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**trytond***stockDocumentation*

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The stock module defines fundamentals for all stock management situations: Locations where products are stored, moves between these locations, shipments for product arrivals and departures and inventory to control and update stock levels.



Locations are generic places where products are physically or virtually stored. The following location types are defined:

- Storage

Storage locations define real places where products are stored.

- Warehouse

Warehouses are meta-locations which define input, storage, picking and output locations. These locations are all of type Storage. Input and Output are locations where incoming and outgoing products are temporarily stored awaiting transportation. The storage location is often the biggest location where products are stored for middle or long periods of time. The picking location is optionally where the products are picked by the customer shipment otherwise the storage location is used.

- Customer

Customer locations are virtual locations accumulating products that have been sent to customers.

- Supplier

Supplier locations are virtual locations accumulating products that have been received from suppliers.

- Lost And Found

Lost And Found locations collect inventory gaps. See :ref:inventory for details.

- Drop

Drop locations are virtual locations used as intermediary locations in the process of drop shipping.

- Production

Production locations are used during the production of products.

- View

View locations are virtual locations that can be used to logically group other location types.

Locations are organised in tree structures, allowing to define fine grained structures. It is possible to restrict a location to have only one level of children, this allows to improve the performance of the stock quantity computation.

## 1.1 Location Lead Time

It allows to define the time needed for an *Internal Shipment* between two warehouses.



A move is a movement of a product in a given quantity between two locations. It may eventually defines a unit price and a currency for the products that are moved from or to another company, allowing to compute stock value at any time (and to update the cost prices if the chosen cost price method is *Average*). A move also defines a planned date (when one plan to do the move) and an effective date (when the move is actually made). Products that are used in stock move must of of type *Goods* or *Assets*. Stock levels are ignored for consumable, this means that they can be always assigned. *Service* products are ignored by the stock module.

A move can be in one of this states:

- Draft  
The initial state, used when the move is created and to define future stock movement that are planned, but still subject to modifications.
- Assigned  
An assigned move allow to reserve some products. Thus preventing other user to assign them.
- Done  
The move is in state Done when the real movement is made.
- Cancel  
A cancelled move will be ignored by the system. Only Draft or Assigned move can be cancelled. To revert a move in state Done, an opposite move must be created.
- Staging  
A phantom state used to create in advance move that should not be taken for stock computation.

## 2.1 Product Quantities

Product quantities on each location are the sum of all moves coming from or going to this location. For quantities that are computed for a date in the past, only confirmed moves (i.e. in state Done) with an effective date inferior to the

considered date are taken into account, reflecting the real situation. For future quantities, Draft and Assigned move with a planned date greater than today and smaller than the given date are also summed.

A Shipment define a group of moves happening at the same date and around the same location.

### 3.1 Supplier Shipment

A supplier shipment is used when products are received from a supplier. It is mainly composed of a party (the supplier), a location (the warehouse in which the products are coming) and two list of moves:

- Incoming moves  
The moves between the supplier location and the input location (as defined on the warehouse).
- Inventory moves  
The inventory moves are between the input location and the storage location (or one of his child locations).

The supplier shipment can be in one of this states:

- Draft  
Incoming moves and inventory moves (if they exist) are in draft.
- Received  
Incoming move are set in state Done, inventory moves are created if necessary.
- Done  
Inventory and incoming moves are in state Done.
- Cancel  
All moves are cancelled.

## 3.2 Customer Shipment

A customer shipment is used for sending products to customer. It is mainly composed of a party (the customer), a location (the warehouse out of which the product are going) and two list of moves:

- Inventory moves

The moves between the picking or storage location and the output location of the warehouse

- Outgoing moves

The moves between the output location of the warehouse and a customer location.

If the picking or storage location is configured as the same as the output location, then only outgoing moves are created and no assignation is done.

The customer shipment can be in one of this states:

- Draft

Outgoing moves and inventory moves (if they exist) are in draft.

- Waiting

When a customer shipment is set to waiting, the inventory moves are created (or completed) to balance the outgoing moves. The waiting state also means that the shipment should be processed.

- Assigned

The assigned state is when products have been assigned (or reserved) from the storage locations.

- Packed

The packed state is when the inventory moves have been made, i.e when the products have been physically moved to the outgoing locations.

- Done

The shipment is Done when the outgoing moves have been made, e.g. when a truck left the warehouse.

- Cancel

A shipment which is not yet completed (not in state Done) can be cancelled at any time. This also cancel all the moves.

## 3.3 Internal Shipment

An internal shipment is used for sending products across locations inside the company. It is mainly composed of two locations and a list of moves. It can be in one of these states:

- Draft

The moves (if they exist) are in draft.

- Waiting

The waiting state means that the shipment should be processed.

- Assigned

The assigned state is when products have been assigned.

- Done

The shipment is Done when the moves have been made.

- Cancel

A shipment which is not yet completed (not in state Done) can be cancelled at any time. This also cancel all the moves.



## CHAPTER 4

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### Inventory

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Inventories allow to control and update stock levels. They are mainly composed of two locations (a Storage location and a Lost And Found location), and a list of inventory lines. A button allow to auto-complete inventory lines with respect to the expected quantities for each product in the location. Inventory lines consist of: a product and it's default unit of measure, an expected quantity and the real quantity (the real products on the shelves).

When the inventory is confirmed, moves are created to balance expected quantities and real ones.

**Warning:** Inventory is not suited to import initial stock level especially if other cost price method than *fixed* is used. Individual moves from supplier to each locations must be used with the cost price as unit price.