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on Order Management - Shipping

Oracle 11i Shipping Execution – Interface Trip Stop Trouble Shooting

By Scott Ma

Editor's Note: Most of you are probably familiar with Oracle's 11i Shipping Execution functionality. A shipping delivery-based system, customers typically use it to track trips, i.e., delivery lines that are scheduled to be shipped in a specific vehicle on a specific date by a specific carrier departing from a specific location. What happens when the shipping lines become stuck in an interface table? Leaving them there is not an option because of the impact to Oracle Inventory's accounting periods. Purging them is not an option because this is business critical data. Scott Ma, our Manufacturing expert, has written an informative article intended to help you realize the full value of this functionality and how to trouble-shoot stuck transactions. Scott begins with the basics – how to analysis your transactions using the Interface Trip Stop concurrent process, and then goes on to list common causes and solutions that account for most issues. Even experienced users will pick up some useful pointers with this introductory article.

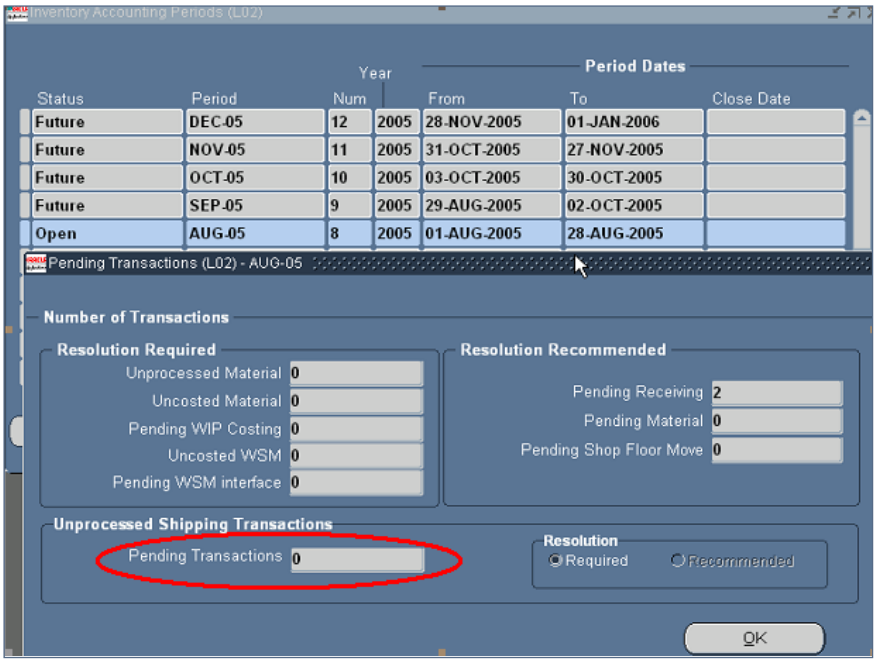

Figure 1 – Inventory Accounting Periods and Pending Transactions

If the transaction information is not interfaced properly, the transactions will be stuck in the inter-face table.

Introduction: What is a "Stuck Line"

All transactions that impact inventory will interface to the Oracle Inventory and Oracle Financial modules. The transactions will occur in Oracle Purchasing, Oracle Order Management, Oracle Work In Progress (WIP), to name a few. If the transaction information is not interfaced properly, the transactions will be stuck in the interface table. The stuck lines will prevent the Oracle Inventory accounting period from closing as shown in Figure 1 using the navigation path: Oracle Inventory > Accounting Close Cycle > Inventory Accounting Period > (Button) Pending.

This article will discuss how to clear stuck shipping lines.

How to Identify "Stuck Shipping Lines"

During the shipping execution process and after the shipping lines are ship confirmed, the shipping information will be interfaced to the Oracle Order Management and Oracle Inventory modules via the "Interface Trip Stop - SRS" concurrent program.

If the "Interface Trip Stop – SRS" concurrent program finishes successfully, the shipping line status will change from "shipped" to "interfaced". Hence, "shipped" status is an interim status. If the shipping lines status remains "shipped", we call these lines "stuck shipping lines" as shown in Figure 2.

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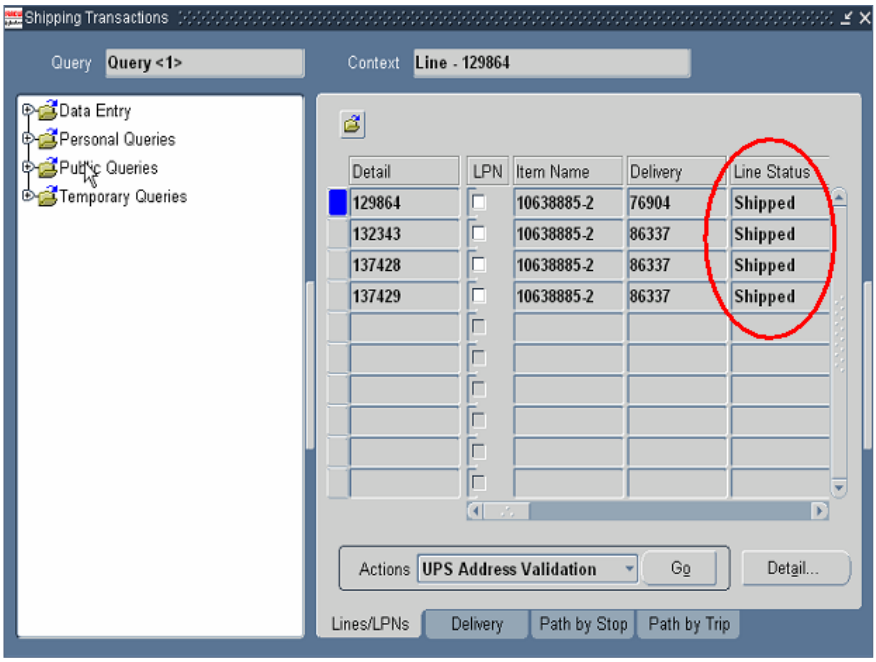

Figure 2 – "Stuck Shipping Lines"

The stuck lines will cause inventory inaccuracies. Each month end, all pending transactions must be cleared in order to keep accounting and inventory information in-sync.

"Stuck Shipping Lines" Trouble Shooting Analysis

Once you have identified shipping lines that are stuck, the next step is the most challenging part. You are going to determine why they are stuck. The most useful information you can use is the "Interface Trip Stop - SRS" concurrent request log file. But be warned, you will need patience; this is a long log file. It is typically 20-30 pages. You have to read through it and, most of the time, the information that will help you identify the issue is just a few sentences.

Step 1 Submit the "Interface Trip Stop" concurrent program

The Oracle 11i shipping execution process is delivery-based shipping; therefore you will need to run the "Interface Trip Stop - SRS" concurrent program against the delivery that is stuck, as shown in Figure 3.

Step 2 Obtain the concurrent request log file as shown in Figure 4.

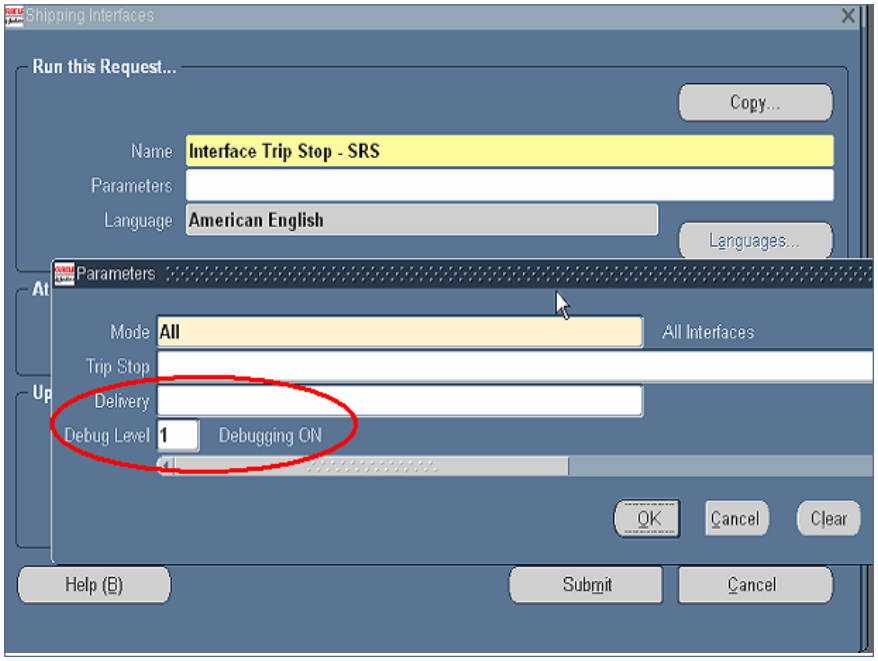

Figure 3 – Submit the "Interface Trip Stop - SRS" Concurrent Program

Tip: Write down the "Interface Trip Stop" concurrent request ID when you submit the program. This will make it easier to find once completed.

How to Clear Stuck Shipping Lines

There are many sources that contribute to stuck shipping lines. They include, but are not limited to:

- No Remote Transaction Manager
- Subinventory has been defined as "Allow Reservation" for ATO items
- Negative price not allowed
- Not enough on hand quantity in staging subinventory, negative balances not allowed
- ORA-20002: 3133: Activity instance "SHIP_LINE" is not a notified activity. The workflow is not in the expected status.

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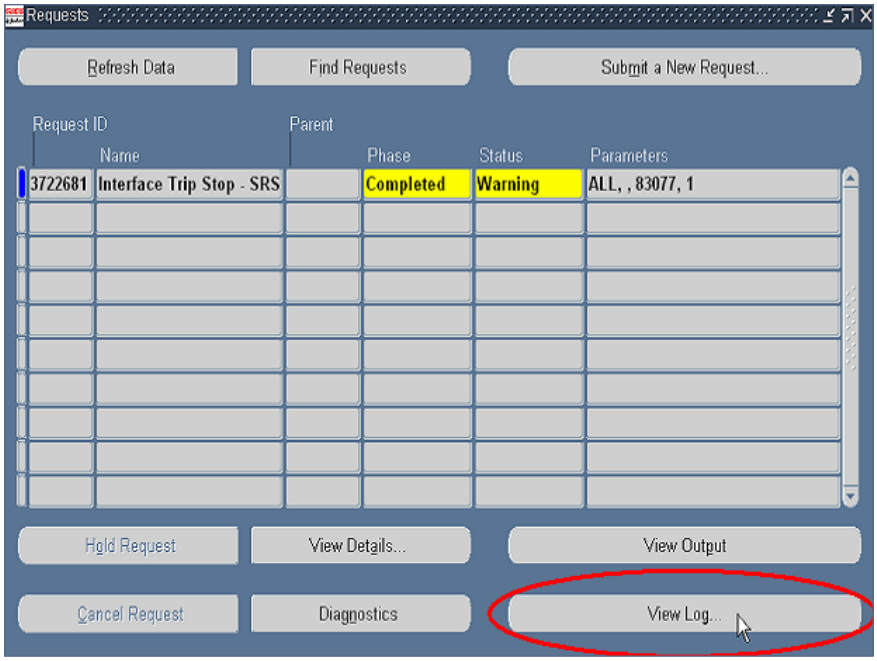

Figure 4 – Completed "Interface Trip Stop" Concurrent Program Request ID and View Log

Scenario 1 No Remote Transaction Manager

Symptom:
When you review the "Interface Trip Stop" log file, the error message "No Remote Transaction Manager" occurs.

Cause:
While the concurrent program "Interface Trip Stop" was running, for some reason, it was interrupted; those lines then are stuck in the interface table.

Solution
Step 1 Clear Pending Transactions as shown in Figures 5a and 5b, using the navigation path: Oracle Inventory > Transactions > Pending Transactions.

Step 2 Clear the Transaction Open Interface as shown in Figures 6a and 6b using the navigation path: Oracle Inventory > Transactions > Transaction Open Interface.

Step 3 Resubmit the "Interface Trip Stop - SRS" concurrent program for the stuck delivery (Figure 3) using the Navigation Path: Oracle Order Management > Shipping > Interfaces > Run.

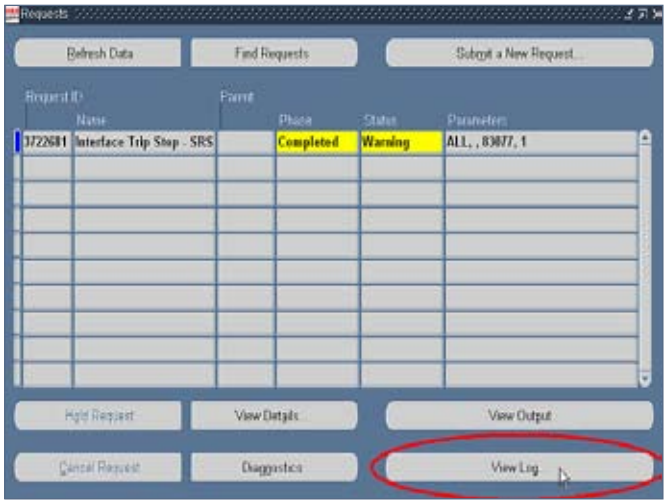

Figure 5a – Find Pending Transactions

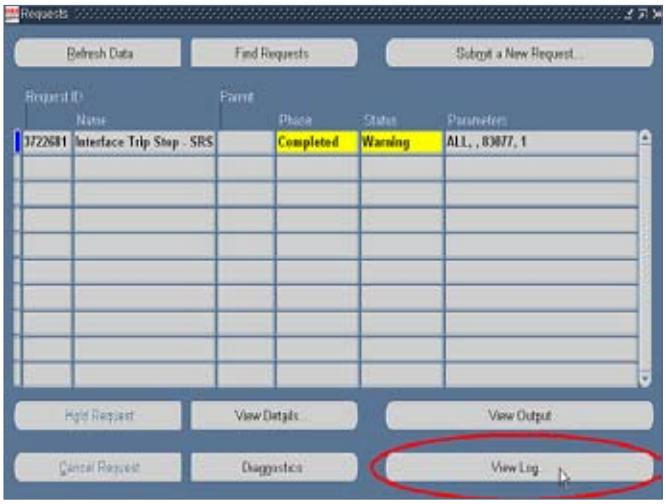

Figure 5b – Clear Pending Transactions

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Scenario 2 Subinventory has been defined as "Allow Reservation" for ATO items

Symptom:
When you review the "Interface Trip Stop" log file, the error message

> "Subinventory is Not Allow Reservation" occurs.

Cause:
For ATO items, the staging subinventory has been defined as "Allow Reservation".

Solution:
Most of the time, the staging subinventory is set to "Allow Reservation". If you set subinventory to "Not Allow Reservation", it will cause an error when the "Interface Trip Stop - SRS" concurrent program is run for ATO items.

Step 1 Change the old staging subinventory to "Allow Reservation" as shown in Figure 7 using the navigation path: Oracle Inventory > Setup > Organization > Subinventory.

Step 2 Resubmit the "Interface Trip Stop - SRS" concurrent program for the stuck delivery (Figure 3) using the navigation path: Oracle Order Management > Shipping > Interfaces > Run

Step 3 Change the old staging subinventory back to "Not Allow Reservation"

Step 4 Find the move orders created for the old staging subinventory and back order those move orders as shown in Figure 8.

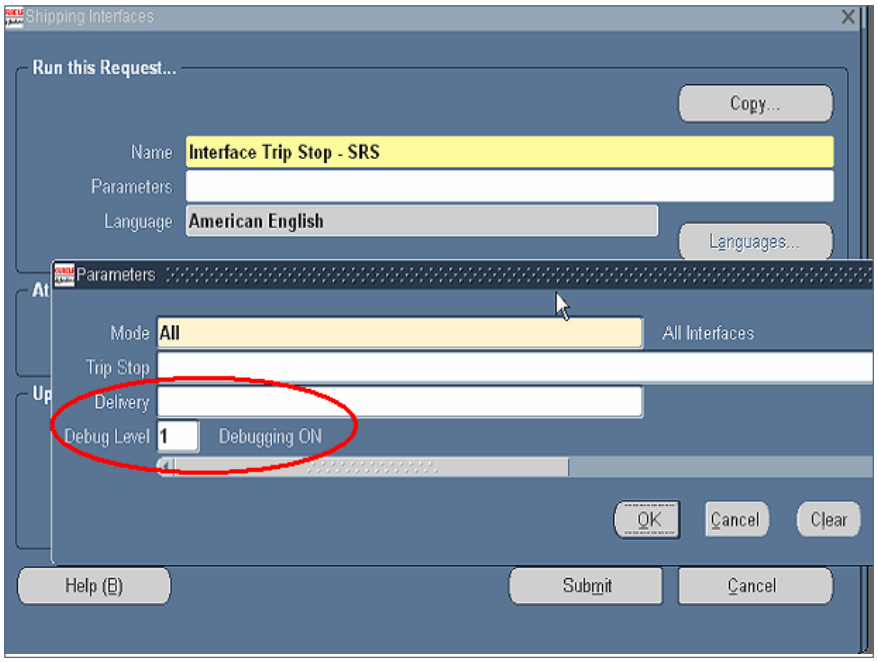

Figure 6a – Find Interface Transactions

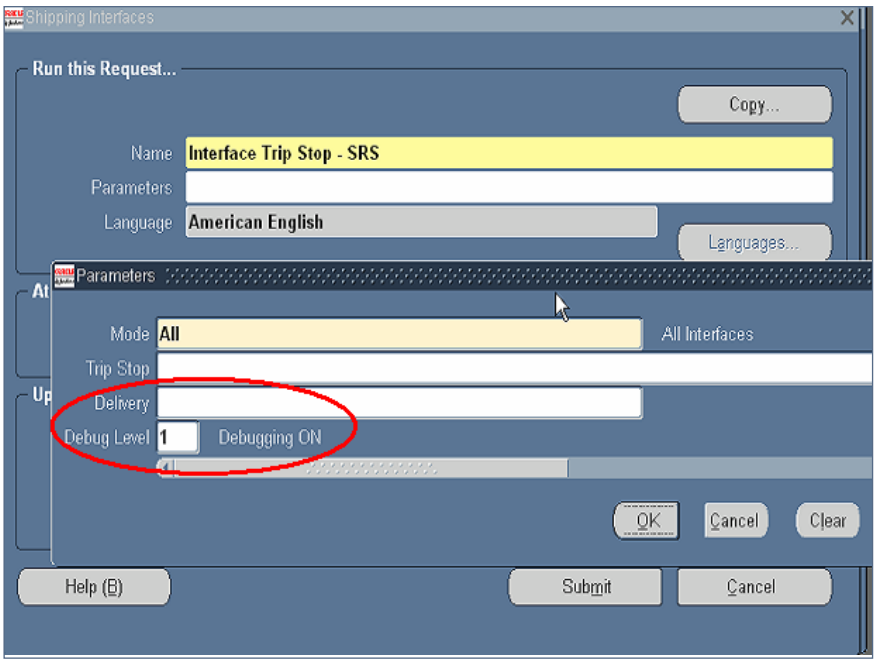

Figure 6b – Clear Interface Transactions

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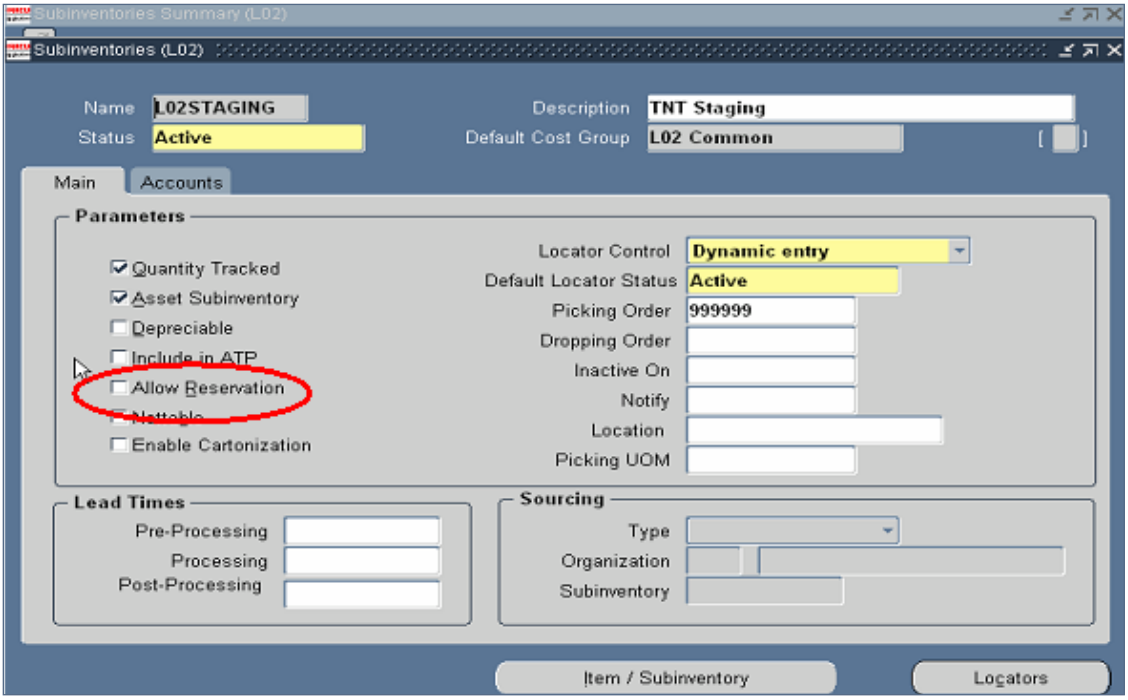

Figure 7 – SubInventories

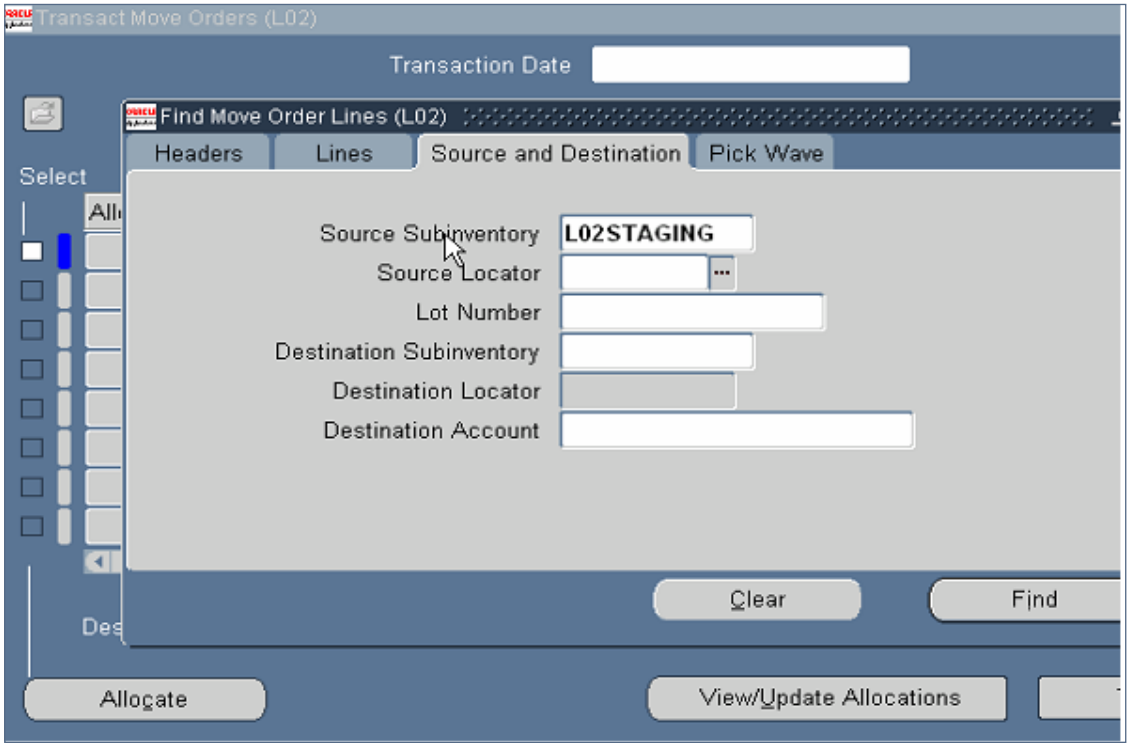

Figure 8 – Find Move Orders

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Scenario 3 Not Allow Negative Price

Symptom: When you review the "Interface Trip Stop" log file, the error message

"Not Allow Negative Price" occurs.

Cause: There are two profiles that cause this issue:

- QP: Negative Pricing set to "No"
- QP: Selling Price Rounding Options: set to "No = unrounded list price + unrounded adj"

In this scenario, we will place a sales order with a price of zero.

Consequently, since "QP: Selling Price Rounding Options" is set as "No Rounding", when "Interface Trip Stop " is run, it calculates the price as "- 0.0000xxx". But note, when "QP: Negative Pricing" is set to "Not Allow Negative", it causes an error.

Short Term Solution

Step 1 Set "QP: Selling Price Rounding Options" at the user level to "Individual: = round (list price) + round(adj)" as shown in Figure 9.

Step 2 Resubmit the "Interface Trip Stop - SRS" concurrent program for the stuck delivery using the navigation path: Oracle Order Management > Shipping > Interfaces > Run (Figure 3).

Long Term Solution

You will need to coordinate with all functional areas related to Oracle Order Management, Oracle Shipping, Oracle Pricing, Oracle Inventory, and Oracle Financial modules to reach consensus.

Scenario 4 Not enough on hand quantity in staging subinventory, "Negative balances not allowed"

Symptom: When you review "Interface Trip Stop" log file, the error message

"Negative Balance is Not Allowed" occurs.

Cause: When the "Interface Trip Stop – SRS" concurrent program runs, it will interface to the Oracle Inventory to update on hand quantity and deduct shipped quantity from the staging subinventory for the shipped item. If there is not enough on hand quantity in staging subinventory, it will cause the line stuck.

Using the Subinventory Transfer process, if an item was accidentally transferred out of the staging subinventory, it can be transferred back.

Solution

Step 1 Contact the business users to determine if there is enough on hand quantity in the staging subinventory. If there is not, most of the time it is because the business users have manually moved them out of the subinventory.

Step 2 Using the Subinventory Transfer process, if an item was accidentally transferred out of the staging subinventory, it can be transferred back. Figure 10 demonstrates this using the navigation path: Oracle Inventory > Transactions > Subinventory Transfer.

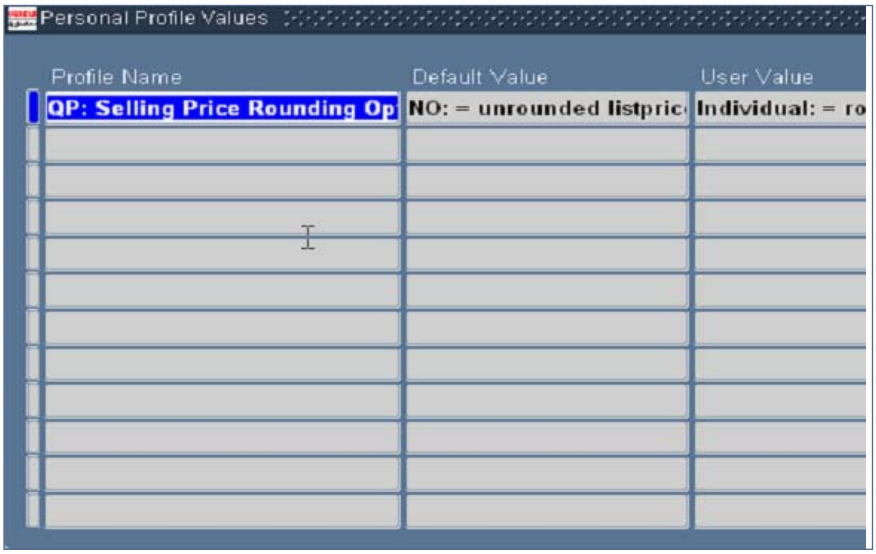

Figure 9 – QP: Selling Price Rounding Option

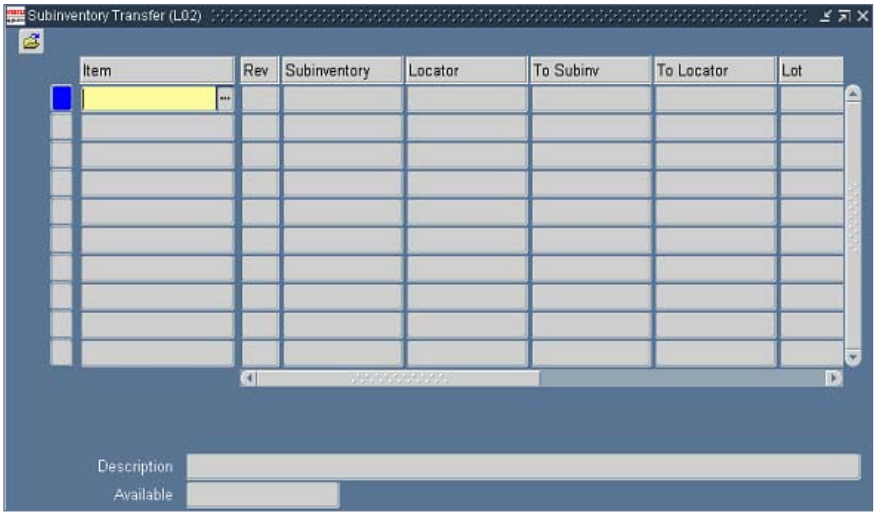

Figure 10 – Subinventory Transfer Window

Alternatively you can use the Cycle Count or Miscellaneous Receipt function.

Step 3 Resubmit the "Interface Trip Stop - SRS" concurrent program request for the stuck delivery using the navigation path: Oracle Order Management > Shipping > Interfaces > Run (Figure 3).

Scenario 5 Workflow is not in appropriate status

Symptom: When you review the "Interface Trip Stop" log file, the error message "ORA-20002: 3133: Activity instance 'SHIP_LINE' is not a notified activity...." OR " the workflow is not in the expected status…" may occur.

Cause: After the sales order is shipped, the sales order line status is still "awaiting shipping". It should be "closed".

Solution

Step 1 You could try executing the sample script below to perform a data fix, and then analyze the debug file to identify the root cause:

```
set server output on;

Declare
l_line_id NUMBER := &line_id;
l_org_id NUMBER;
l_count  NUMBER;
l_result VARCHAR2(30);
l_file_val varchar2(200);

BEGIN

OE_DEBUG_PUB.DEBUG_ON;
OE_DEBUG_PUB.INITIALIZE;
l_file_val := OE_DEBUG_PUB.Set_Debug_Mode('FILE');
OE_DEBUG_PUB.SETDEBUGLEVEL(5);

dbms_output.put_line('The debug log is stored at : '||OE_DEBUG_PUB.G_DIR||'/'||OE_DEBUG_PUB.G_FILE);
dbms_output.put_line('Please capture the above debug log and send it to support/dev for investigation');

OE_Standard_WF.OEOL_SELECTOR
(p_itemtype => 'OEOL'
,p_itemkey => to_char(l_line_id)
,p_actid => 12345
,p_funcmode => 'SET_CTX'
,p_result => l_result
);
```

```
wf_engine.handleError('OEOL', l_line_id, 'SHIP_LINE', 'RETRY',null);

END;
/
COMMIT;

DECLARE

l_line_id   NUMBER := &line_id;
l_org_id   NUMBER;
l_count    NUMBER;
l_activity_id NUMBER;
l_result   VARCHAR2(30);

BEGIN

OE_Standard_WF.OEOL_SELECTOR
(p_itemtype => 'OEOL'
,p_itemkey => to_char(l_line_id)
,p_actid => 12345
,p_funcmode => 'SET_CTX'
,p_result => l_result
);

select activity_id
into l_activity_id
from wf_item_activity_statuses_v
where item_type = 'OEOL'
and activity_name = 'SHIP_LINE'
and item_key = to_char(l_line_id)
and activity_status_code = 'ERROR';

wf_item_activity_status.create_status('OEOL',to_char(l_line_id),l_activity_id,wf_engine.eng_notified,wf_engine.eng_
null,SYSDATE,null);
End;
/
commit;
```

Step 3 Resubmit "Interface Trip Stop - SRS" concurrent program for the stuck delivery using the navigation path: Oracle Order Management > Shipping > Interfaces > Run (Figure 3).

Conclusion

Pending Transactions (as in Figure 1) is the most common issue that almost every Oracle client will have to confront during the first 6-12 months following go live. It is also the most comprehensive issue, because Oracle Purchasing, Oracle Order Management, Oracle Work In Progress (WIP), etc might cause it. There are literally hundreds of reasons that will cause the transaction pending/stuck to occur. This article primarily addresses issues for the Oracle Order Management - Shipping module.

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