if you have already applied the 6.0.1 release of a product, you will neither find the generated grant script `bwrbg60001.sql` nor its spooled output, the `bwrbl60001` listing, in the `splpref` directory.

File Name	*Description*	*Examine*
`checkum.sql`	Intermediate file created when examining what modifications are currently on your system.	
`domod.sql`	Script of all the modification SQL and commands that must be applied to your system to apply the upgrade.	
`examgrt.sql`	Generated script that is executed after generating grants for new database objects.	
`listab1` listing	Spooled output from the modification process.	Yes
`mhuginx.sql`	Sizing definition for a huge index.	
`mhugtab.sql`	Sizing definition for a huge table.	
`mlrginx.sql`	Sizing definition for a large index.	
`mlrgtab.sql`	Sizing definition for a large table.	
`mmedinx.sql`	Sizing definition for a medium index.	
`mmedtab.sql`	Sizing definition for a medium table.	

msmlinx.sql	Sizing definition for a small index.	
msmltab.sql	Sizing definition for a small table.	
nomod.sql	Script that is executed if the applymod variable is set to nomod.	
bwrbg***VRRFF***.sql	Generated grant script which gives BANINST1 full privileges to all objects owned by other baseline Banner product owners.	
bwrbl***VRRFF***.lst	Spooled output from BANINST1 grant script (bwrbg***VRRFF***.sql).	
bwrfg***VRRFF***.sql	Generated foreign grant script which gives the owner of the product being upgraded access to new tables and views owned by other products.	
bwrfl***VRRFF*** listing	Spooled output from the foreign grant script (bwrfg***VRRFF***.sql).	
bwrlisall listing	Spool file built during the extract table allocation process.	
bwrog***VRRFF***.sql	Generated script containing all grants issued for tables to be dropped and recreated. This script is started later to reapply all the grants so that none are lost.	
bwrol***VRRFF*** listing	Spooled output from the reapplication of the saved grants for tables script (bwrog***VRRFF***.sql).	
bwrovg***VRRFF***.sql	Generated script containing all grants issued for views to be dropped and recreated. The grants are then reissued from the BANINST1 account.	
bwrovl***VRRFF*** listing	Spooled output from the reapplication of the saved grants for views script (bwrovg***VRRFF***.sql).	
bwryl***VRRFF***a listing	Spooled output from the first pass at creating public synonyms (bwrym***VRRFF***a.sql).	
bwryl***VRRFF***b listing	Spooled output from the second pass at creating public synonyms (bwrym***VRRFF***b.sql).	
bwrym***VRRFF***a.sql	Generated script which will create public synonyms for any object BANINST1 has select access to, but for which no public synonym exists. This is necessary since views, database procedures, etc., do not prefix database objects with the owner.	
bwrym***VRRFF***b.sql	Generated script which will create public synonyms for any object BANINST1 has select access to, but for which no public synonym exists. This second script is needed to create synonyms for new views.	

CAUTION: **If you have made database changes at your site, this script may abort when it attempts to drop a database object that is not there or create a new database object that already exists.**

Make sure ALL prerequisites specified in the Overview and Installation Requirements sections have been met before proceeding.

Anytime `gostage` fails, you should review the files in the `splpref` directory in order of date/time created. Typically, the most recent file will contain the error.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @gostage Enter
```

If this step fails review the `listab1` listing file and refer to restart code B, otherwise, continue to part B.

Review: `listab1` listing

NOTE:	**The following error can be ignored as the public synonym to be dropped may not exist in the database.** ***ORA-01432: public synonym to be dropped does not exist***

Part B

In this part you will run the `gurutlrp.sql` utility script to compile database objects that are in an invalid state. The `gurutlrp.sql` script runs ORACLE's utlrp utility script (as SYS) and then displays a list of the remaining invalid database objects. This script is run to shorten the time required to perform subsequent steps of this upgrade in which the rdbms would otherwise have to recompile invalid database objects as they are referenced. All errors should be investigated before continuing to the next step.

To compile objects which are currently in an invalid state perform the following.

```
sqlplus /nolog @gurutlrp Enter
```

Review: `gurutlrp` listing

All errors should be resolved before continuing to the next step. You may need to repeat this process several times until all dependencies are validated.

NOTE:	**The following Oracle error message may appear in the gurutlrp listing file. This is a known Oracle bug associated with Oracle's utlrp.sql process and a patch is available (Oracle patch number - 7707103). Applying this patch will resolve this issue. However, the process will complete the validation process and you may continue with the upgrade.** **DECLARE** ***** **ERROR at line 1:** **ORA-00904: "FALSE": invalid identifier** **ORA-06512: at line 13**

Step 6 Migrate from stage to permanent directories

Before executing any of the migration scripts make sure you are signed on to an operating system account that has write permission into the target Banner directories.

The migration scripts provided for the UNIX and MICROSOFT WINDOWS platforms expect your directory structure to match the one created by the Banner install process. You will have to modify the scripts if you chose a different directory structure. Migration scripts for other platforms are not provided due to their highly customized structures but you may use the `BWRMIGR.TXT` file as a starting point for writing your own migration script.

Part A In this part you will migrate the staged files to your permanent directories.

The file `BWRMIGR.TXT` lists all files that need to be deleted from your permanent directories, and all files which should be copied from the staging directory to your permanent directories. The destination is indicated in UNIX format , and *will be different* on other platforms.

UNIX

The file `bwrmigr.shl` will do the appropriate removes, copies, and links. Review for correct directory path names and make sure that the environment variable `$BANNER_HOME` is set to the appropriate directory before executing.

NOTE: The bwrmigr.shl file defines a local variable, LN, at the top of the file which determines the type of links which should be used in the migration. This change enables clients who wish to use symbolic links, for example, to set LN='ln -s' instead of the default value of 'ln' so that the command ${LN} file $BANNER_HOME/links is translated to ln -s file $BANNER_HOME/links. Similarly, clients who wish to force the removal of any existing targets before linking files can set LN='ln -f'.

Note that even if your directory structure matches the baseline perfectly, some of the link commands will fail (that is, where the link currently exists). Other link errors may indicate that you had two copies of an object when the migration script was executed. This condition must be corrected. The duplication is probably between links and the product subdirectory.

You may wish to run the migration shell in background so that you may review any errors when it is complete. To submit into background and produce an error log, do the following:

1. If your operating system prompt is a percent sign, you are a cshell user. Enter the Bourne shell by typing:

   ```
   sh Enter
   ```

2. Position to the staging directory for this product.

3. Run the migration script by typing:

   ```
   sh bwrmigr.shl >bwrmigr.log 2>&1 & Enter
   ```

4. If you were a cshell user and want to return to that mode, press CTRL-D *or* type:

   `exit` Enter

Review: `bwrmigr.log`

MICROSOFT WINDOWS

The file `bwrmigr.pl` will do the appropriate deletes and copies. Before running the migration script you must check the BANENV environment variable. This value may be determined by executing the SET command from the DOS prompt.

If BANENV has a value of REG, the value used for BANNER_HOME will be taken from the registry entry:

HKEY_LOCAL_MACHINE\SOFTWARE\BANNER\BANNER_HOME

If BANENV has a value of ENV, the value for BANNER_HOME will be taken from the environment variable BANNER_HOME.

Review the script for correct directory path names.

To run the migration script and produce an error log for the migration, do the following:

1. Position to the staging directory for this product.
2. Run the migration script by typing:

   `perl bwrmigr.pl >bwrmigr.log 2>&1` Enter

Review: `bwrmigr.log`

Step 7 Compile C programs

This step does not apply to this upgrade.

Step 8 Apply required data changes

This step does not apply to this upgrade.

Step 9 Update referential integrity constraints

This step does not apply to this upgrade.

Step 10 Restart the gostage process

This step will complete the installation process. For information on this process, refer to Step 5.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @gostage Enter
```

Review: `listab1` listing

Step 11 Verify the state of the upgraded environment

Part A In this part you will run the `gurutlrp.sql` utility script to compile database objects which are in an invalid state. The `gurutlrp.sql` script runs ORACLE's utlrp utility script (as SYS) and then displays a list of the remaining invalid database objects. Any time a database object is modified, other objects that have interaction with the changed object are marked as "INVALID" by the rdbms. All errors should be investigated before continuing.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @gurutlrp Enter
```

Review: `gurutlrp` listing

All errors should be resolved before continuing to the next step. You may need to repeat this process several times until all dependencies are validated.

NOTE: The following Oracle error message may appear in the gurutlrp listing file. This is a known Oracle bug associated with Oracle's utlrp.sql process and a patch is available (Oracle patch number - 7707103). Applying this patch will resolve this issue. However, the process will complete the validation process and you may continue with the upgrade.

```
DECLARE
*
ERROR at line 1:
ORA-00904: "FALSE": invalid identifier
ORA-06512: at line 13
```

Part B In this part you will run the `bwrrudone.sql` utility script to verify that all of the loaded modifications for this release have been applied. `gostage` did not execute any of the rows that are displayed by this script.

Invoke SQL*Plus and run the procedure:

```
sqlplus upgrade_owner/password Enter
start bwrrudone Enter
```

Review: `bwrrudone` listing

Part C In this part you will run the `bwrudv82500.sql` utility script to insert the release version into the Version History Table.

Invoke SQL*Plus and run the procedure:

```
sqlplus bwrmgr/password Enter
start bwrudv82500 Enter
```

Review: `bwrudv82500` listing

Part D In this part you will run the `grestrigs.sql` which restores BANSECR security audit settings back to pre-upgrade status which were altered by the `bwrruready` script run at the beginning of this upgrade.

WARNING: If you are running upgrades in parallel, do NOT run this part until you have finished all of your upgrades. The reason is that the actual pre-upgrade Banner Security Audit trigger status is saved in the upgrade where Step 4, Part A was applied first. You will have to position yourself in the stage directory for the product upgrade that was applied first and then execute this Part to restore the audit triggers to their pre-upgrade status. Not following this procedure could have adverse effects on restoring the actual pre-upgrade audit trigger status.

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @grestrigs Enter
```

Review: `grestrig` listing

Part E In this part you will run the `bwrresroled.sql` to restore the original roles for those accounts modified by the `bwrruready` script run at the beginning of this upgrade

> **WARNING: If you are running upgrades in parallel, do NOT run this part until you have finished all of your upgrades. The reason is that several accounts are used by all upgrades. If they do not have the DBA role as a default role, this script will reset their privileges so DBA is not included. This could have adverse effects on the other upgrades.**

Invoke SQL*Plus and run the procedure:

```
sqlplus /nolog @bwrresroled
```
Enter

Review: `bwrresrole` listing

This Banner Financial Aid Self-Service 8.25 upgrade is now complete.

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