

SECURITY, TIPS & TRICKS FOR ORACLE KEY FLEXFIELDS



Common Key Flexfields

Assets

Asset Key Flexfield

Asset Category

Location

General Ledger

Accounting

Receivables

Sales Tax Location

Territory

Service

Service Item

Human Resources

Grade • Job • Position

Inventory

Account Alias

Item Catalogs

Item Categories

System Items

Payroll

Cost Allocation

People Group

MSS White Paper by Melanie Cameron

Key Flexfields are widely used in Oracle applications. In general, they house the codes used by organizations to identify such things as part numbers and General Ledger accounts. A list of the most commonly used key Flexfields can be found at left.

Setting up these segments can improve the usability of Oracle, decrease the work load of the users, and increase data accuracy. This paper will provide an overview of the options available and recommended best practices.

When first setting up a Key Flexfield, there are some features that will greatly affect the usability and required maintenance.

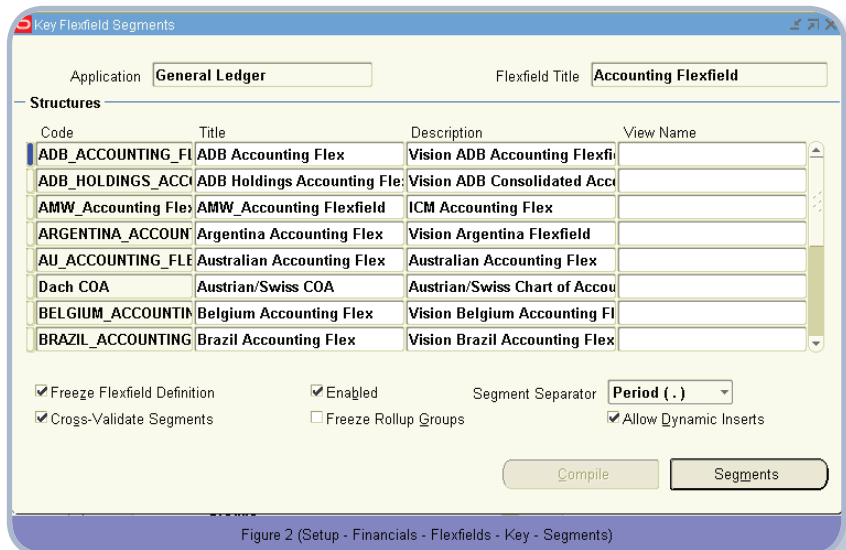


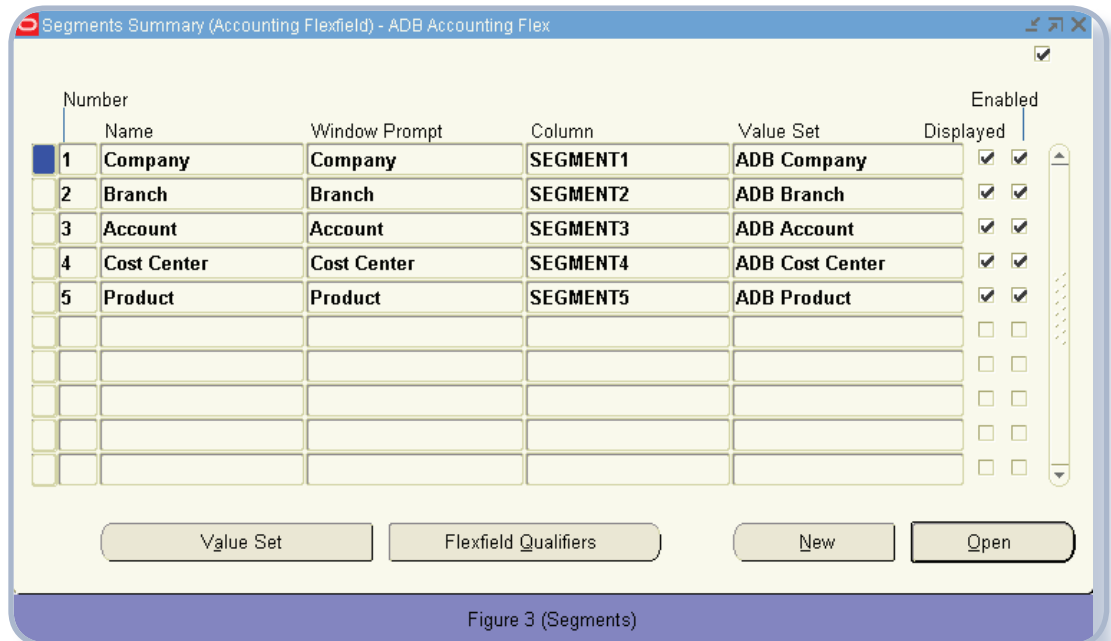
Figure 2 (Setup - Financials - Flexfields - Key - Segments)

For example, the Segment Separator can increase or decrease data entry time. For the Accounting Key Flexfield, a period is common because it is faster during data entry. Other options include Dash and Pipe. A custom Separator can also be set up.

Allowing Dynamic Insertion will reduce the need to create combinations manually. It is recommended for Fixed Assets and required for Project Costing and Billing. When using Dynamic Insertion, it is recommended that the Cross Validation Segments be turned on and set up as well, which will be addressed later in this paper. Freezing rollup groups will prevent them from being modified. Lastly the Flexfield must be frozen and enabled in order for it to be used.

Tip: When performing maintenance on a Key Flexfield, you must first unfreeze it. This can have some negative consequences if done when transactions are being processed in the system, so be aware of any transactions that may be occurring and wait till after business hours if needed to perform your maintenance.

Once the Structure is set up, the Segments and their Flexfield Qualifiers can be defined.



Remember to set up all the Required Segments. For example, for Accounting Flexfields, you must set up a Segment for Company, Cost Center and Account. All others are optional.

Tip: Ensure that you think about future growth when setting up Key Flexfields. You can add segments to your Accounting Flexfield with the help of a talented (and probably expensive programmer) but they will not be supported by Oracle. Adding a segment called FUTURE when you set up the Flexfield is a much safer way to go if the requirements are known up front. You can default it to zero, change the name, and add numbers once the use is required.

If adding a segment does become a requirement, you have two options. The first is Oracle's solution, which is to set up a new Book and Operating unit and move everything over. The other option is to add it via code. Both have pros and cons and should be carefully considered.

The **NUMBER** you assign a Segment is the order in which it will appear on the user screen. This is important because if a company decides it wants to see the Cost Center before the Account, the change can be done simply by changing the Number on this screen.

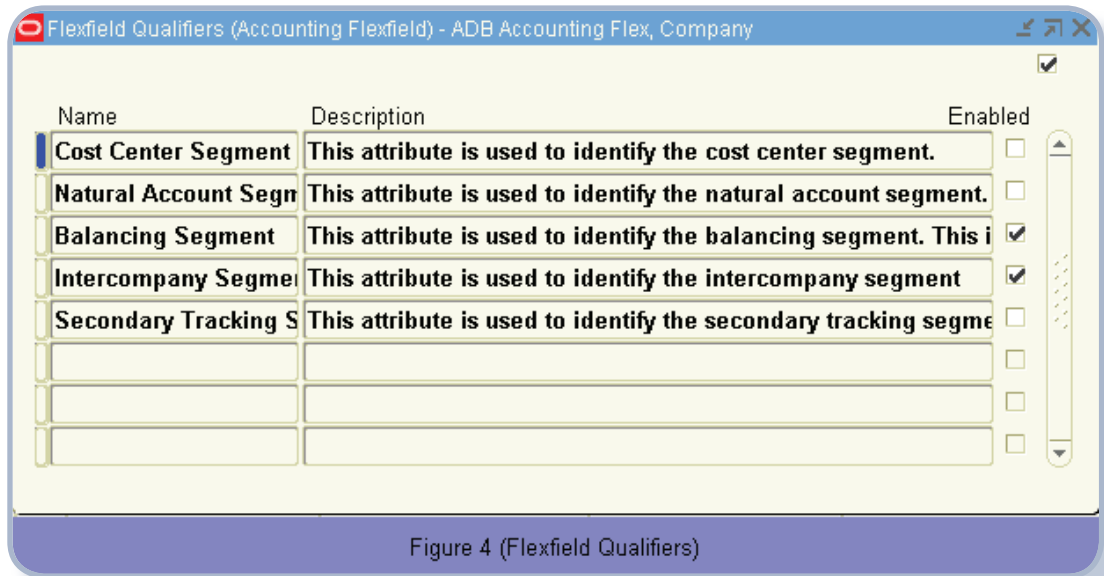
It is not necessary to change the column **SEGMENT** number as well. But be aware—this can invalidate any Cross Validation Rules you have set up. In addition Account Alias for this Flexfield will need to be re-examined after the change. Do this in a test instance first to see what the impact it may have on your environment.

The **NAME** is the name of the Key Flexfield segment and the **WINDOW PROMPT** is the prompt that appears to the users. To eliminate confusion, I give them the same name so technical and function users all refer to the same name.

The **VALUE SET** is used to validate the data entered in the Key Flexfields. For Descriptive Flexfields, the Value Sets can be left null and the data free formed in, but there should be a Value Set assigned to all Key Flexfields for data validation.

All Key Flexfields need to be **DISPLAYED** and **ENABLED**, even if they are set up for future use. Future use Segments can have the Segments default in as preset values.

Once the Segments are set up, the Flexfield Qualifiers should be set up if they are applicable.



In the General Ledger, the Flexfield Qualifiers are used for specific segments as follows.

Cost Center Qualifier:

- Required in all Charts of Accounts.
- Used in Assets, AP, AR, Order Management, and GL for Cost Center analysis.
- Used for revaluations by Cost Center.

Natural Account Segment Qualifier:

- Required in all Charts of Accounts.
- Identifies a Segment as an asset, liability, owners equity, income, or expense.
- Determines if an account rolls into retained earnings at the fiscal year end.
- Used as part of XBRL Taxonomy standards for integration with other systems and reporting.

Tip: Accounts that are classified wrong can not be corrected by just changing the Natural Account Flexfield qualifier. See Metalink Note 1050920.6 for detailed instructions on how to correct accounts that have been set up wrong.

Balancing Segment Qualifier:

- Required in all Charts of Accounts.
- All debits and credits within and Balancing Segments must be equal (either with an offsetting entry or with automatic intercompany offsets).
- Security can be added to Balancing Segments to prevent unauthorized access to specific Balancing Segments.

Intercompany Segment Qualifier:

- Available only in Oracle 11i. This was not back-ported to Oracle 11.0 or Oracle 10.7.
- Used to balance intercompany journals.
- Works with Global Intercompany System (GIS).
- Eliminates the need for Natural Accounts for intercompany balancing and reduces balancing time.

Secondary Tracking Segment:

- Optionally used for revaluations, translations, and year end entries by tracking unrealized gains and losses, cumulative translation adjustments, and retained earnings.
- Aids in detailed analysis of currencies with Step Down allocations.

To set up the *SEGMENT OPTIONS*, click the open button on the Segment you want to set up.

Figure 5 (Open)

The first region of the screen will all default from the previous page with the exception of *DESCRIPTION* which can be added here. Description does not display anywhere and is for informational purposes only. Again, all Key Flexfields need to be *ENABLED* and *DISPLAYED*. Indexing will improve reporting speed and is recommended for Key Flexfields.

The *VALIDATION* region will default from the previous page and should be reviewed and modified as needed. This is where you can set up *DEFAULT TYPES* and *DEFAULT VALUES* for your Flexfields. Default Types are listed below.

- *SEGMENT* will copy the value in another Segment of the same Flexfield. Enter the Segment number as the Default Value.
- *CONSTANT* will enter the actual value of the segment in the Default Value field.
- *FIELD* defaults the value to another field on the same form. The format is “:block.field.”
- *PROFILE* defaults to the value of a Profile Option. Enter the profile short name in the Default Value.
- *SQL STATEMENT* defaults the value to the result of a SQL statement. Enter the SQL in the Default Value to ensure that your SQL will return one row and one value every time.

The *VALUE SET* and Description will default in. If they are incorrect and need modification, or you need to set up a new one, click on the Value Set tab.

Figure 6 (Value Sets)

Oracle comes with a large number of *VALUE SETS*. You can also set up custom ones.

Tip: When setting up custom Value Sets for your company, consider adding a unique identifier (such as a three letter abbreviation for your company) to the beginning each name to segregate them from seeded Value Sets. A detailed description will help future users understand what that Value Set was designed to do without having to look at the details.

There are three options for **List Type**:

- *LIST OF VALUES* requires that the value be set up before it can be used. Users can select it from a list or type in the first few characters. Only the Short Name will appear.
- *LONG LIST OF VALUES* works just as the List of Values except the Short Name and the Description will appear.
- *POPLIST* works like the List of Values but is limited to 10 characters per value.

The **Security Type** also has three options:

- *NO SECURITY*, in which there is no security on the Value Set.
- *HIERARCHICAL SECURITY*, which is based on the Parent Value Set.
- *NON-HIERARCHICAL SECURITY*, which is based on the rules assigned to the Child Values.

FORMAT VALIDATION SETUPS

This section will determine what data format will be accepted in this Value Set. The format type options are Char, Date, DateTime, Number, Standard Date, Standard DateTime and Time. Right Justify and Zero Fill options are only available with Number. The *MAXIMUM SIZE* determines the maximum size of the data that can be entered. Data that is smaller will be accepted. You can also assign minimum and maximum values for the Value Set.

Validation Types determine how and if the value is validated. The options are below.

- *DEPENDENT* restricts options based on other Segment Values (Departments A, B and C are the only valid options for Company 1).
- *INDEPENDENT* validates based on values set up within the Value Set.
- *NONE* uses no validation.
- *PAIR* is used when running concurrent processes where Segments within Segments are used. An example would be ITEM, where the Item Value Set is two Segments but displays to the user as one Segment with the Separator.
- *SPECIAL* works same as Pair.
- *TABLE* works similar to Independent but validates off a table using a *SELECT* statement instead of a Value Set.
- *TRANSLATABLE INDEPENDENT* works just like Independent but uses a translated value instead of an entered value.
- *TRANSLATED DEPENDENT* works just like Dependent but uses a translated value instead of an entered value.

Once you have your Value Setup set up or modified, you can resume setting up your Validation Region of the Segments (refer back to Figure 5).

The *DEFAULT TYPE* and *DEFAULT VALUE* are used together to assign a default *SEGMENT VALUE* as described above. These can be used either for Future Use segments or for Segments that are frequently the same in order to decrease data entry time. Use care when defaulting value. If a user does not have to enter a value, they will often overlook it—leaving room for errors.

TIP: All segments will default to being required—and this is correct for Key Flexfields. If you are working with a Descriptive Flexfield, you may want to uncheck this field.

If you plan to set up Security Rules for this Segment, you must check “Security Enabled.” Check “Range” if you want to find a form with a Range that has built in intelligence. For example, you can configure the Range to know that the High Account must be greater than the Low Account. To do so, click Range and set the Low Account as “Low” and the High Account as “High.”

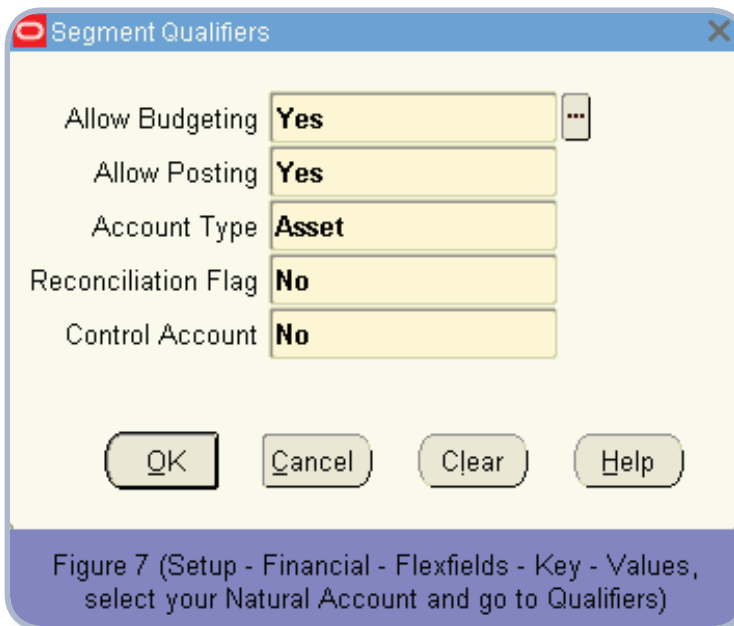
Size determines how data will appear and makes the Flexfield more user-friendly. The Display Size must be at least as large as the Value Set maximum value. The Description Size is sometimes set too small and can cut off Descriptions so keep this in mind when you set them up.

The Concatenated Descriptions is now the Concatenated Flexfields that appear on some reports and all the forms. For example, if your account number has three Segments, the concatenation of the descriptions controls it.

Prompts are what the users see in a window or when engaging a List of Values. Again, I like to keep them the same whenever possible to eliminate confusion.

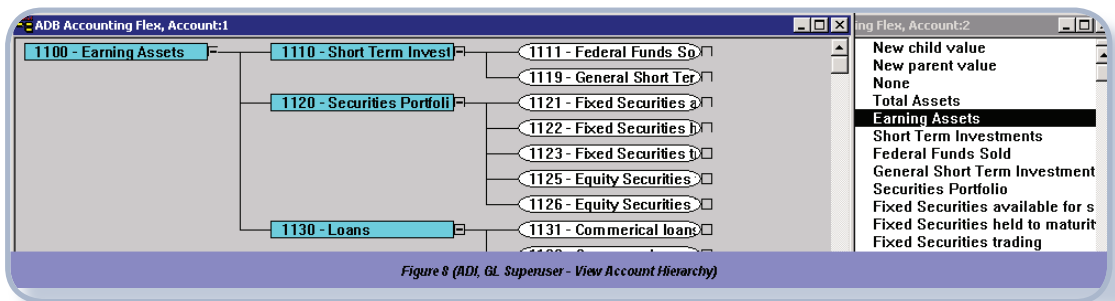
BEST PRACTICES FOR KEY FLEXFIELD COMBINATIONS

1. Use Begin and End Dates to track when the Flexfields were in use. In some versions of Oracle, disabled Segments and combinations used in setup forms just disappear and cause errors. They still exist in the database, so beware when troubleshooting this problem!
2. Use Begin and End Dates to prepare for a change ahead of time. Dates can be set in the future so you can work on maintenance during slow periods instead of during month-end, when changes usually need to take effect.
3. Use the Qualifiers on the General Ledger Accounts for additional security.



If you do not budget or post to this account, then tag it as such to prevent posting errors during budgeting and journal entries. If it is not a reconciled account in Europe, or a control account for your Global Accounting Engine, it should be tagged as “No.”

PARENT-CHILD RELATIONSHIPS—NOT USING ADI? YOU SHOULD BE!



ADI (Application Desktop Integrator) provides a GUI interface to easily see Parent-Child relationships. It is under “View Account Hierarchy” and you must have access to set up Account Flexfields in the GL in order to see this in ADI. You can add or remove Parents and Children from the hierarchy as well as add and maintain accounts and their attributes here.

ACCOUNT ALIAS is a short name for a Key Flexfield combination. It can either be a full combination or a partial combination where the user has to fill in the rest of the Segments.

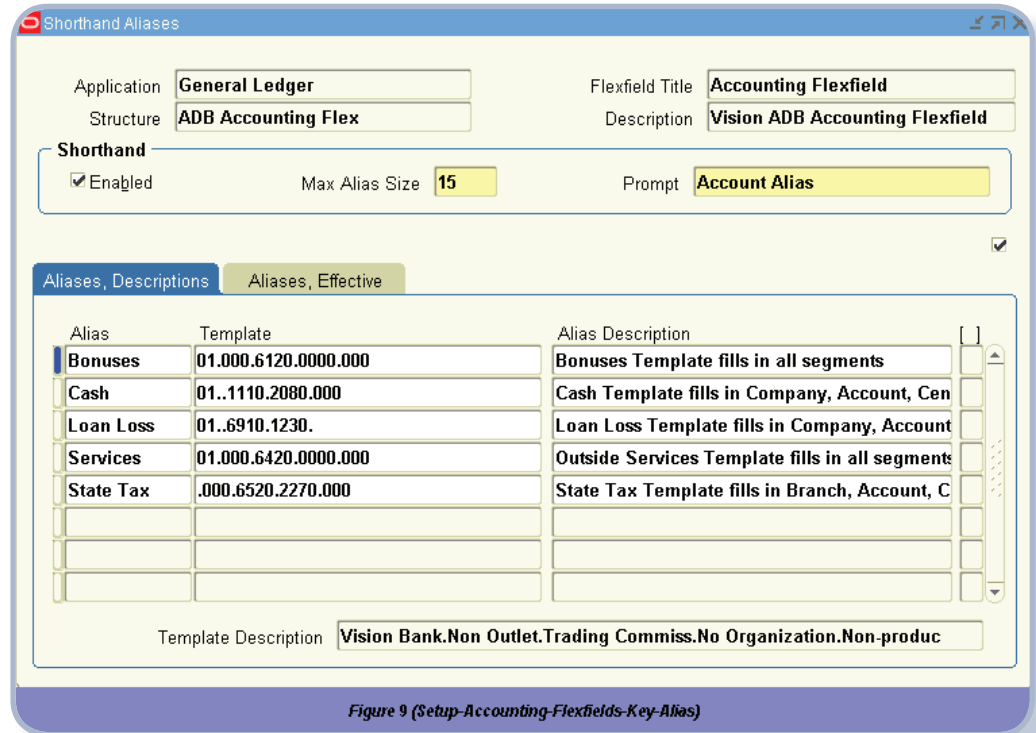


Figure 9 (Setup-Accounting-Flexfields-Key-Alias)

For large Flexfields, an Account Alias can reduce data entry and learning curves for non-Accounting personnel. Remember that an Alias is NOT available in the i-modules, like iProcurement and iExpenses, but is available in ADI (Application Desktop Integrator).

CROSS VALIDATION RULES (CVR) are important to have set up if you have Dynamic Insertion turned on. While every Oracle user has the ability to set up account combinations, it is better to tell the system what is valid rather than expect users to remember that information. This can prevent posting errors to the General Ledger and reclasses at month end, reducing the close cycle and reconciliation time.

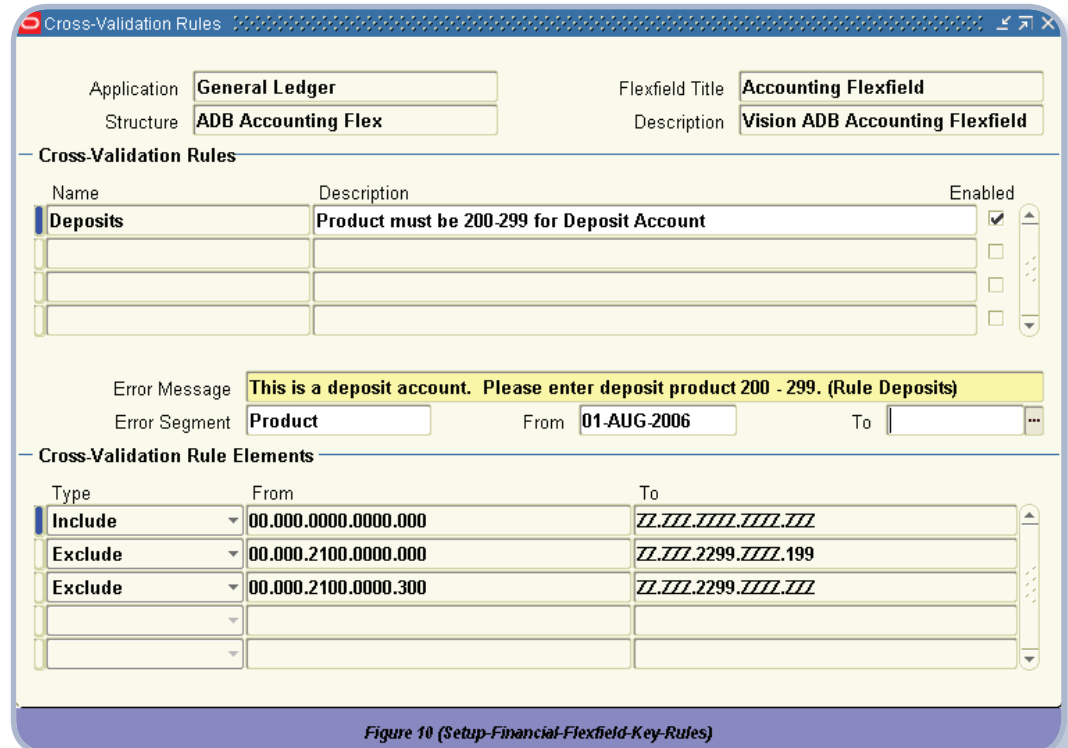


Figure 10 (Setup-Financial-Flexfield-Key-Rules)

Here are a few simple rules to easily maintain and trouble shoot Cross Validation Rules.

1. KISS (Keep it Simple Silly). Write more simple rules rather than fewer complex ones. They are easier to troubleshoot.
2. Under the NAME, assign a number to the rule. Use this number in the Error message. When a user calls up about a CVR violation, have them provide the number so you can easily identify it.
3. Make the Error Messages simple and self-explanatory. The better written they are, the less calls you will get on valid violations.
4. Make sure your Descriptions are actually descriptive. Three years from now, nobody will remember why this rule was written.
5. The Error Segment will highlight which Wegment is wrong for the users.
6. Use the From Date and To Date as opposed to the Enabled Flag.
7. Always include ALL valid combinations. This prevents problems. Then exclude the invalid combinations, using Ranges where you can.
8. Test your rule. Can you enter the combination you are trying to prevent? Will it allow a combination you want to allow?
9. Every time you do maintenance on CVR's, run the Cross Validation Rule Violation report to see if any existing combinations violate any rules. Run it first in view mode, then once you validate it, you can re-run it and disable all the violating accounts. This report is traditionally found in System Administrator responsibility.

SECURITY RULES can add a layer of security above the responsibilities, as well as prevent additional posting errors to the General Ledger. Commonly, it is used to either prevent users from reviewing financial information for a division or department the do not work for or to prevent a responsibility, such as Purchasing or iProcurement, from posting to an account such as "Asset-Computer Equipment" as opposed to the "Asset Clearing" account.

The screenshot shows the 'Define Security Rules' window with the following details:

- Options:** Value Set (unselected), Key Flexfield (selected), Descriptive Flexfield (unselected), Concurrent Program (unselected).
- Title:** Accounting Flexfield
- Structure:** Corporate Accounting
- Independent Segment:** Account
- Independent Value:** (empty)
- Dependent Segment:** (empty)
- Value Description:** (empty)

Security Rules Table:

Name	Description	Message
A1	Restrict Depreciation	Please select accounts 1500 - 1599 for Fixed Assets

Security Rule Elements Table:

Type	From	To
Include	0000	ZZZZ
Exclude	1600	1999

Assign button is located at the bottom right.

Figure 11(Setup-Financial-Flexfields-Key-Security-Define)

Security Rules can be set up for a Key or Descriptive Flexfield, Value Set, or Concurrent Program. Navigate to Setup → Financial → Flexfield → Key → Security → Define. Then Query the Key Flexfield you want to add security to.

Assign the rule a Name, Description, and Message. The Message will appear in the core applications when someone tries to access the account, but in Web applications, such as iProcurement, the segments excluded with the security rule no longer appear as an option. Again, you will need to include all values in the Segment, then exclude the Ranges you do not want this rule to have access to. If the rule is complex, write multiple simple rules as opposed to multiple exclusions to keep the troubleshooting simple.

Save your record and click "Assign."

Figure 12 (Assign)

This is where you assign the rule to a given responsibility. You must know what application a responsibility is set up under, which can be determined under the System Administrator Responsibilities. Sign into this responsibility and test your rule to ensure you are restricting access to the accounts you want to limit and still have access to the accounts you should.

Security Rules, when added and maintained properly, make month end close faster by reducing posting errors to the General Ledger and can aid in SOX audits for sensitive accounts.

All the features covered in this paper will make your General Ledger more accurate at month end and your system more user-friendly and maintainable. It takes some thought to set up and maintain but the rewards of accurate financial statements are worth it!

ABOUT THE AUTHOR

Melanie Cameron is a Funco Techno consultant for MSS Technologies, specializing in Oracle Financials related to SOX, Process Improvements, Upgrades, Implementations, and Workflow. Based in Phoenix, Melanie serves on the Board of Directors of the AzOAug and can be found at most Oracle events in the Valley of the Sun. She can be reached at (602) 387-2123 or mcameron@msstech.com.

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