3.0 Appendix B – Project Aspire Enhancement Functional Design

ADML ID	**1733**
ADML Description	**Treasury Shadow Entries**
ADML Tech#	**1733**

3.1 Background

3.1.1 Functional Requirement

Certain accounting entries occurring within Agency business units represent accounting *events* for the Treasury, leading to a need for the Treasury BU to record a corresponding accounting entry in its books. For example, an Agency entry affecting the 'Verified Cash' GL account will generally require the Treasury BU to record a corresponding entry in the 'Cash due to State Funds' account. These event triggered entries are referred to as *Treasury Shadow Entries*. The Aspire requirement is that the creation of these entries be automated, i.e. that they be system generated rather than user entered.

The scope of this requirement is systemwide. That is, it applies to all Agency accounting entries, regardless of origin or type. For example, GL journals created via the Journal Import, Spreadsheet Upload, Journal Copy or Journal Generation processes should all be capable of triggering the creation of Treasury Shadow Entries.

Although systemwide in scope, the requirements and rules governing the creation of the Treasury Shadow Entries vary according to the source of the trigger entries. For example, transactions in a certain GL account might need to trigger a Treasury Shadow Entry when those transactions occur in the Accounts Payable module but not when they occur in Accounts Receivable. Occasionally, the eligibility of agency transactions as triggers for Treasury Shadow Entries even varies *within* a subsystem. For example, it's possible that AP *voucher* transactions in a certain GL account should trigger Treasury Shadow Entries while AP *payment* transactions in the same account should not.

3.1.2 Delivered Functionality

The delivered functionality that comes closest to meeting this need is known as 'Entry Event'. However, Entry Event has several shortcomings relative to our requirements:

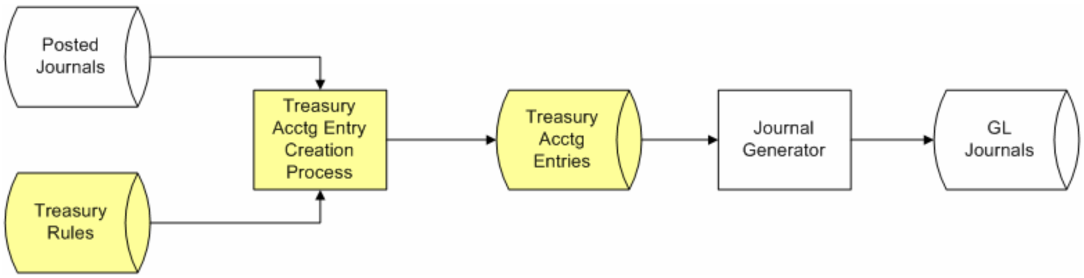
- Requires the entry of an Entry Event Code on a transaction, thereby relying on a user to remember to use the correct code.
- Cannot cross BUs, i.e. the trigger entry and the Entry Event entry must be in the same Business Unit.
- Impossible to implement conditional logic/rules.

3.1.3 Gap Description

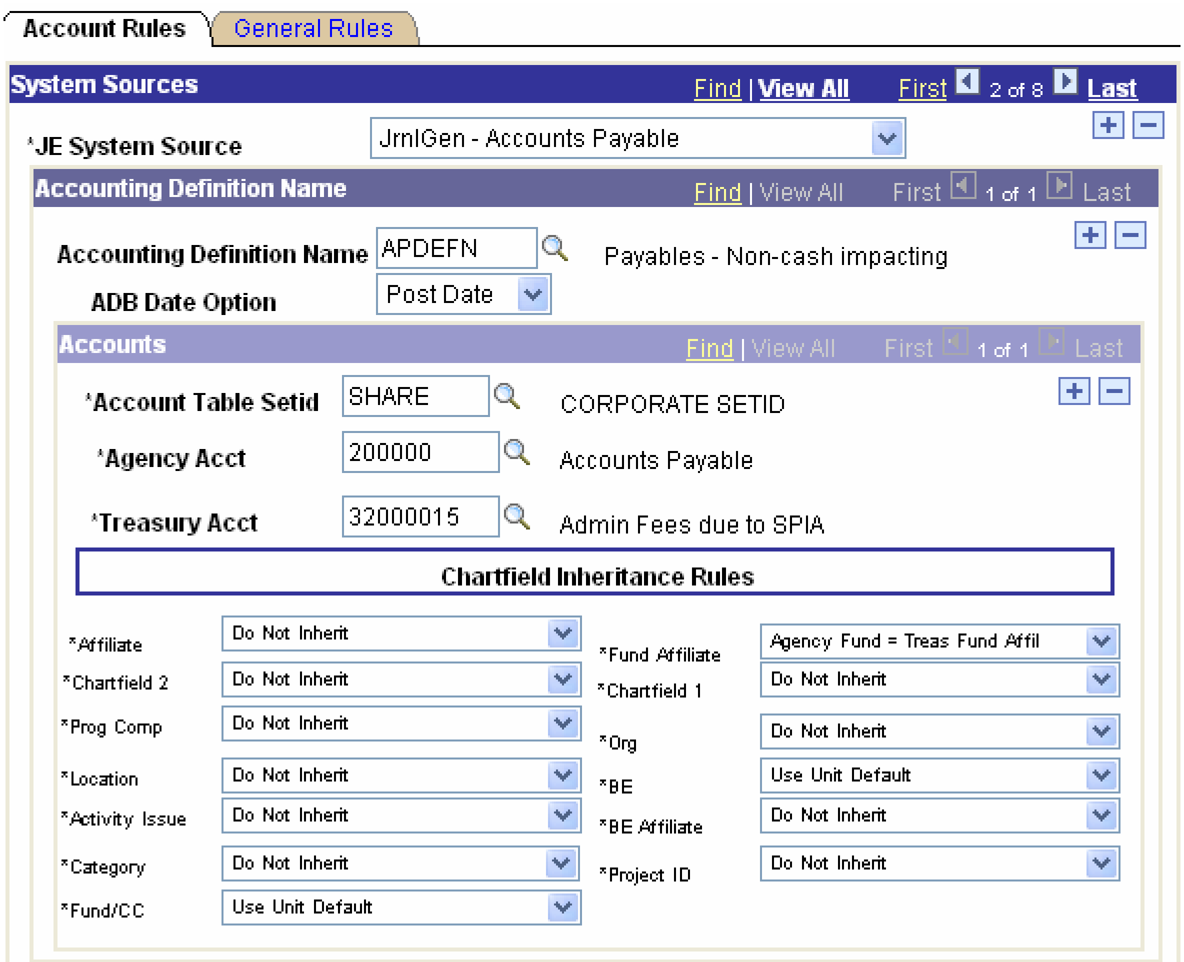
The lack of delivered functionality that can be leveraged to meet these requirements means that the entire requirement is, in fact, a gap**.**

3.2 Description of New Functionality

Overview: A new process is needed for the creation of Treasury Shadow Entries. This process will be based on a set of user-configurable rules which control (1) the identification of eligible agency transactions, and (2) the ChartField values and ADB Date to be populated on the Treasury Shadow Entries. When run, this process will identify agency BU transactions that (1) are , on the basis of their accounts, 'triggers' for the creation of Treasury Shadow Entries, and (2) have not been processed previously. Using those eligible transactions, the process will then create new accounting entries for the Treasury Business Unit in accordance with the Treasury Shadow Entry Rules. These new accounting entries will be created in an accounting entry table from which they will be transformed into GL journals via the Journal Generation process. An illustration of this process is shown below (objects in yellow are created for this enhancement):



Configurable Rules: To avoid hard-coding ChartField values and related logic in the Treasury Shadow Entry process, it will be designed in such a way that its behavior is based on rules configured by Treasury staff. To maintain those rules, two new pages are needed. The first will be used to maintain the Account ChartField values used by the process when (1) identifying eligible agency transactions, and (2) creating the Treasury Shadow Entries. This page will also contain the ChartField inheritance rules used by the process when creating the Treasury Shadow Entries (see page illustration below):



<u>System Source and Accounting Definition – </u>As described earlier in the requirements section, the rules for the creation of Treasury Shadow Entries can vary according to the origin of an agency accounting entry. The two GL journal data elements most indicative of a journal's origin are *System Source* and *Accounting Entry Definition Name*. Therefore, to provide maximum flexibility, Treasury Shadow Entry Rules will be defined for every applicable combination of these two data elements.

ADB Date Option – The Treasury Business Unit utilizes an Average Daily Balance (ADB) ledger for investment and cash tracking purposes. Therefore, it is important that all Treasury journals affecting any of the accounts recorded in Treasury's ADB ledger be posted with correct ADB Dates. Various ADB Date strategies are needed, based on the type of agency journal that has triggered the creation of a Treasury Shadow Entry. To support that need, the following ADB Date options will be provided:

- **Journal Date** – the Journal Date from the agency journal will be used as the ADB Date on the Treasury Shadow Entry.
- **ADB Date – the ADB Date from the agency journal will be used as the ADB Date on the Treasury Shadow Entry.**
- **Creation Date – the date on which the Treasury Shadow Entry is created will be used as the ADB Date.**
- **Post Date – the date on which the agency's journal was posted will be used as the ADB Date on the Treasury Shadow Entry.**

Special handling will be needed for the calculation of the ADB Date field in the case of Treasury Shadow Entries arising from unposted agency transactions. In that case, the ADB Date field should be populated with the same ADB Date that was used on the Treasury Shadow Entry arising from the *original* agency transaction. For example:

Jrnl Type	BU	Jrnl ID	Jrnl Date	Posting Date	ADB Date
Regular	43000	XYZ0001	15-Mar-05	18-Mar-05	n/a
Regular	TREAS	TLS1020	18-Mar-05	18-Mar-05	18-Mar-05
Unpost	43000	XYZ0001	15-Mar-05	30-Mar-05	n/a
Regular	TREAS	TLS1234	30-Mar-05	30-Mar-05	18-Mar-05

Agency Account – Specifies the GL account in which all posted activity is eligible for Treasury Shadow Entry creation.

Treasury Account – Specifies the GL account that will be used on the Treasury Shadow Entry for entries resulting from activity in the Agency Account. This value will also be used to populate the *Alternate Account* ChartField.

Account Table SetID – The SetID specified in this field controls the list of accounts that are available in the 'Agency Account' field.

ChartField Inheritance Rules – These settings determine how all ChartFields other than Account and Alternate Account are populated on the Treasury Shadow Entries. For all listed ChartFields other than those with 'Affiliate' in their names, the allowable values and their associated behaviors are:

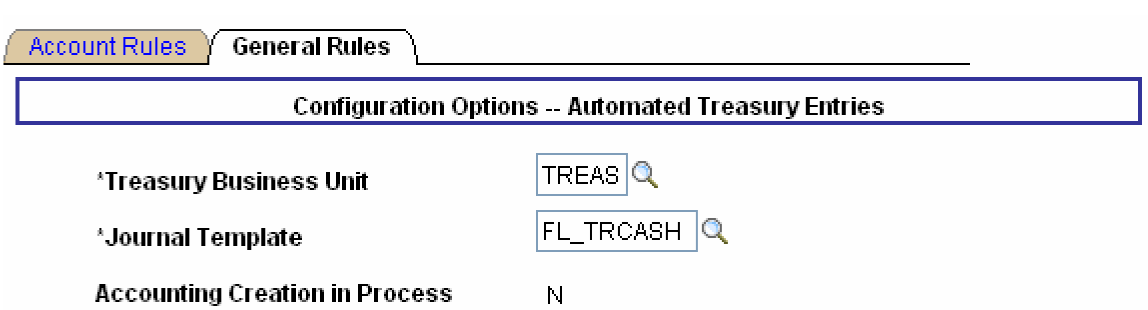
- **Do Not Inherit – No value is placed in ChartFields having this option.**
- **Use Transactional Value – Indicates that the value in this ChartField on the agency's journal should also be used on the Treasury Shadow Entry. For example, if this option were used for the Category ChartField, then the Category value used on the agency's accounting entry would also be used in the Category ChartField on the resulting Treasury Shadow Entry.**

Use Unit Default – ChartFields having this option will be populated with the Treasury Business Unit's default value for that ChartField (as defined on the GL Business Unit configuration pages).

For all listed ChartFields that have 'Affiliate' in their names, the allowable values and their associated behaviors are:

- **Do Not Inherit – No value is placed in ChartFields having this option.**
- **Use Agency Value – Indicates that the value in the associated ChartField on the agency's journal should be used on the Treasury Shadow Entry. For example, if this option were used for the Fund Affiliate ChartField, then the Fund value used on the agency's accounting entry would be used to populate the Fund Affiliate ChartField on the resulting Treasury Shadow Entry.**

The second rules configuration page contains settings that have overall applicability to the Treasury Shadow Entry process:



Treasury Business Unit – To avoid hardcoding the Business Unit code for Treasury within the Treasury Shadow Entry process, we store it here.

<u>Default Journal Template</u> – As described earlier, the Treasury Shadow Entries rely on the Journal Generation process to become GL journals. This option specifies the default Journal Generator Template name that will be recorded on the Treasury Shadow Entries. In addition to the Default Journal Template, it should also be possible to associate a Journal Generator Template name with any or all of the System Source values for which rules have been defined. When specified, these System Source specific Journal Generator Templates are used instead of the Default Journal Template on accounting entries arising from the specified System Source(s).

<u>Accounting Entry Creation Process</u>: The process to create the Treasury Shadow Entries is straightforward in concept. The process should perform the following steps, in sequence:

1) **Identify eligible agency transactions –** Eligible transactions are posted to GL journal lines (a) for which there is a matching rule in the Treasury Shadow Entry Rules table, and (b) that have not been processed previously by the Treasury Shadow Entry process.

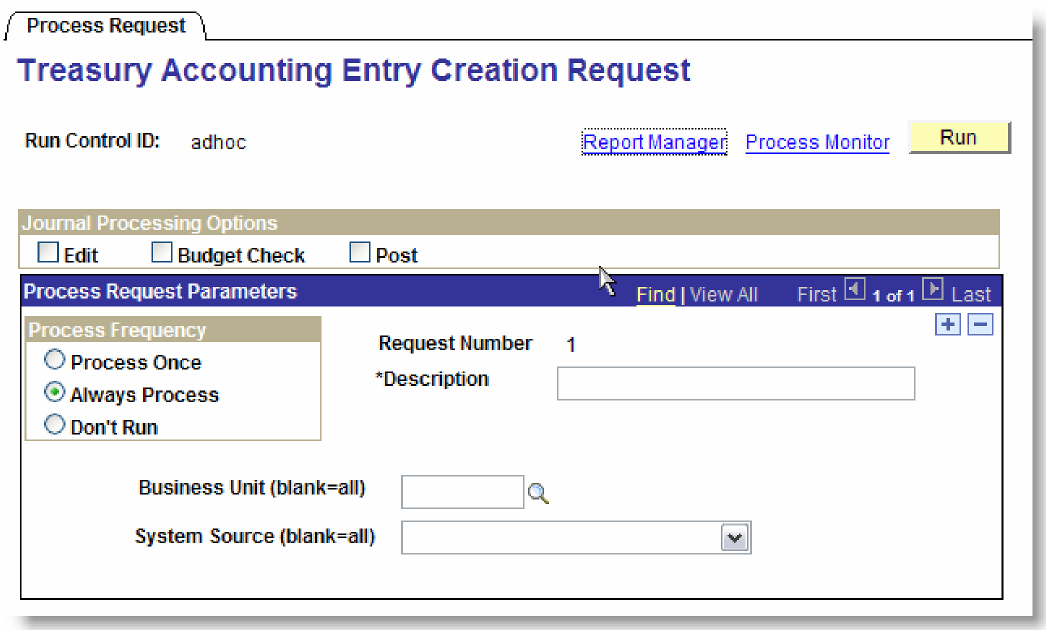
2) **Create Treasury Shadow Entries –** Using the information in the matching Treasury Shadow Entry Rule, create one Treasury accounting entry in the Treasury Shadow Entry table for each eligible agency transaction. The sign of the monetary amounts on these entries should be the opposite of the sign used on the agency transaction. For example, a credit on a qualifying agency transaction should result in a debit Treasury Shadow Entry. This reflects the reality that agency assets are Treasury liabilities and vice versa. Note that there is exceptional processing required when populating the ADB Date field on Treasury Shadow Entries arising from unposted agency journals as described earlier.

3) **Mark processed transactions –** for each journal identified in step 1, update a flag on the Journal Header indicating that the journal has been processed (to avoid subsequent reprocessing).

3.3 Navigation path

<u>Run Control:</u>

To launch the Treasury Shadow Entry process a new run control table and page will be needed. To make the processing as seamless as possible, the run control page will launch a job consisting of the Treasury Shadow Entry process followed by the Journal Generation process. To facilitate the launching of both processes simultaneously, the run control will need to contain options relevant to each of those processes. An illustration of that page is shown below, followed by an explanation of some of the fields:



Business Unit – Allows a user to specify one, multiple or all agency Business Units whose transactions should be processed. Leaving a blank value in this field indicates the desire to process all BUs. Multiple BUs can be processed by inserting multiple rows in the Run Control scroll.

System Source – Allows the specification of one, multiple or all System Sources for which processing should occur. As with the Business Unit field, a blank value in System Source indicates a desire to process all System Sources. The specified System Source value is 'GTS'.

Journal Edit – A checkbox field indicating if the Journal Generation process should trigger the Journal Edit process upon completion.

Budget Check – A checkbox field indicating if the Journal Generation process should trigger the Budget Check process upon completion.

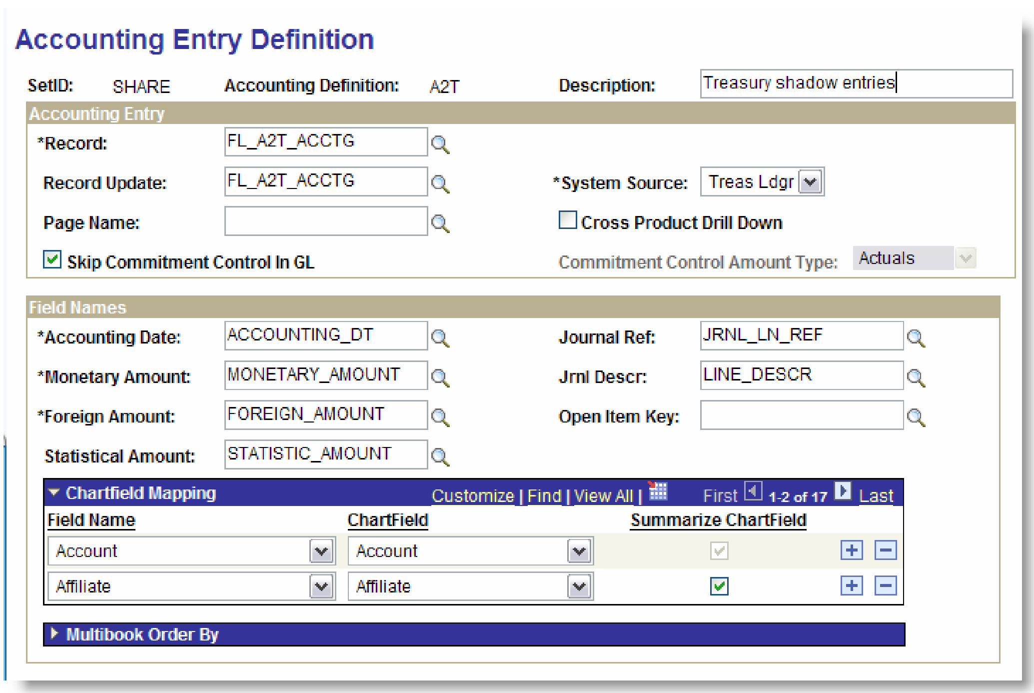
Post – A checkbox field indicating if the Journal Generation process should trigger the Journal Post process upon completion.

3.4 Set Up/Control Data

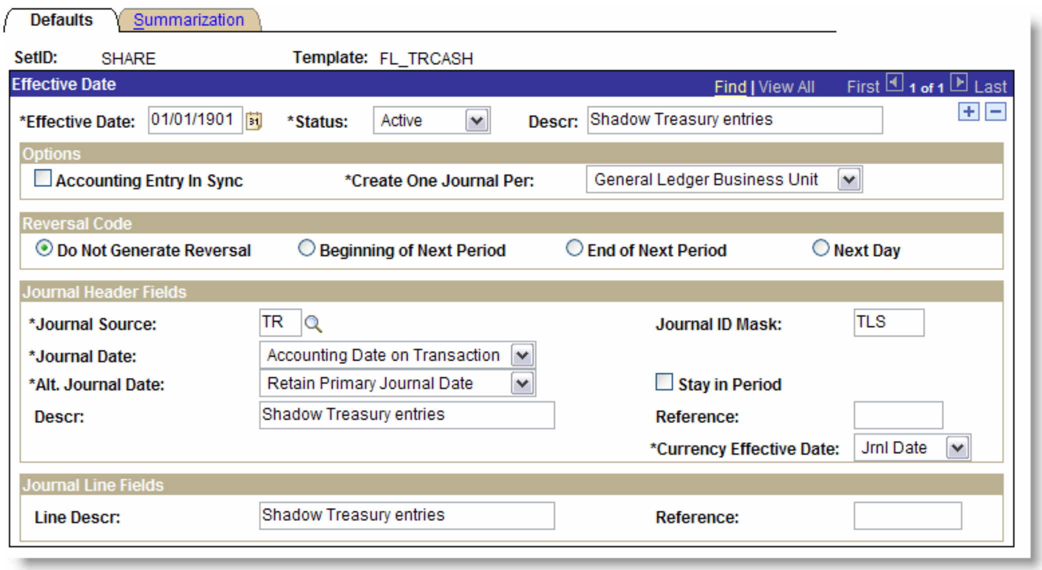
In addition to the new Treasury Shadow Entry Rules table and page described herein, additional configuration will need to be performed to support the journal generation of the Treasury Shadow Entries.

Accounting Entry Definition:

A new Accounting Entry Definition based on the Treasury Shadow Entries table will be needed. A new System Source specific to the Treasury Shadow Entry process should be used on this Accounting Entry Definition:



Journal Generator Template:


Defaults | Summarization

SetID: SHARE Template: FL_TRCASH

Effective Date — Find | View All — First 1 of 1 Last

*Effective Date: 01/01/1901 *Status: Active Descr: Shadow Treasury entries

Options

Accounting Entry In Sync *Create One Journal Per: General Ledger Business Unit

Reversal Code

Do Not Generate Reversal — Beginning of Next Period — End of Next Period — Next Day

Journal Header Fields

*Journal Source: TR Journal ID Mask: TLS

*Journal Date: Accounting Date on Transaction

*Alt. Journal Date: Retain Primary Journal Date Stay in Period

Descr: Shadow Treasury entries Reference:

*Currency Effective Date: Jrnl Date

Journal Line Fields

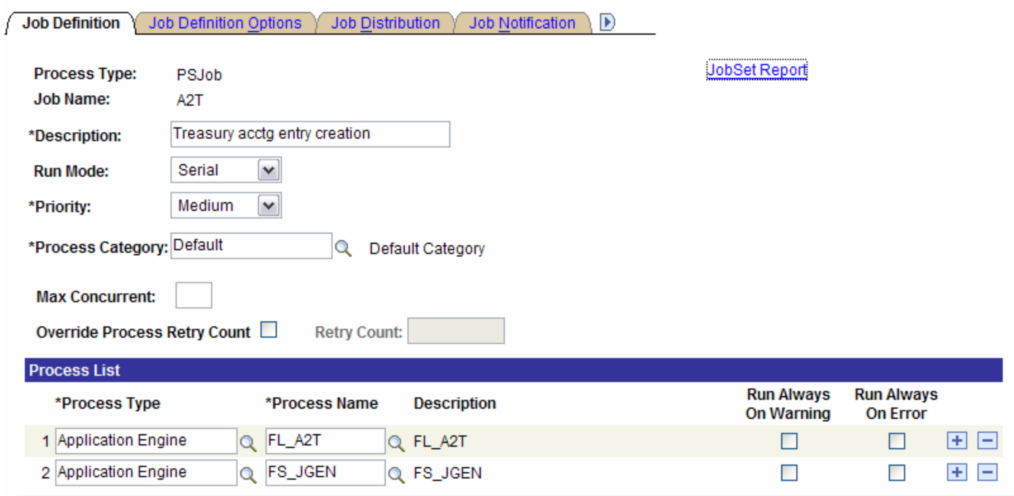
Line Descr: Shadow Treasury entries Reference:

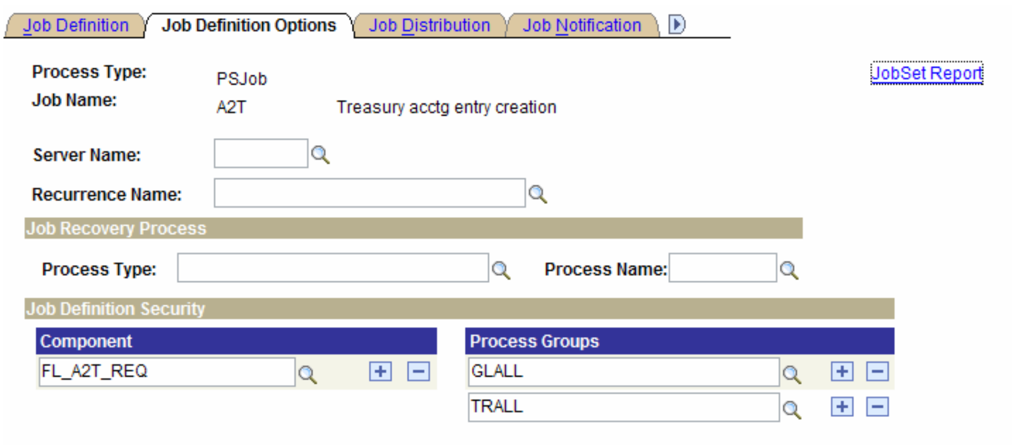
Process Definitions:

A new Process Definition will be needed for the Treasury Shadow Entry process. This process should not be linked with any components. It should only be executable from the Run Control component as part of the Treasury Shadow Entry Job (which includes the Journal Generation process).

Job Definition:

To enable sequential processing of the Treasury Shadow Entry process followed by the Journal Generation process, a new job definition will be needed. This job should be the only process associated with the Treasury Shadow Entry Run Control Page.





3.5 Application Changes (e.g., Pages, Components, Menus, Records, App Engines, SQRs, etc.)

Records:

Record	Action	Changes
Treasury Shadow Rules – Detailed	New	
Treasury Shadow Rules – General	New	
Treasury Shadow Entry Process Run Control	New	
Treasury Shadow Entries	New	

Pages:

Page	Action	Changes
Treasury Shadow Rules – Detailed	New	
Treasury Shadow Rules – General	New	
Treasury Shadow Entry Process Run Control	New	

3.6 Unit Test Considerations

Areas to be tested should include the following:

1) No creation of duplicate Treasury Shadow Entries for the same agency transaction.

2) No creation of Treasury Shadow Entries prior to the posting of an eligible agency transaction.

3) Creation of Treasury Shadow Entries when eligible agency transactions are unposted.

4) Creation of Treasury Shadow Entries from the posting of copied agency journals containing eligible transactions.

5) Proper operation of each ChartField Inheritance option (of particular interest are the Affiliate fields).

3.7 Miscellaneous

N/A

3.8 Assumptions

N/A