Inventory Count & Recon – Points Discussed

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The following Team Members were present in this meeting via conference call:

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1. **SAP Part and MES Part**

In order to implement Inventory Counting & Reconciliation, there are some action items required to be completed at SAP as well as MES / LES end. The counting of physical inventory will be done in MES / LES. After having executed such counting, Book Stocks in SAP (at Storage Location level), Book Stocks in MES / LES (at Warehouse Location + Container (or LU) level) and Physical Stock (actually present inside LU’s located at any Warehouse Location) will all get in **sync**.

1. **MES Inventory Delta**

This will always be computed as follows in MES / LES.

There will be three conditions on the basis of the mathematical sign of this MES Δ.

* Positive Sign 🡪 There is inventory loss or missing inventory. So Stock Adjustment is required.
* 0 (no Sign) 🡪 Book Stock is same as Physical Stock. So no Stock Adjustment is required.
* Negative Sign 🡪 There is inventory gain. So Stock Adjustment is required.

1. **SAP Inventory Query and Update**

During Counting, after the necessary Business Processes are completed, the following values will be available in MES / LES:

* Current MES Book Stock of LU as per MES / LES
* Physical Stock of LU practically counted by the Operator
* MES Δ computed by MES / LES

Now MES / LES will send a Request Message called **“Inventory Query”** to SAP at Storage Location level. SAP will send a Response Message called **“Inventory Value”** at Storage Location level, which will contain the “Current SAP Book Stock” as maintained by SAP.

Then MES / LES will compute “New SAP Book Stock” as under:

After this, MES / LES will send a **“Stock Update”** message to SAP with Storage Location and the New SAP Book Stock computed above. Even when, the MES Δ is 0, MES / LES will send a **“Stock Update”** message with New SAP Book Stock that will be the same as Current SAP Book Stock. Then SAP will respond with **“Stock Update Acknowledge”** message. This **“Stock Update Acknowledge”** will be of two types as explained below:

* Positive Acknowledgement 🡪 Complete and close a Counting Transaction and related Counting Document at MES / LES end. Update the Book Stock with Physically Counted Stock in MES / LES at LU level, provided when the MES Δ is non-zero.
* Negative Acknowledgement 🡪 Cancel the Counting Transaction and related Counting Document at MES / LES end. Do NOT update the Book Stock in MES / LES. Trigger Recounting process in MES / LES.

1. **Configurations in MES / LES**

To enable Inventory Counting & Reconciliation in MES / LES, we need to perform the following configurations. These features are already available in any standard DELMIA Apriso FlexNet installation. We just need to enable them, configure, and start using.

* SAP Storage Location (at MES Warehouse level OR at MES Warehouse Location level OR at Product level). **Decision is required from KONE Business and SAP Experts about selection of the level for SAP Storage Location. Depends on how SAP template is configured.**
* Counting Frequencies (At MES Facility OR MES Warehouse OR MES Warehouse Location OR Product). **Decision is required from KONE Business about the selection of level for Count Frequencies.**
* Counting Procedures (At MES Warehouse level).
* ERP Material Stocks (At MES Warehouse level).
* “Inventory Query” Outbound Message. **Does SAP have any standard Message Structure?**
* “Inventory Value” Inbound Message. **Does SAP have any standard Message Structure?**
* “Stock Update” Outbound Message. **Does SAP have any standard Message Structure?**
* “Stock Update Acknowledge” Inbound Message. **Does SAP have any standard Message Structure?**
* Inventory Counting & Reconciliation Documents. It is recommended to follow Apriso-standard best practices and procedures.

1. **Cycle Counting Task Lists and Reminders**

The MES / LES System can check the Counting Calendar as per the preconfigured settings for each Product and suggest all Products that are due for counting at any date. It can also generate automatic Counting Reminders.

Time interval required for Counting can be configured. However, care must be taken that for the duration of Counting activity, the associated Warehouse Locations and LUs must be blocked and no material movements should take place.

1. **ABC flag and ABC class**

Alike SAP, MES / LES also have provision to define ABC Flag and ABC Classes. These are generally defined in SAP and downloaded in MES / LES via MATMAS interface. Since we are using the same KM Code in SAP as well as MES, consequently their behavior will be the same.

ABC Classes can also be specified in Apriso by making our own definition. It all depends on how we customize it. **Business decision is required from KONE.**

1. **Product Characteristics / Unit Characteristics**

Product Characteristics / Unit Characteristics feature of Apriso can be used at various levels to define monetary aspects of ABC Classes and their behavior in Cycle Counting process. Once all these configurations are done, the process of Counting can be automated in MES with the help of Counting Documents.