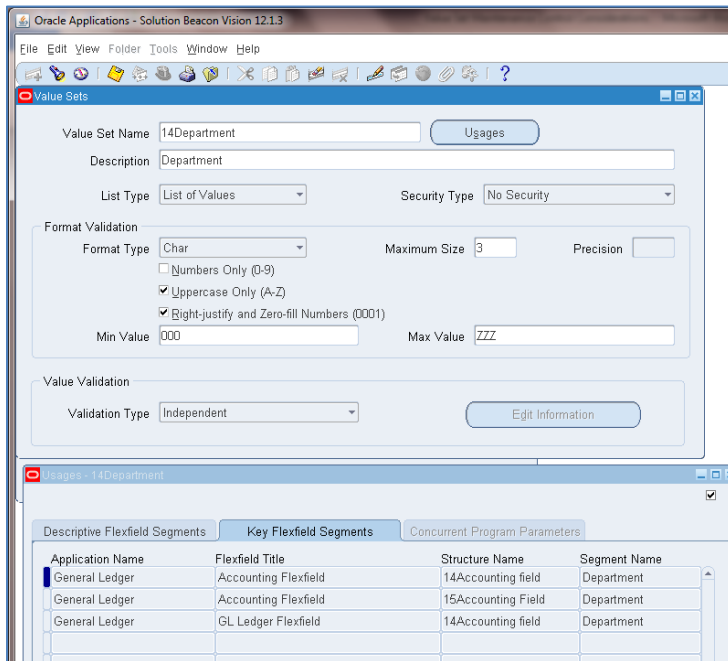


Value Set Values Maintenance Control Considerations

Background:

Value sets are used throughout Oracle in the definition of Key Flexfields and Descriptive Flexfields to provide a list of values for data entry. Value sets are a shared configuration and can be used in multiple descriptive and key flexfields. For example, a key flexfield related to Asset Location (Fixed Assets) and the Chart of Accounts (Accounting Key Flexfield) could both use a department value set. For the Chart of Accounts, the department value set would denote which department is charged for departmental expenses. For the Asset Location flexfield, the use of the department value set could denote which department ‘owns’ the asset. With that as background, let’s look at the risks related to the maintenance of the value set values.

Here is an example of a value set:



The screenshot shows the Oracle Applications interface for maintaining value sets. The main form is titled 'Value Sets' and contains the following fields and options:

- Value Set Name:** 14Department
- Description:** Department
- List Type:** List of Values
- Security Type:** No Security
- Format Validation:**
 - Format Type:** Char
 - Numbers Only (0-9)
 - Uppercase Only (A-Z)
 - Right-justify and Zero-fill Numbers (0001)
 - Maximum Size:** 3
 - Precision:** (empty)
 - Min Value:** 000
 - Max Value:** ZZZ
- Value Validation:**
 - Validation Type:** Independent

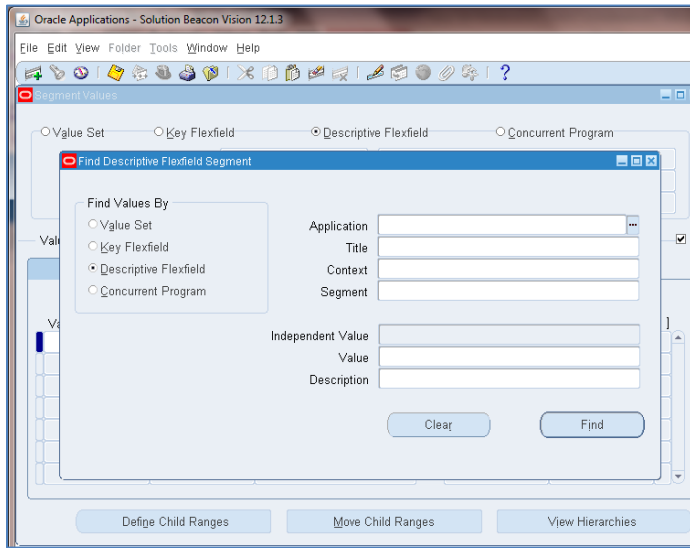
Below the form is a table titled 'Value Sets - 14Department' showing the segments where this value set is used:

Application Name	Flexfield Title	Structure Name	Segment Name
General Ledger	Accounting Flexfield	14Accounting field	Department
General Ledger	Accounting Flexfield	15Accounting Field	Department
General Ledger	GL Ledger Flexfield	14Accounting field	Department

As you can see from this example, the value set “14Department” is shared by three different Key Flexfields. This same value set could be used in different Key Flexfields or by any Descriptive Flexfield.

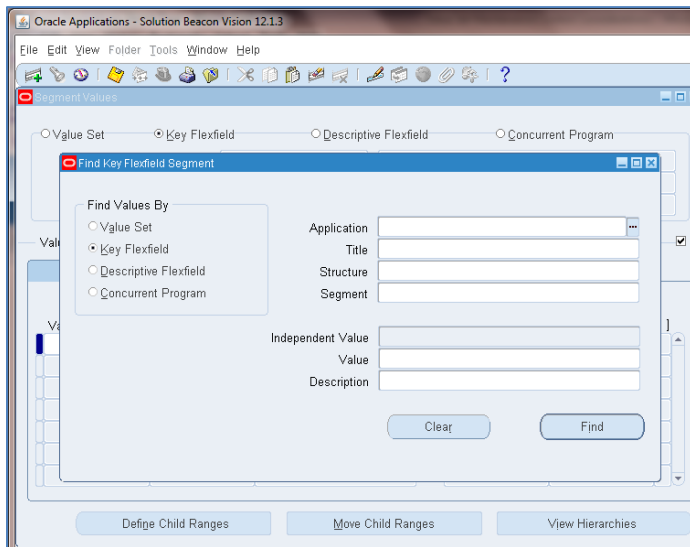
The ability to maintain Value Set Values are embedded throughout the application in various submenus related to Flexfields. Below is a screen shot of the Flexfields submenu. As you can see, there are three different forms referring to “Values”. Here are the three forms (actually is the same underlying form with three different functions – see Appendix A) through which values relates to the value set (aka Value Set Values) can be maintained:

Descriptive Value Set Values:



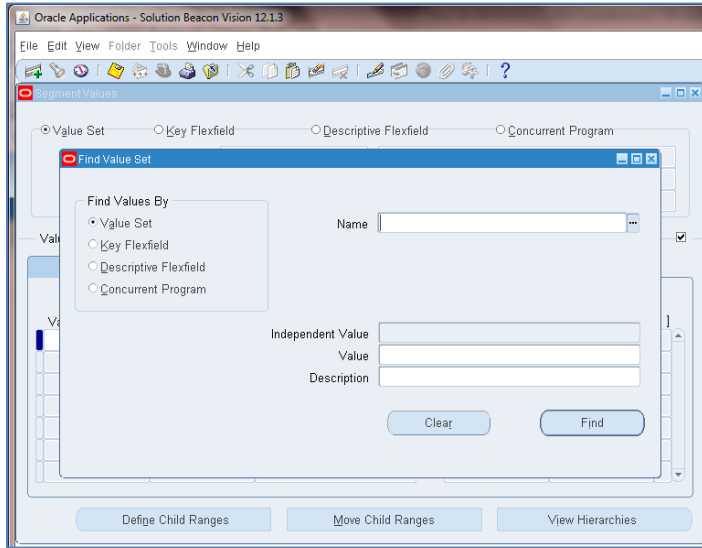
The screenshot shows the Oracle Applications interface for 'Segment Values'. The 'Find Descriptive Flexfield Segment' dialog box is open, with the 'Descriptive Flexfield' radio button selected. The 'Find Values By' section has 'Descriptive Flexfield' selected. The search criteria fields are: Application (dropdown), Title, Context, Segment, Independent Value, Value, and Description. There are 'Clear' and 'Find' buttons at the bottom of the dialog. Below the dialog, there are buttons for 'Define Child Ranges', 'Move Child Ranges', and 'View Hierarchies'.

Key Flexfield Value Set Values:

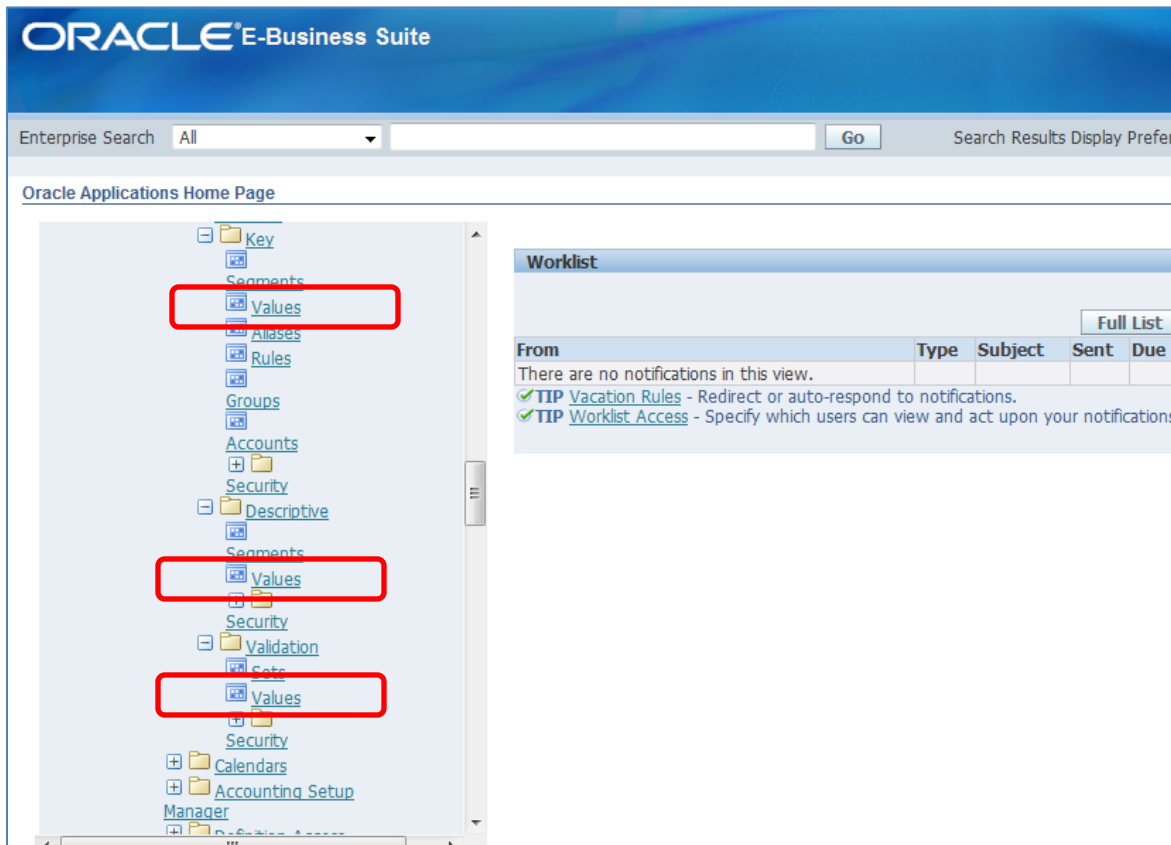


The screenshot shows the Oracle Applications interface for 'Segment Values'. The 'Find Key Flexfield Segment' dialog box is open, with the 'Key Flexfield' radio button selected. The 'Find Values By' section has 'Key Flexfield' selected. The search criteria fields are: Application (dropdown), Title, Structure, Segment, Independent Value, Value, and Description. There are 'Clear' and 'Find' buttons at the bottom of the dialog. Below the dialog, there are buttons for 'Define Child Ranges', 'Move Child Ranges', and 'View Hierarchies'.

Value Set Values:



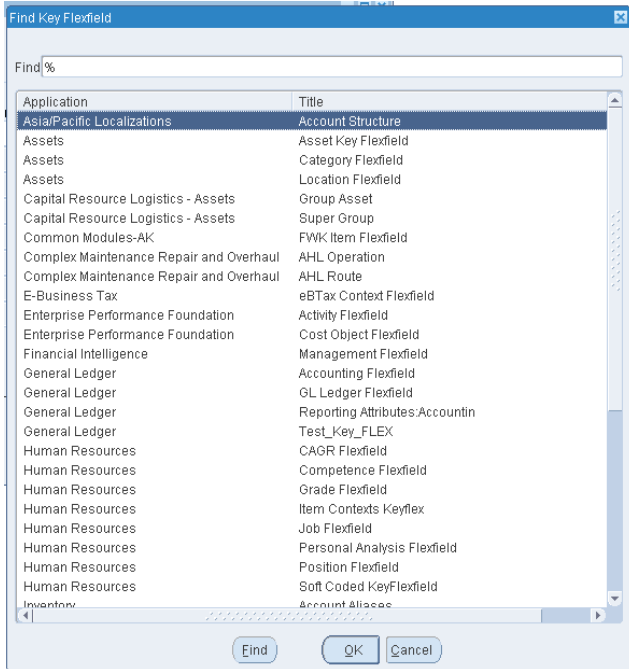
Here is an example of the Flexfield menu in which all three are contained:



Key Flexfields and Descriptive Flexfields are used throughout the application and by various departments.

Here is a screen shot that identifies some of the Key Flexfields that are used throughout the application:

Examples of Key Flexfields



Application	Title
Asia/Pacific Localizations	Account Structure
Assets	Asset Key Flexfield
Assets	Category Flexfield
Assets	Location Flexfield
Capital Resource Logistics - Assets	Group Asset
Capital Resource Logistics - Assets	Super Group
Common Modules-AK	FWK Item Flexfield
Complex Maintenance Repair and Overhaul	AHL Operation
Complex Maintenance Repair and Overhaul	AHL Route
E-Business Tax	eBTax Context Flexfield
Enterprise Performance Foundation	Activity Flexfield
Enterprise Performance Foundation	Cost Object Flexfield
Financial Intelligence	Management Flexfield
General Ledger	Accounting Flexfield
General Ledger	GL Ledger Flexfield
General Ledger	Reporting Attributes:Accountin
General Ledger	Test_Key_FLEX
Human Resources	CAGR Flexfield
Human Resources	Competence Flexfield
Human Resources	Grade Flexfield
Human Resources	Item Contexts Keyflex
Human Resources	Job Flexfield
Human Resources	Personal Analysis Flexfield
Human Resources	Position Flexfield
Human Resources	Soft Coded KeyFlexfield
Inventory	Account Alias

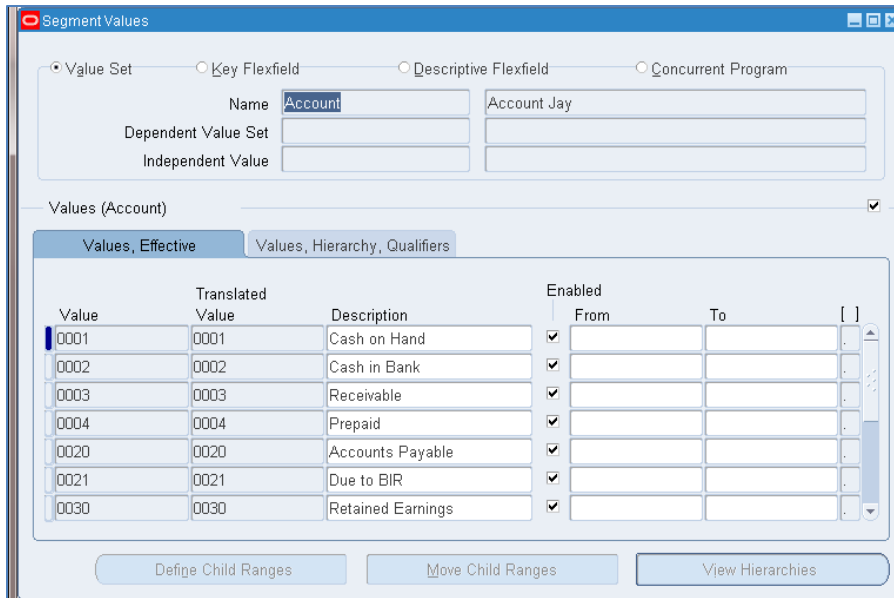
You can see that key flexfields are used in a variety of applications.

Risks Related to Value Set Values

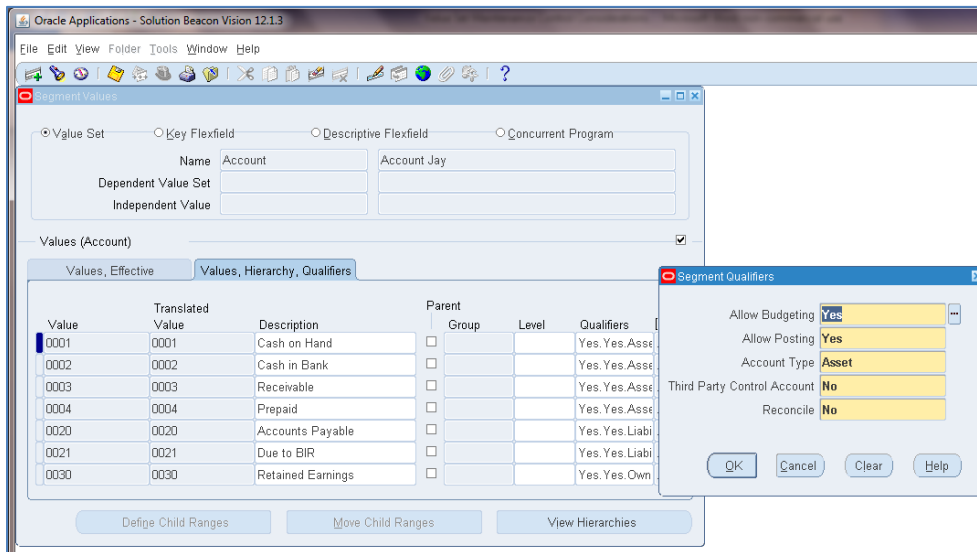
Value Sets and the Values related to the value sets are a shared form that needs to be maintained to support varying functionality throughout the application. Often, one or more of the forms that can maintain these values (Value Set Values, Descriptive Flexfield Values, and Key Flexfield Values) are given to a variety of employees including both end users and IT personnel. There are a couple of notable risks:

- Since value sets are shared by various key and descriptive flexfields, those that maintain the values may not be aware of the risks or make changes to the values without considering the impact of all the key and/or descriptive flexfields which will be impacted
- Excessive access to these forms for employee(s) who are not authorized to make changes
- Changes are made by a user to value set values for value sets that they are not authorized to maintain (for example, an accounting or HR employee adding a value to the value set pertaining to the chart of accounts (accounting key flexfield))

With all common setups, management in IT and functional management must discuss the issues and risks related to maintaining the data. However, the values maintained within these three forms have a particularly high risk. Here is an example of values related to a value set that is used for the chart of accounts:



And a second screen shot with the Qualifiers window popped up:



Since this is a shared configuration, any changes to values related to key or descriptive flexfields have some level of risk. However, changes made to value related to the chart of accounts (accounting key flexfield) generally are deemed as high risk. Some organizations that are subject to US Sarbanes-Oxley requirements have the maintenance of such values as a key control. While I don't generally recommend that as a key control (entity level controls related to the financial close generally provide good mitigating controls for the risks), some organizations have defined the control as 'key' which is indicative of the level of risk by some organizations related to this maintenance.

When educated as to the level of risk most Accounting executives would rather not allow personnel outside the accounting department to be able to maintain the value associated with the chart of

accounts. Unfortunately, Oracle does not provide an easy way (even in R12) to segregate the value sets to be maintained by different groups. The only method of segregating the maintenance of these values is through the personalization of the form which becomes a somewhat complex personalization (writing code to the custom.pll) because the list of values needs to be conditionally restricted based on the responsibility that is using the form. For example, a user in HR would not be able to maintain those value sets related to the chart of accounts. The development specs needs to identify all value sets that are being used and which responsibility is authorized to maintain the data. Here is an example:

<u>Value Set</u>	<u>Authorized to maintain</u>
ABC_Company	ABC GL IT Support
ABC_Department	ABC GL IT Support
ABC_Account	ABC GL IT Support
ABC_Jobs	ABC HR IT Support
ABC_Asset_Location	ABC FA IT Support

Plan B: Monitoring changes made to certain high-risk value sets

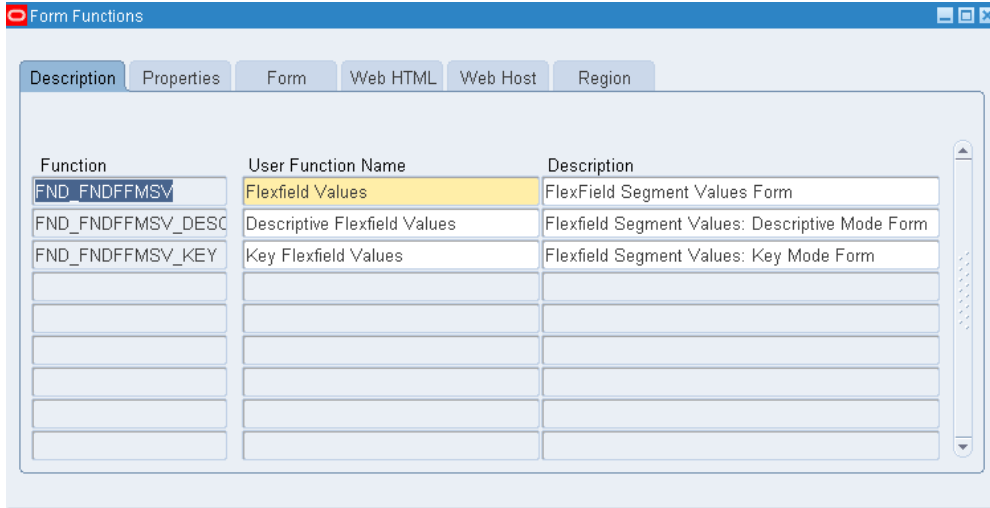
Another option that organizations have chosen is to deploy a trigger- or log-based auditing solution that captures the creation of and changes to the value sets. Then, the system-based audit trail is reviewed by someone in accounting designated to ensure changes to the chart of accounts are properly authorized.

Conclusion:

Maintenance of value set values is a shared configuration. Only users that are authorized to make such changes should be given access to the form(s) that allow the values to be maintained. Risks related to maintenance of values throughout the application need to be discussed by IT and functional management. Common ways to mitigate the risk are to have a detailed audit trail be developed using a trigger or log-based technology or to personalize the form to limit access to various users by conditionally limiting the list of values by responsibility.

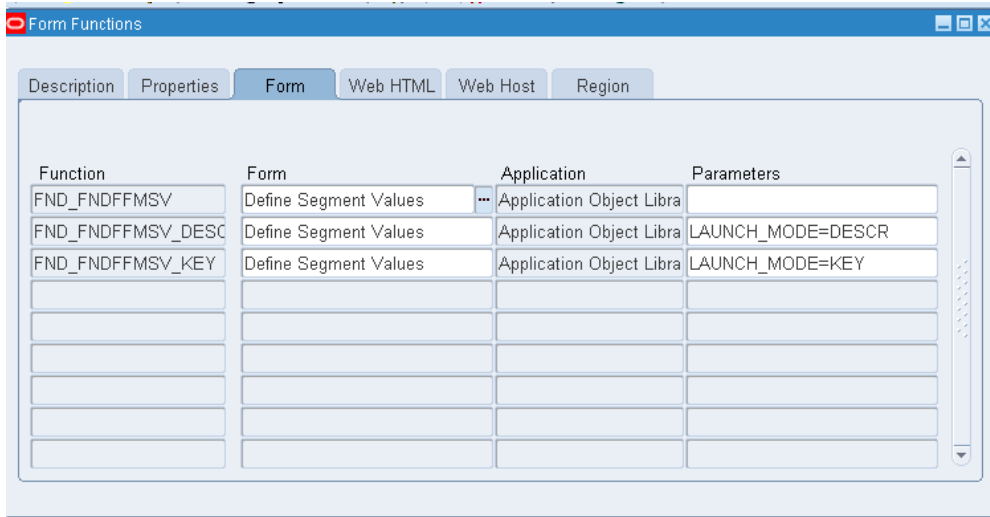
Appendix A – screen shots of functions related to maintenance of value set values

Here is a screen shot of the functions in question:



Function	User Function Name	Description
FND_FNDFFMSV	Flexfield Values	FlexField Segment Values Form
FND_FNDFFMSV_DESC	Descriptive Flexfield Values	Flexfield Segment Values: Descriptive Mode Form
FND_FNDFFMSV_KEY	Key Flexfield Values	Flexfield Segment Values: Key Mode Form

Here is the information on the Form tab:



Function	Form	Application	Parameters
FND_FNDFFMSV	Define Segment Values	Application Object Libra	
FND_FNDFFMSV_DESC	Define Segment Values	Application Object Libra	LAUNCH_MODE=DESCR
FND_FNDFFMSV_KEY	Define Segment Values	Application Object Libra	LAUNCH_MODE=KEY