

# Costing In Oracle HRMS

## CONCEPTS

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# Costing Overview

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## Purpose

This document contains an outline of the hierarchical nature of costings in Release 10. It explains how costings entered into the Cost Allocation Flexfield at various levels in the HRMS system are interpreted and applied by the Costings process. It is meant as a quick guide for Applications' Consultants and Customers.

Refer to Oracle Payroll Manuals for additional detail on the costings set-up.

## Costings

There are various levels at which costs can be accumulated in Oracle Payroll and combinations of costs entered at these levels are processed according to hierarchies, themselves dependent on the types of costings set up.

When Element Link level costings are applied, the following priorities operate according to the Costable Type of those link costings:

```
Costable Type | Priority (dominant -> subordinate)
-----
'Costed'      | Entry -> Assignment -> Organization -> Link -> Payroll
-----
'Fixed Costed' | Entry -> Link -> Payroll (others are ignored)
-----
```

When Element Link level costings are not applied, the following priorities are in effect:

```
| Priority (dominant -> subordinate)
-----
| Entry -> Assignment -> Organization -> Payroll
-----
```

For example, when Entry, Organization, and Payroll costings are set up, the Entry level overrides the Organization level, and the Organization overrides the Payroll level.

The examples below illustrate how costs are distributed according to the Costable Type when Element Link level costings are set up.

## Examples

The Costing structure is set up as follows:

```
-----
LEVEL      -- COST ALLOCATION KEY FLEXFIELD SEGMENTS --
           CC | ACCOUNT | COMPANY | BUSINESS UNIT
-----
Organization 513 | <null> | <null> | <null>
-----
Payroll      <null> | <null> | 31 | <null>
-----
```

Element Link				
EEs Pension				
- Costing	000	2474	<null>	<null>
- Balancing	000	2439	<null>	<null>

---

When the element link Costable Type is set to 'Costed', the following applies:

LEVEL	CC	ACCOUNT	COMPANY	BUSINESS UNIT
Entry	<null>	<null>	<null>	<null>
Assignment	<null>	<null>	<null>	<null>
Organization	513	<null>	<null>	<null>
Link	000*	2474	<null>	<null>
Payroll			31	<null>
	v	v	v	v
	513	2474	31	<null>

\* 000 is overridden by the higher level costing

When the element link Costable Type is set to 'Fixed Costed', the following applies:

LEVEL	CC	ACCOUNT	COMPANY	BUSINESS UNIT
Entry	<null>	<null>	<null>	<null>
Level	000	2474	<null>	<null>
Payroll			31	<null>
	v	v	v	v
	000	2474	31	<null>

## Overview of Payroll Costing process and connected issues.

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### SCOPE & APPLICATION

Intended as a guide to assist HR/Payroll support analysts understand and investigate issues surrounding the payroll Costing process.

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#### 1 SET UP OVERVIEW

##### 1.1 Costing Flexfield

Payroll costing is setup using the Pay Cost Allocation Key Flexfield. Flexfield Segments are defined to allow cost codes to be allocated to set areas within the organization, Example: cost centre\regions\projects\accounts.

The specific setup is determined by the individual accounting\business needs.

Example of Cost Allocation Flexfield:

Segment	Name
1	Region
2	Project
3	Account

## 1.2 Flexfield Qualifiers

Flexfield Qualifiers are used to set at which level the segments can be used within the system. There are five levels at which costing information can be entered :

[Fig 1.]

Cost Level/Qualifier	Application Form
-----	-----
1. Element Entry	Element Entry
2. Assignment	Employee Assignment
3. Organization	Define Organization
4. Element Link	Element Link
5. Payroll	Define Payroll

You can set a cost segment to be at just one or many levels within the system.

Note: If it does not have the flexfield quailifier set, at a specific level then it will not appear on the corosponding form. Qualifiers should be checked if you expect to see a segment at a certain level and it is not available.

## 1.3 Balancing

If using double entry bookkeeping you should also set up balance segments. This allows the opposite result of the costed value to be captured, in a specific code. There is a flexfield qualifier for balancing, which allows the double entry segments of the cost code to be entered via the element link form.

Note: Unlike the cost side, there is no cascading with the balancing Flexfield, the codes entered at the Element Link level cannot be overridden at any other level. This is logged as enhancement request Bug 761982.

Cost Level/Qualifier	Application Form
-----	-----
Balancing	Element Link

## 1.4 Balance Adjustment

It is also possible to cost a balance adjustment, this requires you to enter cost codes on the Adjust balance form. When you have entered the cost codes, you need to set the costed checkbox. This sets the BALANCE\_ADJ\_COST\_FLAG to Y, on the PAY\_ELEMENT\_ENTRIES\_F table and the adjustment is costed. This functionality is delivered with R11, it is available for R10 but requires the latest C code patch (see Version Checking) and also a new version of the adjust balance form delivered by Bug 619650.

## 1.5 Suspense Account

The system allows you to set up a suspense account; this is another set of Flexfield segments defined on the Payroll form. This is used if validation of the costing flexfield fails. If that is the case then the cost amounts will be costed to the suspense account. It is important to be aware of this as, if you are getting values costed to a different code than expected, this could

be the suspense account. If a suspense account is not defined and the cost flexfield fails, then the cost codes will be null.

## 1.6 Costing Hierarchy

The costing process will determine which level to assign the costed values to using the hierarchy rule shown in (Fig 1. above) where 1 is high and 5 is low priority.

If you have the following setup:

Segment	Name	Qualifier
1	Region	Element Entry + Payroll
2	Project	Element Link
3	Account	Element Link + Element Entry

You will then be able to enter values at the following levels:

- At Payroll Form - Region
- At Element Entry Form - Region \ Account
- At Element Link Form - Project \ Account

If you enter a value at all the levels :

- Payroll Level - Region(11111)
- Element Entry Level - Region(66666)\Account(77777)
- Element Link Level - Project(22222)\Account(44444)

The costing will check to validate these combinations against the hierarchy. Region is defined at payroll level, but this would be overridden by the code defined at element entry level. The same is true of Account, it is entered at element link level, but the element entry level would take priority. If a segment is displayed at a level and left Null, then the next level in the hierarchy will be used.

The actual cost combination would be:

Region(66666)\Account(77777)\Project(22222)

## 1.7 Costing Types

The type of costing is also set on the Element Link form and can be Costed, Fixed Costed, Distributed or Not Costed.

### 1.7.1 Costed

This works as defined in the Costing Hierarchy section above, using all five of the available levels.(see fig 1.above) It is important to note that this type allows you to use assignment level costing. This means you can split the run result values over more than one set of cost codes. This is done on the Assignment costing screen, you are able to enter percentages for specific sets of segments, the sum of these must be 100 percent.

Proportion %	Cost Code
-----	-----
60	111.444.555
40	222.555.666

If a run result of 100 pounds is costed here, 60 will be costed to cost code 111.444.555 and 40 to cost code 222.555.666.

### 1.7.2 Fix Costed

Fix costed works in the same way as costed, except it does not use the assignment or organisation level costing. So the Fix costed hierarchy is as follows, with 1 having the highest priority.

Fig 2.

Cost Level/Qualifier	Application Form
-----	-----
1. Element Entry	Element Entry
2. Element Link	Element Link
3. Payroll	Define Payroll

### 1.7.3 Distributed

Distributed costing requires you to create a distribution set of elements. This is done from the Element Set form. Using a type of Distribution Set, you include the elements you want to be in the set. You can then assign the distribution set to an element at link level. The element is then costed as a member of the distribution set, so the costing result is divided by the sum of the distribution sets costings and multiplied by the number of members in the set.

## 2 TECHNICAL OVERVIEW

### 2.1 Running Costing

To run the costing process you submit the concurrent request Costing from Submit processes and reports Form. This will prompt for the parameters Start Date, End Date, Payroll and Consolidation Set (if used). The process will then process all costable values between the two dates for the specified payroll.

### 2.2 What is Costed

The costing processes picks up run results. The specific payroll actions that will be picked up by the costing process are in the PAY\_ACTION\_CLASSIFICATIONS table and have a CLASSIFICATION\_NAME of COSTED, shown below.

PAY\_ACTION\_CLASSIFICATIONS table:

CLASSIFICATION_NAME	ACTION_TYPE	MEANING
-----	-----	-----
COSTED	B	Balance adjustment
COSTED	Q	QuickPay Run



COSTED	R	Run
COSTED	V	Reversal

So the process will create an assignment\_action for every assignment that has a run result from one of the costed classifications. Therefore if an element for an assignment has had both a quickpay and a reversal, then this will produce one assignment action for the assignment, with both of the actions costed. The process then populates the PAY\_COST table(below) with the run result value(costed\_value). The actual cost code is stored on the PAY\_COST\_ALLOCATION\_KEYFLEX table in the concatenated\_segments column, this is referenced using the cost\_allocation\_keyflex\_id from PAY\_COSTS.

PAY\_COSTS table description :

Name	Null?	Type
-----	-----	----
COST_ID	NOT NULL	NUMBER(15)
ASSIGNMENT_ACTION_ID	NOT NULL	NUMBER(15)
INPUT_VALUE_ID	NOT NULL	NUMBER(9)
RUN_RESULT_ID	NOT NULL	NUMBER(15)
COST_ALLOCATION_KEYFLEX_ID	NOT NULL	NUMBER(9)
BALANCE_OR_COST	NOT NULL	VARCHAR2(30)
COSTED_VALUE	NOT NULL	NUMBER
DEBIT_OR_CREDIT	NOT NULL	VARCHAR2(30)
DISTRIBUTED_INPUT_VALUE_ID		NUMBER(9)
DISTRIBUTED_RUN_RESULT_ID		NUMBER(15)

## 2.3 Rolling Back

It is possible to rollback the costing process, using the rollback request from submit reports & requests. This is only possible if you have not run the transfer to GL process for that costing process. If you have you will need to rollback the transfer first, then the costing or you will get locks.

It is also worth noting that if you have costed a value to the wrong account by mistake, you can rollback the costing change the cost code and re-run. This will only pick up the new set of segments, if the actual run result is incorrect; you will have to rollback the actual process that calculated the value, a payroll for example.

## 3 ISSUES & TROUBLESHOOTING

### 3.1 Unexpected Cost Codes

If you get values costed to the a cost code you did not expect, then firstly check this is not the suspense account. If it is the suspense account, you can assume that the Costing Flexfield has failed validation. You should then check the PAY\_MESSAGE\_LINES table and the costing log file for the reason validation failed. There are some other reasons that the suspense account will be used, they are:

1. A costing Distribution set has no members.
2. Sum of distribution set values is Null.
3. The combination of assignment level costing, does not equal 100%.

If you get no cost code for a run result, then you have either not specified a suspense account or both the cost flex and the suspense account have failed validation.

If the cost codes you are getting are not the suspense account and validation has not failed, then it is likely that you have the costing segment set at a level higher up the hierarchy. To verify this you can check the following tables using the cost\_allocation\_keyflex\_id from PAY\_COSTS. If you find the value at a higher level you will need to rollback and change the set up before rerunning.

Costing Level -----	Table -----	Column -----
Element Entry	PAY_ELEMENT_ENTRIES_F	cost_allocation_keyflex_id
Assignment	PAY_COST_ALLOCATIONS_F	cost_allocation_keyflex_id
Organization	HR_ALL_ORGANIZATION_UNITS	cost_allocation_keyflex_id
Element Link	PAY_ELEMENT_LINKS_F	cost_allocation_keyflex_id
Payroll	PAY_PAYROLLS_F	cost_allocation_keyflex_id

### 3.2 Unexpected Costed Values

If you get problems where the actual costed value is not what is expected. This is not normally due to the costing process itself, as this does not do calculations, except for when percentage values are set at assignment level and when processing distributed costing. It is worth checking the Input Values from the element link of the offending element. When you set the link to be costed, you can then go to the input values and have them costed or not costed.

If therefore you only want to cost the input value Pay Value, you must make sure any other input values that could be costed are not checked. If you have another input value also checked, costing will cost both values. The solution is to just cost the Pay Value input value.

### 3.3 Performance

Performance of the costing process on occasion used to be slow. However some significant changes to the core code that addressed this issue, the main changes are in the up-to-date C Code Patch. (See Version Checking) Ensure you have the latest version of the C code before any further investigation is made. If you have the latest version and still suffer performance problems, there is some tuning that can be done. This involves altering the way the costing process validates against the pay\_cost\_allocation\_keyflex table. This can be done by setting the value of the parameter COST\_PLS\_VAL in the table PAY\_ACTION\_PARAMETERS. This parameter is usually not defined, this means the costing process uses(AOL C Code) validation. This is fine until the table becomes increasingly populated and performance starts to slow. It is then possible to set COST\_PLS\_VAL to value Y. This will force the costing process to validate using the (fnd\_flex\_keyval PL/SQL API), this will have to be used together with indexes on the pay\_cost\_allocation\_keyflex table, in order to see a performance improvements.

See thereadme of Bug 636044 for details.

### 3.4 Deadlock Issue

A problem was reported whereby the costing process caused database deadlocks. Again this should be resolved by applying the latest version of the C code.

(See Version checking)

### 3.5 Rounding Error's

There were some problems with roundings not taking into account negative adjustments. This is fixed in a version of the C code. (See Version Checking)  
For release 11 - base release includes fix.

### 3.6 Organization Level Failing

Organisation level costing can be affected if the following has been altered:

```
SQL> select * from DUAL;
```

This has to return the value uppercase X.

This is now resolved with the latest C code. (See Version Checking.)

## 4 VERSION CHECKING

The costing process is part of the payroll C code chain, that calculates payroll run results. The main C code component used for costing is pycos.lpc.

Versions of the costing is delivered with the payroll C Code Chain.  
Example: Bug 871122 (Release 10.7 & 11) delivers:

```
R10.7 -'pycos.lpc' ver 40.64  
R11 -'pycos.lpc' ver 110.24
```

To determine version of pycos.lpc - C Code for Costing :

```
UNIX -  
$ cd $PAY_TOP/bin  
$ strings -a PYUGEN|grep pycos.lpc  
$Header: pycos.lpc 110.24 98/11/26 02:03:22 porting ship
```

```
NT -  
Start a command prompt session  
cd PAY_TOP/bin  
find "pycos.lpc" pyugen.exe  
Header: pycos.lpc 110.24 98/11/26 02:03:22 porting ship
```

## Frequently Asked Questions (FAQ) - Costing - ORACLE PAYROLL

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1. Why are you unable to enter Cost Allocation details in Element Entries form even though the flexfield qualifiers have been checked for element entry?
2. Why are the account cost codes on costing run results are not populating?
3. Why is the effective date on the Costing Detail report wrong when you run the report for multiple pay periods?
4. Why does costing go to the next period when costing at the end of the month and payroll is run one week in arrears?
5. What tables and attributes specify if a costed transaction has been transferred to the General Ledger?
6. Should Special Inputs deductions be set up to be costed?
7. Can employer benefits be costed across organization and location?
8. FRM-40200 error appears when changing the Costable Type on the element link for an element from Costed to Fixed Costed. Why?
9. Does the Oracle HRMS module include functionality to perform month end accruals for payroll costs by employee?
10. Can you clear the Cash account after the NACHA and CheckWriter processes are run?
11. Why do you not receive an error when entering data that violates the Cross Validation Rules when they have been defined for the Cost Allocation Key Flexfield?
12. What should the effective date be on the Costing Detail report when you run the report for multiple pay periods?
13. SEGMENT1 through SEGMENT% were not populated in the GL\_INTERFACE table when the transfer to GL finished successfully. Why ?
14. Why is no output report generated when the transfer to GL completed successfully?
15. Why does the transfer to GL process fail with HR\_6881\_HRPROC\_ORA\_ERR SQLERRMC?
16. Costing Breakdown report errors ORA-00904: invalid column name.
17. How can you cost balance adjustments?
18. Why are we having performance issues when running transfer to GL in 11i?
19. After completion of an Oracle 11i upgrade, why are Reversals costing in the incorrect period?
20. Why are information elements not costing even though they are set up to generate costing transactions?

## QUESTIONS & ANSWERS

1. Why are you unable to enter Cost Allocation details in Element Entries form even though the flexfield qualifiers have been checked for element entry?

Answer:

Element links are not costed. In order for the element entry to be costed, costing information must also be entered on the element link.

2. Why are the account cost codes on costing run results are not populating?

Answer:

The Value Sets for Segments on the Cost Allocation Key Flexfield were set up as required; however, they were not populated for cost processing. Change the Value Sets to not required or fill in all required segments with the appropriate data.

Navigation: System Administrator > Application > Flexfield > Key > Segments  
Query on Cost Allocation Flexfield in the Flexfield Title  
Select Structure  
Click on Segments button  
Select Open button  
Check or uncheck Required checkbox as needed

3. Why is the effective date on the Costing Detail report wrong when you run the report for multiple pay periods?

Answer:

The effective date column used the last date the process was run. If the costing process covers multiple periods the last end date is used for all elements.

4. Why does costing go to the next period when costing at the end of the month and payroll is run one week in arrears?

Answer:

Costing results are generated based on the check date of the payroll process. However, you do have the ability to set the accounting date for the transfer to date earned rather than date paid. To do this you would need to change the TGL\_DATE\_USED pay action parameter to "E". If you do not do this then the accounting date of the transfer defaults to the check date of the originating payroll.

5. What tables and attributes specify if a costed transaction has been transferred to the General Ledger?

Answer:

This information is stored in the following tables GL\_INTERFACE, PAY\_COSTS and USER\_JE\_SOURCE\_NAME.

6. Should Special Inputs deductions be set up to be costed?

Answer:

Special Inputs and Special Features are shadow elements created automatically by the system when the base element is created. Special Inputs can be costed if and when it is needed. Special Features should never be costed.

7. How do you charge employer benefits across organization and location?

Answer:

Either enter a percentage split at the assignment level, or use Distributed Costing.

8. FRM-40200 error appears when changing the Costable Type on the element link for an element from Costed to Fixed Costed. Why?

Answer:

The costing has to exist for the entire length of the link. End the current Costed link and create a new one set to Fixed Costed for the appropriate period.

9. Does the Oracle HRMS module include functionality to perform month end accruals for payroll costs by employee?

Answer:

At this time there is no delivered functionality in the Oracle HRMS module to accomplish this.

10. Can you clear the Cash account after the NACHA and CheckWriter processes are run?

Answer:

This functionality does not exist at this time. An enhancement request has been logged for this functionality and can be reviewed under Bug number 794166.

11. Why do you not receive an error when entering data that violates the Cross Validation Rules when they have been defined for the Cost Allocation Key Flexfield?

Answer:

The validation of the Cross Validation Rules is enforced when the costing process is run, not at the point of data entry.

12. What should the effective date be on the Costing Detail report when you run the report for multiple pay periods?

Answer:

The effective date column uses the last date the process was run. If the costing process covers multiple pay periods, then the last end date is the effective date that is used for all elements.

13. SEGMENT1 through SEGMENT% were not populated in the GL\_INTERFACE table when the transfer to GL finished successfully. Why ?

Answer:

Map the segments in the GL Flexfields.

14. Why is no output report generated when the transfer to GL completed successfully?

Answer:

Flexfield mapping is not set up.

15. Why does the transfer to GL process fail with HR\_6881\_HRPROC\_ORA\_ERR?

Answer:

The entire error reads:

```
HR_6881_HRPROC_ORA_ERR
SQLERRMC ORA-01400: cannot insert NULL into
("GL"."GL_INTERFACE"."SET_OF_BOOKS_
SQL_NO 1000 TABLE_NAME pay_trgl_pkg.trans_pay_costs
```

The payroll in the consolidation set did not have 'set of books info' defined. Setting up Account Mapping information on payroll resolves the issue.

16. Costing Breakdown report errors ORA-00904: invalid column name.

Answer:

ORA-00904: invalid column name. Apply patch 2005571

17. How can you cost balance adjustments?

Answer:

Enable qualifiers on segments that need to be included in balance adjustment costing.

18. Why are we having performance issues when running transfer to GL in 11i?

Answer:

Many performance issues in 11i are resolved by running the Gather Schema Statistics process. For additional assistance with this process please see Note.141532.1

19. After completion of an Oracle 11i upgrade, why are Reversals costing in the incorrect period?

Answer:

In 11i it is necessary to use the Costing Breakdown Report rather than the Costing Summary Report to review the results.

20. Why are information elements not costing even though they are set up to generate costing transactions?

Answer:

An element must have run results in order to be costed, and information elements will not have run results because they are not processed in the payroll. They are for information only.