



Oracle Retail Store Inventory Operations Cloud Service



Late Sales

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Overview

The purpose of this document is to provide detailed information about Late Sales Processing and its impact on stock counts in Oracle Retail Store Inventory Operations Cloud Service (SIOCS).

In addition to this document, you may need to refer to other end user documents for specific functional areas such as sales processing and stock counts.

It is generally recommended to retailers that stock counting be done while the store is closed, however SIOCS does allow users to perform stock counting anytime under some specific conditions.

Executing stock counts during a regular business day could cause issues with inventory positions due to sales being posted late.

In this document, we will discuss how the system processes late posted sales. In some cases, it will require an inventory adjustment to revert the sale, since the sales adjustment was already counted into the physical count resulting in double reductions.

What is a Snapshot?

The snapshot is a process in which the system captures the current Stock On Hand (SOH) of items during the stock count process to determine the discrepancy and adjust the inventory when the stock count is completed. A snapshot allows after counting, normal inventory operations to continue in the store that will change the SOH. Completed inventory related transactions will update the SOH, but because the snapshot represents the SOH at a specific point in time and the count was performed as close as possible to the snapshot time, a valid comparison can be made between the snapshot (the SOH at one point in time) and the physical counted items.

The difference between these two will result in the change of inventory to the SOH.

In most cases, the snapshot must be taken before the physical count is started. After the initial snapshot is taken, the system updates the snapshot at specific intervals, or during the authorization process which allows the user to update it before authorization. Snapshot updates in various areas will be covered in this document.

Note: In one special case, the user is allowed to start the count before a snapshot is taken. This can only be done for a Unit and Amount count and should only be performed under the condition that the stock in that location does not change until the snapshot is taken. This is mostly used for counting window displays, or backroom areas where the physical inventory is controlled until after the snapshot.

The snapshot of a stock count will happen in the system for different types of stock counts:

- **Unit or Problem Line:**
Can be taken from the Child Count List screen for the whole stock count or from the Stock Count Item screen if not in re-count mode. When Re-Counting, it will be taken automatically for discrepant items.
- **Ad Hoc:**
Takes a snapshot on runtime as and when items are added in the stock count.
- **Unit and Amount:**
Snapshot for this type can be taken using the Snapshot batch with the Oracle Retail Enterprise Inventory Cloud Service (EICS) module.
- **Unit, Problem, and Unit and Amount third-party process:**
When uploading data for the third-party count, a snapshot will be taken as part of the stock count process if no snapshot was taken yet.

What is a Late Sale?

The whole idea of stock count itself is to update SOH as needed to match the physical inventory for accuracy purposes.

Since some transactions, particularly sales, cannot be stopped during the stock count, the system must be equipped to handle certain inventory transactions that are generated before and during the open stock count, but are not uploaded or executed until after the snapshot was taken. The system must be able to identify these transactions to prevent possible double accounting and process them in a special way.

Here is a simple example to understand what the business problem is:

09:00 - SIOCS SOH = 10 units.

10:00 - a sale occurs for 2 units.

11:00 - a snapshot is taken for 10 units, and the user counts physically 8 units.

13:00 - the user authorizes the count for 8 units and the SOH is updated to 8 units (10-2 is the difference from the authorized count and the snapshot).

14:00 – SIOCS processes the sale for 2 units, and updates SOH to 6 units.

As you can see in this simple example, the physical count already took into account the sales of 2 units and in essence the system double counted. Late sales process will try to bring the inventory back to 8 units through a variety of different means explained later on in this document.

Late sales transactions is a concept that applies to:

- Sales
- Receiver unit adjustments
- Externally-generated inventory adjustments

For clarity in this document, we will cover sales first and then later define how these concepts can also apply to the other transactions listed above.

Let us look at a late sale to understand it at a very high level and then see it in detail in later parts of this document.

The system classifies late sale transactions in two ways:

- Any sale transactions that is integrated when there is an open stock count and the snapshot has been taken, but the count has not yet completed.
- Any sales transactions that took place before an authorized stock count, but is integrated after the count has been authorized.

Configurations

Late sales processing is impacted by several configuration settings.

System Configurations

Unit and Amount Stock Count Sales Processing

This parameter will determine what kind of sales processing will be used for sales that are uploaded during a Unit and Amount stock count process.

Valid values: Timestamp Processing, Daily Sales Processing

Timestamp Processing: This option is used when sales data is available near real time with a date and time available on the transaction. The user is not prompted to select Before Store Open or After Store Close when starting the stock count since the sales timestamp will be used to compare with the timestamps taken during the stock count.

Daily Sales Processing: This option is used when sales data is only available with a date and no time is provided. The user is either prompted or the store parameter determines when the stock count is performed, before store opens or after closing the store. The date is used to determine if a sale is late or not.

Unit Stock Count Sales Processing

This parameter will determine what kind of sales processing will be used for sales that are uploaded during a Unit type stock count process.

Values: Timestamp Processing, Daily Sales Processing

Timestamp Processing: This option is used when sales data is available near real time with a date and time available on the transaction. The user is not prompted to select Before Store Open or After Store Close when starting the stock count since the sales timestamp will be used to compare with the timestamps taken during the stock count.

Daily Sales Processing: This option is used when sales data is only available with a date and no time is provided. This means there is no timestamps in the transactions. The date is used to determine if a sale is late or not.

Stock Count Display Default Timeframe

This parameter is used to determine whether the system must prompt the user to select to whether the stock count is performed before opening the store or after closing the store.

Values: Yes, No

Yes, will prompt. No will not prompt and takes the value from the Stock Count Default Timeframe store configuration.

Stock Count Default Timeframe

Valid Values: Before Store Open, After Store Close

This parameter defines when the stock count is performed in relation to the store opening hours for Daily Sales Processing. This value may be overridden at the time of the stock count if the system is configured to allow the override. If an override is allowed, this setting will determine the default value displayed.

Before Store Open: The stock count is performed before the opening of the store. All sales on the day of the stock count will only update SOH. It will not update any counted quantities.

After Store Close: The stock count is performed after the closing of the store. All sales on the day of the stock count will update both SOH and any counted quantities. If Oracle Retail Merchandising Foundation Cloud Service (MFCS) is used, After Store Close must be selected.

Note: Timestamp processing does not use this parameter.

Note: The only valid setting when integrating with MFCS for Unit and Amount counts is Daily Sales Processing and using After Store Close. This is necessary because MFCS will take its own snapshot for comparing the counted values against. Sales data in MFCS does not have timestamps, so a more refined view to see if a sale was before or after a physical count that day is not possible. The base tested assumption is that all sales are generated before store close, and thus any items counted happen after that sale of that day.

This restriction does not exist for Unit, Problem Line, or Ad Hoc counts since only SIOCS knows about unit counts.

Store Configurations

Display Late Inventory Adjustment Message

Values: Yes, No

Yes – When the user is confirming a stock count in the Authorization phase and there are items on the stock count with In Progress Inventory Adjustments, the user may return to the stock count to complete the inventory adjustments or to continue and ignore the adjustments. When the user is approving an inventory adjustment with items on an open stock count, a message is displayed allowing the user to determine if further processing should be undertaken. Similar logic to how late sales is processed will be used for these adjustments.

No - When the user is confirming a stock count in the Authorization phase and there are items on the stock count with In Progress Inventory Adjustments, the system ignores the inventory adjustments and allows the user to complete the count. When the user is approving an inventory adjustment, there is no additional processing.

Note: The system will process the inventory adjustment similar to how late sales are processed and determine if the stock count should be adjusted or not. The update to the stock count is not immediate, but rather is at the time of authorization if there are reversing entries created.

Late Sale Processing

We will now look at the late sale processing logic in the system depending on the various configurations when the sales transactions are processed. For simplicity reasons, we will cover a sale record, but this applies to any transaction from POS: return, sale, Layaway Fulfilment, or Void:

1. When a sale or return is processed, the system checks whether there are any open stock counts or stock count approved.
2. The system considers the stock count as open only if the initial snapshot is taken.
3. The system determines the stock count type of the stock counts and checks the configuration for how the stock count sales processing is done for that type:
 - a. Daily Sales Processing
If Daily Sales Processing, whether it is Before Store Open or After Store Close.
 - b. Time Stamp Processing
4. If there are no open stock counts, two possibilities exist:
 - a. The sale timestamp or date is after the last closed count. The system will only update the SOH as a normal sales process.
 - b. If the sale timestamp is before the last closed count timestamp on the item store table, the system will update SOH, but also generate an inventory adjustment to reverse the SOH with the sales qty. This is done because when counting the item and subsequently closing the count, the sale adjustment was already taken into account as part of the stock count process, so a late sale process is needed to revert the sale reduction. Both the SOH and the reverse inventory adjustment are recorded to ensure there is an audit log that confirmed the processing of the POS data, as well as the reversal of this process.
If the transaction is qualified for the late sale adjustment, the system will determine whether to create a positive or negative adjustment depending on the type of the transaction:
 - i. If it is a sale or layaway fulfilment transaction, a positive adjustment is created.
 - ii. If it is a return or void sale transaction, a negative adjustment is created.

5. The system applies the following rules when an open stock count exists:
- a. When processing the sale or return transactions, SIOCS will increment or decrement the SOH depending on the type of the transaction (Sale, Return, Void, Layaway Complete) and will check whether there are any open stock counts for the item being processed.
 - b. After updating the SOH with the sales data, for any items that have open stock counts and a snapshot has been taken, SIOCS inserts a POS transaction record in a stock count table that will be used to evaluate a possible late sales event. For clarity purposes, we call these temporary records: Late Sales Evaluation Records (LaSER).
 - c. When taking the snapshot, each item will have a timestamp of when the snapshot was taken. SIOCS also captures a timestamp when the item is first physically counted.
 - d. When confirming the count, SIOCS will first update the snapshot with those transactions that have occurred before the physical count timestamp of the item. This updated snapshot will consider if an item is discrepant or not.

If an item is not counted, then the snapshot will also be updated.

Any LaSER records that were recorded with a timestamp after the physical count will be ignored.

- e. If a re-count process is enabled, then the count will move to a re-count process that is identical to the count process. In other words, POS transactions will be inserted into the stock count late sales table, and compared against the possible new physical timestamp at the time the re-count is confirmed.

Note: The physical timestamp will be retaken when the item is physically re-counted regardless if it was discrepant or not. A new snapshot will be taken for those items that require a re-count.

- f. During the authorization phase, the user will have two options for late sales processing:
 - i. The user can press a button to apply any LaSER records against the snapshot. This provides an accurate up-to-date view of the snapshot on the UI screen.
 - ii. After confirming the authorization of the stock count, SIOCS will be update the item store record with a timestamp from the stock count. This can be:
 - The physical timestamp if no authorized quantity was entered.
 - The approval authorization timestamp if an authorization qty is entered.
 - iii. After the count is closed, any remaining LaSER records will go through the standard late sale processing which will generate a positive or negative inventory adjustment after the count is authorized. This is the process described in Step 4b.

Note: Only the late sales inventory adjustments would be generated, not the POS record since that was already processed during the sales processing.

- g. Note that the above section explains how late sales are processed for timestamp stock counts. When doing daily sales, the system will use LaSER records as described, however, it will always compare against the stock count extraction date and take into consideration the stock count default timeframe of Before Store Open or After Store Close.
 - i. Before Store Open – the sales can only be considered a late sale if it has a sale timestamp prior to the schedule date of the stock count.
 - ii. After Store Close – any sale date equal to or before the schedule date can be considered as a late sale.

Sale Processing with Timestamp

This section will cover stock count processing when SIOCS is configured for Timestamp Processing. As a reminder, timestamp processing is only available for Ad Hoc, Unit, Problem Line, and Unit and Amount. Unit and amount can only be timestamp processing if MFCS is not deployed with SIOCS.

Retailers can only implement this kind of processing when POS transactions are available with a specific time (timestamp) when the transaction happened in addition to the date of the transaction.

Physical Time Stamp

At the time of stock count, the physical timestamp is recorded when the item is first scanned or entered for the count.

For example, if the item is scanned at 8:00am but the count is not saved until 8:15am, the physical timestamp will be 8:00am and not 8:15 am.

During the stock count, any items that are left blank are assumed to be not counted and a physical timestamp will not be taken for those items. If the item was counted but none were found, the user will enter a zero and SIOCS will take a timestamp for that item.

Note: For unguided stock counts, SIOCS will record the physical timestamp in memory once a user begins counting. The timestamp will get posted to the database once the user saves the count, unless there is an earlier time that is already posted.

When multiple people are scanning, the first person saving will be the physical timestamp saved.

Authorization Timestamp

The system records the authorization timestamp which will help the late sale process to determine whether the transaction is qualified for the late sale inventory adjustment. The authorization timestamp is only set when the user enters a quantity. When defaulting, the physical count quantity is used instead. The assumption is that when entering an authorized quantity, someone will have done another physical count and that is why a new physical timestamp is taken.

Recounting

After all items have been counted, the stock count can move to a re-count phase. The process is like the count phase except not all the items are re-counted. During the move to the re-count phase, SIOCS will be recalculating the correct snapshot by applying the LaSER records to the snapshot value to determine which items require a re-count.

SIOCS provides a way to identify items outside of what is an acceptable difference between the snapshot and the counted quantity.

The system takes a new snapshot when the recount is initiated, and the physical count time stamp is removed to allow the refresh with the new physical count time.

The update process during this stage is the same as described above.

Note: If a re-count is done and sales were uploaded between the first count and the start of the re-count, some sales could have updated the SOH only. This is fine since the new snapshot will be updated with this new SOH quantity for the discrepant item.

Authorization

The move from the count or re-count to the authorization process will apply the LaSER records to the snapshot to determine if an item is discrepant. For example, if a LaSER record has a timestamp of 9:00 and the physical time is 9:15, then the LaSER qty will be added to the snapshot of the item for comparison. If the LaSER record has a timestamp of 9:30, it will be ignored.

During the authorization process, it is assumed that when a user enters an authorization qty, they revalidated what happened on the shopfloor, and as such did a new physical count. If the default button is used, however, no new authorization timestamp is taken, but rather the re-count or count timestamp will be used.

During the authorization processes, the user has the ability to reflect the LaSER records that have come in after the re-count into the Snapshot they are comparing the count/re-count value against. This process will update the snapshot and remove those LaSER records for future consideration.

When completing the stock count authorization process, the SOH will be updated with the difference of the snapshot and authorized qty. Any LaSER records will be processed as a late sale record and generate the appropriate inventory adjustments.

Sales Processing - Unit Count and Problem Line

The initial snapshot for this type of count is taken in the mobile application for the master stock count level or at the child level.

SIOCS will take the timestamp when an item is physically counted and save this timestamp at the stock count item level.

The following table indicates what updates will be made for sales coming in during a specific time period of the stock count based on the physical timestamp, authorization timestamp, or snapshot.

Time Period when the Sale is Processed in the System	Action in the System	Remarks
An open stock count exists, but no snapshot is taken yet.	SOH is updated.	
When an open stock count exists, a snapshot was taken and there is no timestamp taken for the physical count.	LaSER will be recorded and the SOH will be updated.	No date/time comparison is made at this time.
An open stock count exists, a snapshot is taken and a physical timestamp is also recorded.	LaSER will be recorded and the SOH will be updated.	No date/time comparison is made at this time.
A re-count is ongoing, but the item has not been recounted yet.	LaSER will be recorded and the SOH will be updated.	No date/time comparison is made at this time.
A re-count is ongoing, and the item has been recounted and a new physical timestamp is created.	LaSER will be recorded and the SOH will be updated.	No date/time comparison is made at this time.
The stock count is in authorization phase, and no authorization timestamp has been captured.	LaSER will be recorded and the SOH will be updated.	No date/time comparison is made at this time.
The stock count is in authorization phase, and an authorization timestamp has been captured.	LaSER will be recorded and the SOH will be updated.	No date/time comparison is made at this time.
The stock count is completed, and the sales timestamp is before the Authorization timestamp and processed after the authorization.	Late sales processing will take place. An inventory adjustment will be made to reverse the stock count inventory adjustment and the SOH will be updated.	
The stock count is completed, and the sales timestamp is after the Authorization timestamp and processed after the authorization.	Only SOH will be updated.	

Multiple Stock Counts

Since late sales can span multiple days, and items could be counted on multiple stock counts during those days, the timestamp will be kept on the stock count line-item level.

If two or more open stock counts exist for the same item and both have a snapshot, a LaSER record is written to both counts.

If one stock count is closed and an open stock count exists with a snapshot, a LaSER record will be written, and the closed stock count will be ignored for any late sales processing. SOH will still be updated.

If one stock count is closed, and an open stock count exists with no snapshot, SOH is updated and standard late sales process is executed. Depending on the timestamp of the sale, a late sales inventory may or may not be created. From a late sales perspective, a stock count is only open from the moment a snapshot is taken.

Example 1: An item exists on two stock counts that will be performed on the same day. The first stock count has already been completed and authorized while the second stock count is in progress. A snapshot was taken, and has not been confirmed. If a sale uploads with a timestamp of before the authorized count, SIOCS will update SOH and write a LaSER record.

Example 2: An item exists on two stock counts that will be performed on the same day. After both stock counts have been authorized, a sale uploads to SIOCS with a sale timestamp prior to the first authorized count. Late Sales processing will occur for the most recently completed stock count.

Ad Hoc Stock Counts

There is no difference in processing late sales for an open or authorized Ad Hoc stock count. The only difference is that the snapshot is taken when the item is initially added to the count unlike Problem Line, Unit Count, and even Unit and Amount count where the item's snapshot is all taken together.

Rules

The physical count timestamp will be taken at the same time as the snapshot since the user must enter a unit count quantity to add the item to the count.

Once the Ad Hoc stock count has been completed on the mobile, the user accesses the desktop application to authorize the count.

Note: If the Ad Hoc stock count does not have any discrepant items on the count and therefore moves directly to Authorize Completed, SIOCS will process late sale inventory adjustments for these stock counts since late sales processing may apply to both discrepant and non-discrepant items.

Example of Ad Hoc Late Sales Processing:

Item 100051008 SOH = 10 (physically in the store at start of day there are 12 units)

User creates an Ad Hoc stock count on mobile.

10:15:00 AM - user scans barcode of item and enters a count quantity of 10. Snapshot is taken and physical count timestamp is recorded in SIOCS.

Stock Count is authorized on the desktop application or automatically since there is no discrepancy. No Inventory adjustment is created for the difference between the snapshot of 10 and the counted quantity of 10 because the difference is 0.

Sales of 2 units is uploaded after the stock count at 11:00:00 has completed and has a sales timestamp of 09:20:13 AM. Late sales processing will occur since the sales timestamp is before the physical count timestamp and the sales have already been accounted for in the stock count. The end result will be 10 units. The sale uploaded after the count would reduce the SOH to 8, but the late sales processing would bring it back to 10. This is accurate since:

Start of day physical units = 12, SOH = 10

9:20:13 Sale happened, physical units in store 10, SOH 10

10:15:00 user counts physical 10 units

11:00:00 sales upload decrements SOH by 2 units to SOH = 8, late sales processing discovers that sale was BEFORE the physical count, so two units are Inv. Adjusted back in, resulting in a final SOH = 10 which is equal to a physical inventory of 10.

Unit and Amount Stock Count

The Unit and Amount stock counts must be scheduled for a specific date. When the count is scheduled, it is sent to the merchandising system so that it can also create a corresponding stock count.

The snapshot for this type of count is taken using batch. The batch extracts the items and a different batch creates a snapshot of the current SOH.

The process of processing the late sales for a Unit and Amount is same as described in a Unit count.

Third-Party Stock Counts Processing

Retailers may perform a Unit/Problem Line or Unit and Amount stock count using a third-party vendor. The counts are scheduled in EICS but the count process is performed by a third-party vendor. Once the physical stock counting process has been completed, the third-party system exports the results of the count to SIOCS/EICS. The assumption is that the third party uploads the final counting results that have been validated. As such, a re-count or count correction process does not exist for the third-party counting process. The only action is the authorization process that can be executed in SIOCS.

The initial snapshot can be taken manually in the case of Unit and through batch in case of the Unit and Amount.

When the third-party file import process starts, it will attempt to snapshot the stock count if the snapshot has not already taken place. A failure to snapshot will stop the job from import processing.

The file will contain the date of the physical count and, in case of timestamp processing, it must also contain the counting timestamp.

The logic for the late sale process for this type will be same as described earlier. First late sales will be applied to the snapshot and compared against the counted quantities to determine the discrepant items. Subsequently, it will follow the above-described authorization process.

Use Case 1

Simple example of a sale happening pre-physical count and being uploaded pre-authorization, but after the snapshot.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:15	Sale=10	90	100				Sale not uploaded.
3	6-Nov-23 10:25	Snapshot taken	90	100	100			
4	6-Nov-23 10:35	Physical Stock Count taken	90	100	100	90		
5	6-Nov-23 11:00	10:15 Sale uploaded	90	90	100	90	10	
6	6-Nov-23 11:15	Count confirmed	90	90	90	90	0	Stock count moves to authorization phase, item is not discrepant since snapshot is updated with late sales.
7	6-Nov-23 11:30	Stock count authorized	90	90	90	90	0	No SOH update is made.

Note: This example illustrates where if late sales would not have used LaSER and not updated the snapshot, the stock count would have been discrepant in Step 6. Without LaSER, the snapshot would have stayed 100 and thus a discrepancy of 10 units would have been applied in Step 7 resulting in SOH of 80.

Use Case 2

In this example, we will be exploring what happens if a late sales is uploaded after authorization and the stock count is closed.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:15	Sale=10	90	100				Sale not uploaded.
3	6-Nov-23 10:25	Snapshot taken	90	100	100			
5	6-Nov-23 10:35	Physical Stock Count taken	90	100	100	90		
6	6-Nov-23 11:15	Count confirmed	90	100	100	90	0	Stock count moves to authorization phase, item is discrepant.
7	6-Nov-23 11:30	Stock count authorized for 90	90	90	100	90	0	SOH is updated -10 for the discrepancy.
8a	6-Nov-23 11:45	Sale from Step 2 is uploaded	90	80	NA	NA	0	SOH is reduced by 10 from the sale.
8b	6-Nov-23 11:45	Late sale is evaluated	90	90	NA	NA		Inventory is written for +10 units to reverse sale of Step 8a.

Note: This example illustrates a traditional case where the late sale process will evaluate against a closed stock count. EICS will notice that the item was sold before a stock count that had a snapshot which did not include this sale. As such, it will write an inventory adjustment to reverse the reduction in sales since those were already taken into account during the stock count physical process in Step 6.

Use Case 3

In this example, we will be exploring what happens if a late sales is uploaded before a stock count has physically counted something.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:15	Sale=10	90	100				Sale not uploaded.
3	6-Nov-23 10:27	Snapshot taken	90	100	100			
4	6-Nov-23 10:28	Sale 10:15 uploaded	90	90	100		10	
5	6-Nov-23 10:35	Physical Stock Count taken	90	90	100	90	10	
7	6-Nov-23 11:15	Count confirmed	90	90	90	90		Stock count moves to authorization phase, item is not discrepant since snapshot is updated with late sales.
8	6-Nov-23 11:30	Stock count authorized	90	90	90	90		No SOH update is made.

Note: This case is very similar to Use Case 1 because at the end of the day the sale upload process created a LaSER which happens the moment a snapshot is taken.

Use Case 4

In this example, we will be exploring how the authorization process can impact late sale processing.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:15	Sale=10	90	100				Sale not uploaded.
3	6-Nov-23 10:27	Snapshot taken	90	100	100			
4	6-Nov-23 10:35	Physical Stock Count taken	90	100	100	90		
5	6-Nov-23 11:25	Count confirmed	90	90	100	90		Stock count moves to authorization phase, item is discrepant.
6	6-Nov-23 11:30	Sale 10:15 uploaded	90	90	100	90	10	
7	6-Nov-23 11:35	User presses the Apply Late Sales button	90	90	90	90		LaSER is applied to snapshot.
8	6-Nov-23 11:30	Stock count authorized	90	90	90	90		No SOH update is made.

Note: Here the user presses the Apply button during the authorization phase which will apply the late LaSER records to the snapshot. If the user would not have done this, the LaSER record would have generated an inventory adjustment instead.

Use Case 5

In this example, we are going to see what happens if the sale is after the physical count.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:27	Snapshot taken	100	100	100			
3	6-Nov-23 10:35	Physical Stock Count taken	100	100	100	100		
4	6-Nov-23 10:45	Sale=10	90	100				Sale not uploaded.
5	6-Nov-23 11:15	Count confirmed	90	100	100	100		Stock count moves to authorization phase, item is not discrepant.
6	6-Nov-23 11:30	Sale 10:45 uploaded	90	90	100	100	10	
7	6-Nov-23 11:35	User defaults qty	90	90	100	100	10	
8	6-Nov-23 11:30	Stock count authorized	90	90	100	100	10	No SOH update is made, and no late sales adjustment of any kind.

Note: SIOCS will ignore the sale, since the timestamp of the sale is post the time the physical timestamp was taken. This means that the user counted the shopfloor BEFORE a sale was recorded. If SIOCS would have processed a late sale record here by updating the snapshot or creating an inventory adjustment, the SOH would have been reset to 100 which would have been wrong.

This example can also be used to illustrate what would happen if the user actually enters a quantity as an authorization qty.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:27	Snapshot taken	100	100	100			
3	6-Nov-23 10:35	Physical Stock Count taken	100	100	100	100		
4	6-Nov-23 10:45	Sale=10	90	100				Sale not uploaded
5	6-Nov-23 11:15	Count confirmed	90	100	100	100		Stock count moves to authorization phase, item is not discrepant.
6	6-Nov-23 11:30	Sale 10:45 uploaded	90	90	100	100	10	
7	6-Nov-23 11:35	User enters auth qty	90	90	100	90	10	
8a	6-Nov-23 11:40	Stock count authorized	90	80	100	90	10	Because the SS is 100 and auth qty is 90, SOH is reduced by 10.
8b	6-Nov-23 11:40	Stock count authorized	90	90	NA	NA	NA	The 10 LaSER units are added back to SOH as an inventory adjustment.

Note: The user in Step 7 went back to the shopfloor, or revalidated the count and noticed that 10 units too many were counted. Because they entered manually a new qty, the record will get a new timestamp of 11:35. This means that the sales record of 10:45 which was uploaded at 11:30 in this scenario is actually PRIOR to the count timestamp. As such when authorizing, SIOCS will generate late sales inventory adjustments to compensate for double counting the sale reduction in inventory.

Use Case 6

In this example, we are going to see what happens if the sale is after the physical count.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 10:15	Sale=10	90	100				Sale 1 not uploaded.
3	6-Nov-23 10:27	Snapshot taken	90	100	100			
4	6-Nov-23 10:28	Sale 10:15 uploaded	90	90	100		10	
5	6-Nov-23 10:30	Sale=8	82	90	100		10	Sale 2 not uploaded.
6	6-Nov-23 10:35	Physical Stock Count taken	82	90	100	82	10	
7a	6-Nov-23 11:15	Count confirmed	82	90	90	82		LaSER applied, item is marked as discrepant since physical count <> snapshot.
7b	6-Nov-23 11:15	New snapshot is taken	82	90	90	82		Stock count moves to re-count.
8	6-Nov-23 11:30	Sale 10:30 uploaded	82	82	90	82	8	
9	6-Nov-23 11:15	Re-count is con-firmed for 82	82	82	82	82		LaSER applied to SS and item marked as not discrepant.
10	6-Nov-23 11:40	Stock count authorized	82	82	82	82		No discrepancy, no adjustments.

Note: As you may noticed, in this use case the updated snapshot taken in Step 7b is identical to SOH. This may question why a snapshot is retaken for re-counts (except for Unit and Amount counts). The reason could be that a sale was executed and uploaded after the physical count in Step 6. This sale would be ignored since the timestamp would fall after the physical count. However, during the re-count process the user would count physical inventory including that sales data. That necessitates to getting a fresh snapshot.

Daily Sales Processing

Daily sales processing implies that transactions coming into the system have only the date and no timestamp and if this is the setting, SIOCS does not consider the timestamp for any processing even if it is available on the sales records.

The system supports two type of time periods to determine when the stock count was performed:

- Before Store Open
 - If the Stock Count Time Frame is set to Before Store Open, the assumption is that all sales data coming in for the same date or a later date as the count will have happened AFTER the count was physically counted.
 - Example: Stock count is set for 21-Nov-2023, a sale record of 21-Nov-2023 will never be considered for late sale processing since the item had to be sold AFTER the store opened on the 21st. A record of the 20th however would be considered for late sale processing.
- After Store Close
 - If the Stock Count Time Frame is set to After Store Close, the assumption is that all sales data coming in for the same date as the count will have happened BEFORE the count was completed.
 - Example: Count is set for 21-Nov-2023. The sale of the 21st is considered for late sales, while a sale on the 22nd will be considered to have happened after the physical counting process.

Timestamps do not apply if using MFCS, therefore if MFCS is implemented, Daily Sales Processing must be used for Unit and Amount counts. Furthermore, if executing a Unit and Amount stock count and MFCS is implemented, the timeframe must be set to After Store Close. In this case, the snapshot should be taken after all transactions have occurred for the previous day.

For Unit and Amount counts, MFCS will update its snapshot with any transactions happening on or before the date of the stock count. It is important that no receipt or shipments are confirmed after counting started. SIOCS will not update the snapshot with such transactions, however MFCS will update the snapshot assuming that the shipment happened before any physical count.

For Daily Sales Processing, the system must consider the schedule date as the last approved stock count date. The snapshot for the initial count and the snapshot for the recount should always look to the schedule date when using Daily Sales Processing. SIOCS will still record the dates of the snapshots, physical timestamp, and authorization timestamp but when using Daily Sales Processing, it will always use the schedule date when determining late sales.

Note: Late sales inventory adjustments are not sent to MFCS for Unit and Amount counts since MFCS will make its own adjustments based on the idea that the Unit and Amount count will be completed after the store is closed.

Before Store Open Late Sales Rules

1. Any sale transactions that are processed before the stock count date and the count is not authorized, the system must update the SOH and the snapshot is retaken moving from count to re-count for discrepant items.
2. If using Before Store Open, the assumption is that any sales that happen on the same date as the count date or later, the system will assume the sale happened after the item was physically counted. Therefore, no late sales processing will happen.
3. Any sales transactions that are processed after the stock count approval and the sales date is before the schedule count date, the system applies late sale and inventory is adjusted to avoid double counting.

For example, if Store A had 10 units after the count of a 13" TV on Monday and sold 3 units on Monday during the day, the SOH will be updated to 7 when processing the sales record. SIOCS will assume the stock count was performed before the sale so SIOCS will keep the SOH at 7 units. Late sales processing will not occur in this case.

After Store Close Late Sales Rules

1. For Unit and Amount counts using Daily Sales Processing and After Store Close, the snapshot should be taken after all transactions have occurred for the scheduled day.
2. If a stock count is open when sales are loaded and the sales date is for the same date or a date earlier as an open stock count, late sales processing should be executed.
3. If sales are loaded after the stock count is completed and the sales date is before or equal to the scheduled stock count date, late sales processing will be undertaken. An inventory adjustment is used to reverse the sales posted to eliminate the double counting.

Before Store Open versus After Store Close

We will now explain the difference between these two timeframes in detail with some examples:

1. Where we see the difference between Before Store Open and After Store Close is when the sale date is the same as the stock count date.
2. If using Before Store Open, the assumption is that any sales that happen on the same date as the count date or later, the system will assume the sale happened after the item was physically counted. Therefore, no late sales processing will happen.
3. If using After Store Close, the assumption is that any sales that happened on the same date as the count date will assume the sale happened before the item was physically counted. Late sale processing will be executed.

Now that we have covered the settings in detail, we will walk through an example where Daily Sales Processing is in place.

Use Case 1

This is a simple example of a sale happening and daily sales processing is set to after store close.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 16:00	Sale=10	90	100				Sale not uploaded.
3	6-Nov-23 21:00	Snapshot taken	90	100	100			
4	6-Nov-23 21:35	Physical Stock Count taken	90	100	100	90		
5	6-Nov-23 22:00	6-Nov-23 Sale uploaded	90	90	100	90	10	
6	6-Nov-23 23:15	Count confirmed	90	90	90	90	0	Stock count moves to authorization phase, item is not discrepant since snapshot is updated with late sales.
7	7-Nov-23 9:30	Stock count authorized	90	90	90	90	0	No SOH update is made.

Note: As you may notice in this example, it works identical to timestamp processing with the exception that the sale record itself did not contain a timestamp. Let us see if the date would be 7-Nov.

Step	Date/Time	Event	Physical Inventory	SOH	Snapshot	Count	LaSER	Remarks
1	6-Nov-23 10:00		100	100				
2	6-Nov-23 22:25	Snapshot taken	100	100	100			
3	6-Nov-23 22:35	Physical Stock Count taken	100	100	100	100		
4	7-Nov-23 09:10	Sale=10	90	100	100	100		Sale not uploaded.
5	7-Nov-23 11:00	7-Nov-23 Sale uploaded	90	90	100	100	10	
6	7-Nov-23 11:15	Count confirmed	90	90	100	100	0	Stock count moves to authorization phase, item is not discrepant since snapshot did not need updating.
7	7-Nov-23 11:30	Stock count authorized	90	90	100	100	0	No SOH update is made.

Note: The snapshot was not updated since the sales transaction was from the day after the schedule date of the count (after store close).

Other Late Sale Transactions

Most of this document covers transactions related to late sales. However, several additional transactions will be processed as a late sale because they happened before the SOH was updated, but were uploaded post the snapshot taking. They follow the same pattern. They will generate a late sales inventory adjustment and be written as a LaSER.

Those transactions fall into four groupings:

1. Inventory adjustments will automatically be evaluated for late sales processing when approved. Internal made adjustments have a warning that completing them will potentially impact the stock count. This warning is provided on the authorization screen and the inventory adjustment screen. This can be configured to be turned off. It is user discretion to determine if an Inventory Adjustment should be approved or not. If it is approved, the adjustment will update the SOH, but also write a LaSER record. A few considerations when approving inventory adjustments manually through the UI:
 - a. When approving the adjustment, the SOH will be updated. So if a re-count is expected, a new snapshot will be taken for the discrepant items on the unit count, which means no additional work will be needed. However, if doing a Unit and Amount count, and approving a manual adjustment, it could create a discrepancy between what is on the shelf and what was counted. The re-count will not include the new SOH, while the user may include the additional units during the re-count process.
 - b. Best Business Practice is to not perform inventory adjustments until after the count is completed.
 - c. Inventory adjustment will be processed as a late sales record based on the adjust date.
2. Externally-generated DSD Receiver Unit Adjustments (RUA) are also evaluated for late sales processing. Internal RUA are ignored by the counting process, similar to the shipping and receiving processes:
 - a. RUA using late sale Inventory Adjustment codes
 - b. Opens a stock count LaSER
 - c. Uses the receipt date of the original receipt

3. Layaway transactions is the latest addition to late sales processing. These transactions are technically a fulfillment record. However, when the item is handed over to the customer it does impact inventory positions since processing this transaction could also be delayed. As such these transactions are also evaluated as a potential late sale candidate generating LaSER or Inventory Adjustment records.
4. Web orders are processed similar to Layaway. If the web order fulfillment date/time is prior to a closed stock count, a late sales Inv. Adj. will be generated. If a stock count is in progress, a LaSER record will be generated.

Late Sales Inventory Adjustment Codes

These codes are used when the POS transactions are processed and an inventory adjustment is generated for late sales. These apply to POS transactions, Layaway, and Customer Order Fulfillment.

Code	Description	Disposition	Remarks
76	Unit Late Sales Increase SOH	+Stock On Hand	Positive Inventory Adjustment to the SOH for Unit, Problem Line, and Ad Hoc stock counts. Applies to Sale, Return Void, and Return Delete transactions.
77	Unit Late Sales Decrease SOH	-Stock On Hand	Negative inventory adjustment to the stock on hand for Unit, Problem Line, and Ad Hoc stock counts. Applies to Return, Sale Delete, and Sale Void transactions.
78	Unit and Amount Late Sales Increase SOH	+Stock On Hand	Positive Inventory Adjustment to the SOH for Unit and Amount stock counts. Applies to Sale, Return Void, and Return Delete transactions.
79	Unit and Amount Late Sales Decrease SOH	-Stock On Hand	Negative inventory adjustment to the stock on hand for Unit and Amount stock counts. Applies to Return, Sale Delete, and Sale Void transactions.

These codes are used when a receiver unit adjustment or inventory adjustment triggers late sales inventory adjustments.

Code	Description	Disposition	Remarks
184	Unit Late Inventory Adjustment Increase SOH	+Stock On Hand	Positive Inventory Adjustment to the SOH for Unit, Problem Line, and Ad Hoc stock counts.
185	Unit Late Inventory Adjustment Decrease SOH	-Stock On Hand	Negative inventory adjustment to the stock on hand for Unit, Problem Line, and Ad Hoc stock counts.
186	Unit and Amount Late Inventory Adjustment Increase SOH	+Stock On Hand	Positive Inventory Adjustment to the SOH for Unit and Amount stock counts.
187	Unit and Amount Late Inventory Adjustment Decrease SOH	-Stock On Hand	Negative inventory adjustment to the stock on hand for Unit and Amount stock counts.

Integration

Late sales events can be categorized as two kinds:

- They are processed as part of the stock count.
- They are processed outside of the stock count and generate a late sales inventory adjustment.

External systems will be notified when SIOCS produces late sales inventory adjustments, except when the stock count is related to a Unit and Amount count. For Unit and Amount counts, the external system is responsible for managing their own stock count impacts.

Those LaSER records processed during the stock count will not produce any inventory adjustments since they are managed as part of the count. However, if a LaSER record is processed at the end of the authorization process, an inventory adjustment will be communicated as well if not a Unit and Amount count.

Things to Remember

Sl. Number	Description	Remarks
1	If MFCS is implemented, the supported configuration is Daily Sales Processing. For Unit and Amount, the time frame setting must be After Store Close.	
2	For Daily Sales Processing, the stock count schedule date is what is considered to determine whether a sale is a late sale or not.	
3	The late sale processing logic for Timestamp and Daily sales processing is identical, with the exception of looking at the date and time frame for daily sales versus timestamp for Time Stamp processing.	
4	The logic for the Before store open and After store close is also different. If the Stock Count Time frame is set to Before Store Open, the assumption is that all sales data coming in for the same date or a later date as the count, will have happened AFTER the items were physically counted.	
5	Late Sale Inventory adjustments are not sent to MFCS for Unit and Amount counts.	
6	For Unit and Amount counts, it is possible to start the stock count prior to taking a snapshot. However, this assumes that the inventory counted does not have any inventory transaction against it. For example, selling and shipping. This feature is usually leveraged to count the backroom or demo stock which can be easier to control.	

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