Transit Warehousing (2) - Processes and Exception Handling
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<th>Document Version</th>
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<td>Final version, November 2015</td>
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Scenario: Transit Warehousing (2)

You can use this business scenario to integrate warehouse execution with freight forwarding operations using SAP Extended Warehouse Management (SAP EWM) and SAP Transportation Management (SAP TM). In Transit Warehousing, you receive cargo from shippers based on inbound planning from SAP TM. You consolidate cargo with the same destination in your transit warehouse before you ship it to the next location of the transportation chain or deliver it to the final consignee, based on outbound planning from SAP TM. You manage cargo as handling units (HUs) and keep cargo information directly in the documents used in the warehouse. The transit warehouse is structured in such a way that you put away HUs with the same destination country or region on the same storage bin, where they are available for the shipment to the next location or to the consignee. With the next outbound plan sent by SAP TM, you either load the HUs directly from the staging area used for putaway, or you stage the HUs before loading them onto a vehicle. In transit warehouses near airports or seaports (gateways), you load the HUs onto unit load devices (ULDs) or into containers before shipping them. During these processes, SAP EWM informs SAP TM about the major steps performed in the transit warehouse, such as arrival at checkpoint, departure from checkpoint, and receiving or loading completion.

Integration

The business scenario Transit Warehousing (2) is integrated in the LCL Air Freight scenario and in the LCL Ocean Freight scenario from SAP TM. It is an extension of business scenario Transit Warehousing, in which only the first transit warehouse of the LCL Air Freight transportation chain is managed with SAP EWM. In this business scenario, all transit warehouses along the transportation chain are managed with SAP EWM.

Prerequisites

See business scenario Transit Warehousing

Warehouse Structure and Master Data

In this scenario, all transit warehouses have the same warehouse structure and use the same master data.

2 Processes in the LCL Air Freight Scenario

The LCL Air Freight scenario contains the following processes, executed in the following warehouses:

<table>
<thead>
<tr>
<th>Step</th>
<th>Process</th>
<th>Warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Receiving from Shipper</td>
<td>J PTY (Tokyo, Japan)</td>
</tr>
<tr>
<td>2</td>
<td>Shipping to Next Transit Warehouse</td>
<td>J PTY (Tokyo, Japan)</td>
</tr>
<tr>
<td>3</td>
<td>Receiving from Transit Warehouse</td>
<td>J PNR (Narita, Japan)</td>
</tr>
<tr>
<td>4</td>
<td>Loading Cargo onto ULD</td>
<td>J PNR (Narita, Japan)</td>
</tr>
<tr>
<td>5</td>
<td>Shipping ULD to Airport</td>
<td>J PNR (Narita, Japan)</td>
</tr>
<tr>
<td>6</td>
<td>Receiving and Unloading ULD</td>
<td>USLA (Los Angeles, USA)</td>
</tr>
<tr>
<td>7</td>
<td>Shipping to Next Transit Warehouse</td>
<td>USLA (Los Angeles, USA)</td>
</tr>
<tr>
<td>8</td>
<td>Receiving from Transit Warehouse</td>
<td>USPH (Phoenix, USA) or USSA (San Diego, USA)</td>
</tr>
<tr>
<td>9</td>
<td>Shipping to Consignee</td>
<td>USPH (Phoenix, USA) or USSA (San Diego, USA)</td>
</tr>
</tbody>
</table>

The first two processes are identical to the processes from business scenario Transit Warehousing.

The processes described in this scenario interact with each other and build a consistent flow: cargo received in the inbound process is shipped in the outbound process.

The business process descriptions include not only the system and user activities, but also the physical activities in the warehouse. For this reason, some process steps are not carried out in the system.
2.1 Process: Receiving from Shipper

You use this business process to receive cargo from a shipper in a transit warehouse managed with SAP Extended Warehouse Management (SAP EWM). After the creation of a forwarding order and of a pick-up freight order from the shipper to the transit warehouse, SAP Transportation Management (SAP TM) sends the inbound planning information to SAP EWM. When the truck arrives, you identify the freight order in SAP EWM and post the arrival at checkpoint. The truck drives to a door and you unload the cargo, which is usually packed on pallets. After unloading, you identify the handling units (HUs) based on the inbound plan sent by SAP TM. You attach an HU label to them, for example, a house airway bill (HAWB) label containing shipper and consignee information. The truck leaves the door and you post the departure from the checkpoint. You then put away HUs with the same destination country in the same storage bin, where they are available for the shipment to the next location or to the consignee. HUs with special attributes, such as overdimensional cargo or high-value cargo, are put away separately. In this process, SAP EWM informs SAP TM about arrival at checkpoint, receiving completion, and departure from checkpoint. The notification of receiving completion includes information about the single HUs.

Process

This business process runs as follows:

1. Create forwarding order (SAP TM)
   A customer service agent creates a forwarding order for the transportation of cargo from a shipper to a consignee. The cargo is to be picked up from the shipper and transported to the consignee via transit warehouses managed with SAP EWM. SAP TM creates freight units based on the forwarding order.

2. Create freight order for pick-up (SAP TM)
   The transportation planner carries out the transportation planning for the freight units. This creates a freight order for transporting cargo from the shipper’s location to the first transit warehouse. The transportation planner communicates with a carrier. He or she assigns the carrier to the freight order in SAP TM, and communicates the freight order number to the carrier.

3. Pick up packages from shipper (SAP TM)
   The carrier picks up the cargo from the shipper’s location and informs a capacity manager, who sets the status of the current stage of the freight order to ‘Departed’ in SAP TM. When the transportation planning is complete, the transportation planner sends an unloading request message containing freight order information to SAP EWM. (This step can be done automatically.) SAP EWM automatically creates a vehicle, a transportation unit (TU), an inbound delivery, and HUs. The HUs are assigned to the TU.

4. Truck arrives at checkpoint (SAP EWM)
   When the truck arrives, the truck driver gives the receiving office clerk the freight order reference. The receiving office clerk selects the freight order in SAP EWM. He or she assigns a free door to the TU, sets the status ‘Docked at Door’, and tells the truck driver to drive to the assigned door. SAP EWM automatically prints HU labels to prepare for the receiving of HUs. In addition, SAP EWM sends an unloading notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ‘Arrived’.
   In this step, you can also print an unloading list in SAP TM (optional).

5. Unload truck and receive packages (SAP EWM)
   A warehouse worker unloads the packages from the truck to the inbound staging area behind the door. A warehouse worker then receives the HUs using a radio frequency (RF) device. He or she identifies the packages, attaches an HU label to each package, and scans the label. He or she enters the weight and dimensions of the packages. The system automatically posts goods receipt in SAP EWM for each received HU. With the last HU, the warehouse worker confirms the receiving completion in SAP EWM, which triggers the sending of an unloading notification message containing the received HUs to SAP TM. SAP TM updates the freight order and freight units.

6. Truck leaves (SAP EWM)
   The truck leaves the door and the premises. The receiving office clerk confirms the departure from the checkpoint, and therefore from the door. SAP EWM sends an unloading notification message for departure from checkpoint to SAP TM. SAP TM updates the execution status of the freight order.

7. Putaway HUs (SAP EWM)
   The warehouse worker chooses the equipment necessary for the putaway, for example, a forklift truck and an RF device, and logs on as a resource. He or she then picks an HU from the inbound staging area and scans its label. The system automatically creates a warehouse order and proposes a destination bin. The warehouse worker brings the package to the destination bin and confirms the putaway. He or she proceeds in the same way with all HUs until the inbound staging area is empty.
### Receive from Shipper

<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong>&lt;br&gt;Create Forwarding Order (TM)</td>
<td>Customer service agent creates a forwarding order (from shipper to consignee)</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong>&lt;br&gt;Create Freight Order for Pick Up (TM)</td>
<td>Transportation planner creates a freight order (from shipper to TW)</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong>&lt;br&gt;Pick-Up Packages from Shipper (TM)</td>
<td>Capacity manager confirms the pick-up of the freight order</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation planner sends an unloading request message to EVM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system creates a transportation unit (TU), on inbound delivery and HUs in EVM</td>
</tr>
<tr>
<td><strong>Step 4</strong>&lt;br&gt;Truck arrives at Checkpoint (EWM)</td>
<td>GR office clerk identifies TU, assigns TU to door and sets status 'Docked at door'</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system prints unloading list for TU and HU labels (or HAWB labels)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EVM system sends an unloading notification message for arrival at checkpoint to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status arrived)</td>
</tr>
<tr>
<td><strong>Step 5</strong>&lt;br&gt;Unload Truck and Receive Packages (EWM)</td>
<td>Warehouse worker unloads packages from truck</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse worker attaches HU labels to packages on inbound staging area</td>
<td>Warehouse worker scans HU labels and enters weight/dimensions of packages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms receiving completion for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EVM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order and freight units</td>
</tr>
<tr>
<td><strong>Step 6</strong>&lt;br&gt;Truck Leaves (EWM)</td>
<td>Truck leaves</td>
<td>GR office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EVM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td><strong>Step 7</strong>&lt;br&gt;Putaway HUs (EWM)</td>
<td>Warehouse worker brings HUs to destination bin</td>
<td>Warehouse worker scans HU label</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EVM system creates putaway WO and proposes a destination bin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms putaway WOs</td>
</tr>
</tbody>
</table>
2.2 Process: Shipping to Next Transit Warehouse

You use this business process to ship cargo from your transit warehouse to the next location in the transportation chain. After the creation of a pre-carriage freight order, SAP Transportation Management (SAP TM) sends the outbound planning information to SAP Extended Warehouse Management (SAP EWM). When the truck arrives, you identify the freight order in SAP EWM and post the arrival at checkpoint. The truck arrives at a door. You load the requested handling units (HUs) directly from their storage bin, or you stage the HUs to a staging area first before loading them onto the truck. The truck departs from the door and you post the departure from the checkpoint. In this process, SAP EWM informs SAP TM about arrival at checkpoint, loading completion, and departure from checkpoint. The notification of the loading completion includes information about the loaded HUs. In this process, you print the waybills in SAP TM before handing them over to the truck driver.

Process

This business process runs as follows:

1. Create freight order (SAP TM)
   The transportation planner carries out the transportation planning for the freight units. This creates a freight order for transporting the cargo to the next location. He or she assigns the carrier to the freight order in SAP TM, and communicates the freight order number to the carrier.

2. Send loading request to transit warehouse (SAP TM)
   When the transportation planning is complete, the transportation planner sends a loading request message to SAP EWM. (This step can be done automatically.) SAP EWM automatically creates a vehicle, a transportation unit (TU), an outbound delivery order, and planned HUs. The planned HUs are assigned to the TU.

3. Truck arrives at checkpoint (SAP EWM)
   When the truck arrives, the truck driver gives the shipping office clerk the freight order reference. The clerk selects the freight order in SAP EWM. He or she assigns a free door to the TU, sets the status ‘Docked at Door’, and tells the truck driver to drive to the assigned door. SAP EWM sends a loading notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ‘Arrived’.

   With the arrival at checkpoint, SAP EWM creates staging warehouse tasks (WTs) for HUs that must be staged (optional). The system gathers the WTs into warehouse orders (WOs) to optimize the picking. The system assigns the WOs to one or more queues according to specific criteria, such as the activity area and the type of resource necessary to access the storage bins.

4. Stage HUs (optional) (SAP EWM)
   A warehouse worker picks and stages the HUs to the outbound staging area using a radio frequency (RF) device. For this purpose, he or she chooses the equipment necessary for the picking, for example, a forklift truck and an RF device. He or she logs on to the system as a resource. He or she receives the first WO of the queue he or she is assigned to on the RF device, drives to the source bin of the first WT displayed on the RF device, picks the first HU from the source bin, and scans its label. He or she drops the HU at the staging area and scans the staging bin to confirm this step in the system.

   He or she proceeds in the same way with all requested HUs.

5. Load truck (SAP EWM)
   A warehouse worker begins to load the truck from the staging area. This step is carried out using an RF device.

   The warehouse worker chooses the equipment necessary for the loading, for example, a forklift truck and an RF device, and logs on as a resource. He or she scans the door bin to start the loading of the TU in the system. He or she then picks an HU from the staging area and scans its label. He or she loads the HU onto the truck and proceeds with the next HU until the staging area is empty. He or she checks for HUs from other areas that have not yet been loaded, for example, high-value or overdimensional cargo, and picks and loads these as well. With the last HU, the warehouse worker confirms the loading completion in SAP EWM. This triggers the sending of a loading notification message containing the loaded HUs to SAP TM. SAP TM updates the freight order and freight units.

   In this step, you can also print a road waybill in SAP TM (optional).

6. Truck leaves (SAP EWM)
   The truck leaves the door and the premises. The shipping office clerk confirms the departure from the checkpoint, and therefore from the door. SAP EWM posts the goods issue and sends a loading notification message for departure from checkpoint to SAP TM. SAP TM updates the execution status of the freight order.
<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create Freight Order (TM)</td>
<td>Transportation planner creates a freight order from TW1 to TW2.</td>
</tr>
<tr>
<td>2</td>
<td>Send Loading Request to TW (TM)</td>
<td>Transportation planner sends a loading request message to EWM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system creates a transportation unit (TU), an outbound delivery order</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and assigns planned HUs to ODOS in EWM.</td>
</tr>
<tr>
<td>3</td>
<td>Truck Arrives at Checkpoint (EWM)</td>
<td>Truck arrives at checkpoint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Truck driver goes to shipping office.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Truck docks at door.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>With the arrival at checkpoint, the EWM system creates staging WOs for HUs that</td>
</tr>
<tr>
<td></td>
<td></td>
<td>must be staged, e.g. OOG.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message for arrival at</td>
</tr>
<tr>
<td></td>
<td></td>
<td>checkpoint to TM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status arrived).</td>
</tr>
<tr>
<td>4</td>
<td>Stage HUs (optional) (EWM)</td>
<td>Warehouse worker picks and stages HUs to outbound staging area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms stage WOs.</td>
</tr>
<tr>
<td>5</td>
<td>Load Truck (EWM)</td>
<td>Warehouse worker picks and loads HUs directly from outbound staging area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker scans HU labels upon loading.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker queries for not yet loaded HUs from other areas (e.g. high</td>
</tr>
<tr>
<td></td>
<td></td>
<td>value).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the last HU is loaded, the system closes the TU.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends a loading notification message to TM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order and freight units.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system prints road waybill for freight order.</td>
</tr>
<tr>
<td>6</td>
<td>Truck leaves (EWM)</td>
<td>Truck leaves.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shipping office clerk sets departure from checkpoint for TU.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system posts goods issue.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends a loading notification message to TM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed).</td>
</tr>
</tbody>
</table>
2.3  Process: Receiving from Transit Warehouse

You use this business process to receive cargo from a transit warehouse in a transit warehouse managed with SAP Extended Warehouse Management (SAP EWM). After departure of a truck from the previous transit warehouse, SAP Transportation Management (SAP TM) sends the inbound planning information to SAP EWM based on the pre-carriage freight order. When the truck arrives, you identify the freight order in SAP EWM and post the arrival at checkpoint. The truck docks to a door, and you unload the handling units (HUs). After unloading, you receive the HUs by scanning the attached label. The truck leaves the door and you post the departure from the checkpoint. You then put away HUs with the same destination country on the same storage bin, where they are available for the main carriage to the next location. In this process, SAP EWM informs SAP TM about arrival at checkpoint, receiving completion and departure from checkpoint.

Process

This business process runs as follows:

1. Send unloading request message to next transit warehouse (SAP TM)
   
   With the departure from the previous transit warehouse, the transportation planner sends an unloading request message containing freight order information to SAP EWM. (This step can be done automatically). SAP EWM automatically creates a vehicle, a transportation unit (TU), an inbound delivery and HUs. The HUs are assigned to the TU.

2. Truck arrives at checkpoint (SAP EWM)
   
   When the truck arrives, the truck driver gives the receiving office clerk the freight order reference. The receiving office clerk selects the freight order in SAP EWM. He or she assigns a free door to the TU, sets the status ‘Docked at Door’, and tells the truck driver to drive to the assigned door. SAP EWM sends an unloading notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ‘Arrived’.

3. Unload truck and receive packages (SAP EWM)
   
   A warehouse worker unloads the HUs from the truck to the inbound staging area behind the door. A warehouse worker then receives the HUs by scanning the label with a radio frequency (RF) device. The system automatically posts goods receipt in SAP EWM for each received HU. With the last HU, the warehouse worker confirms the receiving completion in SAP EWM, which triggers the sending of an unloading notification message containing the received HUs to SAP TM. SAP TM updates the freight order and freight units.

4. Truck leaves (SAP EWM)
   
   The truck leaves the door and the premises. The receiving office clerk confirms the departure from the checkpoint and therefore from the door. SAP EWM sends an unloading notification message for departure from checkpoint to SAP TM. The SAP TM system updates the execution status of the freight order.

5. Putaway HUs (SAP EWM)
   
   The warehouse worker chooses the equipment necessary for the putaway, for example, a forklift truck and an RF device, and logs on as a resource. He or she then picks an HU from the inbound staging area and scans its label. The system automatically creates a warehouse order and proposes a destination bin. The driver brings the package to the destination bin and confirms the putaway. He or she proceeds in the same way with all HUs until the inbound staging area is empty.
### Receive from Transit Warehouse

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<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Send Unloading Request to TW (TM)</td>
<td>With the “departed” status of freight order, the TM system sends an unloading request message to EWM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system creates a transportation unit (TU), an inbound delivery and planned HUs in EWM.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Truck arrives at Checkpoint (EWM)</td>
<td>GR office clerk identifies TU, assigns TU to door and sets status “docked at door”.</td>
</tr>
<tr>
<td></td>
<td>Truck docks at door</td>
<td>The EWM system sends an unloading notification message for arrival at checkpoint to TM.</td>
</tr>
<tr>
<td></td>
<td>Truck arrives at checkpoint</td>
<td>The TM system updates freight order (status arrived).</td>
</tr>
<tr>
<td>Step 3</td>
<td>Unload Truck and Receive Packages (EWM)</td>
<td>Warehouse worker unloads HUs from truck.</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker scans HU labels on inbound staging area</td>
<td>The system posts goods receipt for the received HUs.</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker confirms receiving completion for TU</td>
<td>The EWM system sends an unloading notification message to TM.</td>
</tr>
<tr>
<td></td>
<td>The TM system sends an unloading notification message to TM</td>
<td>The TM system updates freight order and freight units.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Truck Leaves (EWM)</td>
<td>GR office clerk sets departure from checkpoint for TU.</td>
</tr>
<tr>
<td></td>
<td>Truck leaves</td>
<td>The EWM system sends an unloading notification message to TM.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed).</td>
</tr>
<tr>
<td>Step 5</td>
<td>Putaway HUs (EWM)</td>
<td>Warehouse worker scans HU label.</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker brings HUs to destination bin</td>
<td>The EWM system creates putaway WO and proposes a destination bin.</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker confirms putaway WOs</td>
<td>Warehouse worker confirms putaway WOs.</td>
</tr>
</tbody>
</table>
2.4 Process: Loading Cargo onto ULD

You use this business process to load cargo onto unit load devices (ULDs) in a transit warehouse (exporting gateway) managed with SAP Extended Warehouse Management (SAP EWM). In SAP Transportation Management (SAP TM), a transportation planner creates an air freight booking for the main carriage. With the finalization of the air freight booking, SAP TM sends the outbound planning information to the SAP EWM system managing the exporting gateway. In SAP EWM, you then proceed with the loading preparation: you stage the requested handling units (HUs), you print the master air waybill (MAWB) labels for the HUs, and you fetch the requested ULDs. You then create an HU container for each ULD, and load the HUs onto the ULDs. While loading the HUs, you attach an MAWB label to each HU. With the loading completion of each ULD, SAP EWM sends a notification message containing the ULD identifier and the content of the ULD to SAP TM.

Process

This business process runs as follows:

1. Create and finalize air freight booking (SAP TM)
   The transportation planner creates an operational flight plan based on the master flight schedule. Based on the information given in the operational flight plan, he or she creates an air freight booking. He or she assigns an air waybill number to the air freight booking in SAP TM, and communicates the pre-booking to the carrier. Once the carrier confirms the pre-booking, the transportation planner finalizes the transportation planning for the requested HUs.

2. Send loading request to transit warehouse (SAP TM)
   With the completion of the transportation planning, the transportation planner sends a loading request message containing air freight booking information to SAP EWM. SAP EWM creates an outbound delivery order, planned HUs, and planned HU containers (ULDs).

3. Prepare loading (SAP EWM)
   A warehouse clerk monitoring the due freight bookings in SAP EWM creates warehouse tasks (WTs) to move the requested HUs to the work center responsible for loading cargo onto ULDs. The system gathers the WTs into warehouse orders to optimize the picking. A warehouse worker picks and stages the HUs to the work center. For this purpose, he or she chooses the equipment necessary for the picking, for example, a forklift truck and a radio frequency (RF) device. He or she logs on to the system as a resource. He or she receives the first warehouse order of the queue he or she is assigned to on the RF device, drives to the source bin of the first WT displayed on the RF device, picks the first HU from the source bin, and scans its label. He or she drops the HU at the work center and scans the work center bin to confirm this step in the system. He or she proceeds in the same way with all requested HUs. The warehouse clerk then prints the MAWB labels for all HUs of the air freight booking. Finally, a warehouse worker fetches the requested HU containers (ULDs) and brings them to the work center. This last step is not carried out in the system.

4. Load cargo onto ULD (SAP EWM)
   A packer chooses the equipment necessary for the loading, for example, a forklift truck and an RF device, and logs on as a resource. He or she attaches an MAWB label to the first HU and scans the MAWB label to identify the air freight booking. (This scan is only necessary for the first HU.) He or she then scans or enters the ID of the first ULD and creates an HU container for the ULD in SAP EWM. He or she scans the MAWB label to identify the HU and loads the HU onto the ULD. He or she attaches the next MAWB label to the next HU, scans the HU, and loads the HU onto the ULD. He or she proceeds in the same way to load all requested HUs onto the ULDs. The warehouse worker confirms the loading completion of each ULD in SAP EWM. This triggers the sending of a loading notification message to SAP TM. SAP TM updates the air freight booking.
## Load Cargo onto ULD in Transit Warehouse

<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create Freight Booking (TM)</td>
<td>Transportation planner creates a freight booking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation planner enters ULD information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system assigns an MAVB number to freight booking</td>
</tr>
<tr>
<td>2</td>
<td>Send Loading Request 1 to TW (TM)</td>
<td>Transportation planner sends a loading request message to EWM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system creates an (AV) planned HUs, planned ULD HUs, and assigns planned HUs to ODC in EWM</td>
</tr>
<tr>
<td>3</td>
<td>Prepare Packing (EWM)</td>
<td>Packer creates pick warehouse orders for cargo of freight booking</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker picks and stages HUs to packing station (outbound staging area)</td>
<td>Warehouse worker confirms pick warehouse orders for cargo of freight booking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packer prints MAVB labels for all HUs of freight booking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packer checks requested ULDs for freight booking</td>
</tr>
<tr>
<td></td>
<td>Packer fetches requested ULDs and bring them to packing station (outbound staging area)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Load Cargo onto ULD (EWM)</td>
<td>Packer scans MAVB label to identify freight booking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packer scans ULD number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system creates the ULD HU</td>
</tr>
<tr>
<td></td>
<td>Packer attaches MAVB label to HUs</td>
<td>Packer loads HUs onto ULD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packer scans HU numbers and loads HUs onto ULD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Packer closes ULD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends a loading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight booking and freight units</td>
</tr>
</tbody>
</table>
2.5 Process: Shipping ULD to Airport

You use this business process to ship unit load devices (ULDs) from your transit warehouse (exporting gateway) to the airport. When the truck arrives, you create a freight order for pick-up with reference to the air freight booking in SAP Transportation Management (SAP TM). SAP TM sends the outbound planning information to SAP Extended Warehouse Management (SAP EWM). You identify the freight order in SAP EWM and post the arrival at checkpoint. The truck arrives at a door. You load the requested ULDs directly from their storage bin onto the truck. The truck departs from the door, and you post the departure from the checkpoint. In this process, SAP EWM informs SAP TM about arrival at checkpoint, loading completion, and departure from checkpoint. The notification of the loading completion includes information about the loaded ULDs. In this process, you print the waybills in SAP TM before handing them over to the truck driver.

Process

This business process runs as follows:

1. Truck arrives at checkpoint (SAP EWM)
   When the truck arrives, the truck driver gives the shipping office clerk the freight booking reference. The shipping office clerk navigates from the loading preparation in SAP EWM to the air freight booking in SAP TM, and creates a pick-up freight order for the transfer of the ULDs to the airport.

2. Send loading request to transit warehouse (SAP TM)
   The shipping office clerk sends a loading request message to SAP EWM. SAP EWM automatically creates a vehicle and a transportation unit (TU), and assigns the requested ULDs to the TU.

3. Truck arrives at door (SAP EWM)
   The shipping office clerk selects the freight order for pick-up in SAP EWM, assigns a free door to the TU, sets the status ’Docked at Door’, and tells the truck driver to drive to the assigned door. SAP EWM sends a loading notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ’Arrived’.

4. Load ULDs into truck (SAP EWM)
   A warehouse worker loads the ULDs into the truck. For this purpose, he or she chooses the equipment necessary for the loading, for example, a forklift truck and a radio frequency device, and logs on as a resource. He or she scans the door bin to start the loading of the TU in SAP EWM. He or she then picks a ULD from the work center, and scans or enters its ID. He or she loads the ULD onto the truck and proceeds with the next ULD. With the last ULD, the warehouse worker confirms the loading completion in SAP EWM. This triggers the sending of a loading notification message containing the loaded ULD to SAP TM. SAP TM updates the freight order, freight units, and air freight booking. In this step you can also print a road waybill in SAP TM (optional).

5. Truck leaves (SAP EWM)
   The truck leaves the door and the premises. The shipping office clerk confirms the departure from the checkpoint, and therefore from the door. SAP EWM posts the goods issue and sends a loading notification message for departure from checkpoint to SAP TM. SAP TM updates the execution status of the freight order.
## Ship ULD to Airport

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Truck Arrives at Checkpoint (EWM)</th>
</tr>
</thead>
</table>
| Physical Activity | Truck arrives at checkpoint  
Truck driver goes to shipping office |
| System Activity | Shipping office clerk identifies freight booking and creates a pick-up freight order (from TM to airport) |

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Send Loading Request to TW (TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td></td>
</tr>
</tbody>
</table>
| System Activity | Shipping office clerk sends a loading request message to EWM  
(step can be done automatically)  
The system creates a transportation unit (TU). If given from TM, ULD HUs are assigned to TU in EWM |

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Truck Drives to Door (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>Truck docks at door</td>
</tr>
</tbody>
</table>
| System Activity | Shipping office clerk assigns TU to door and sets status 'locked at door'  
The EWM system sends an unloading notification message for arrival at checkpoint to TM  
The TM system updates freight order (status arrived) |

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Load ULDs into Truck (EWM)</th>
</tr>
</thead>
</table>
| Physical Activity | Warehouse worker picks and loads ULD HUs directly from outbound staging area  
Shipping office clerk hands over road waybill to truck driver (optional) |
| System Activity | Warehouse worker scans ULD HU labels upon loading  
Warehouse worker closes the TU  
The EWM system sends a loading notification message to TM  
The TM system updates freight order, and freight units and freight booking  
The TM system prints road waybill for freight order (optional) |

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Truck Leaves (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Activity</td>
<td>Truck leaves</td>
</tr>
</tbody>
</table>
| System Activity | Shipping office clerk sets departure from checkpoint for TU  
The EWM system posts goods issue  
The EWM system sends a loading notification message to TM  
The TM system updates freight order (status departed) |
2.6 Process: Receiving and Unloading ULD

You use this business process to receive unit load devices (ULDs) from the airport in a transit warehouse (importing gateway) managed with SAP Extended Warehouse Management (SAP EWM). With the uplift confirmation, SAP Transportation Management (SAP TM) creates an import air freight booking based on the export air freight booking data. SAP TM sends the inbound planning information to SAP EWM. When the truck arrives, you create a freight order for delivery with reference to the import air freight booking in SAP TM. SAP TM sends the freight order information to SAP EWM. You select the freight order in SAP EWM and post the arrival at checkpoint. The truck drives to a door and you unload the ULDs. After unloading, you identify the ULDs based on the inbound plan sent by SAP TM. With the last ULD, you confirm the receiving completion in SAP EWM. This triggers the sending of an unloading notification message containing the unloaded ULDs to SAP TM. SAP TM updates freight units and freight order.

The truck leaves the door and you post the departure from the checkpoint, which is also communicated to SAP TM. You then unload the handling units (HUs) from the ULDs. With the last HU of a ULD, you confirm the unloading completion in SAP EWM. This triggers the sending of an unloading notification message containing the unloaded HUs to SAP TM. SAP TM updates freight units and air freight booking. You then put away HUs with the same destination region on the same storage bin, where they are available for the on-carriage to the next location.

Process

This business process runs as follows:

1. Send unloading request for freight booking to transit warehouse (SAP TM)
   
   With the uplift confirmation, SAP TM creates an import air freight booking from the export air freight booking. SAP TM sends an unloading request message containing freight booking information to SAP EWM. SAP EWM automatically creates an inbound delivery, planned HUs, and planned HU containers for the ULDs, and assigns the planned HUs to the inbound delivery.

2. Truck arrives at checkpoint (SAP EWM)
   
   When the truck arrives, the truck driver gives the receiving office clerk the freight booking reference. The receiving office clerk navigates from the unloading preparation in SAP EWM to the air freight booking in SAP TM, and creates a freight order for delivery of the ULDs to the transit warehouse.

3. Send unloading request for freight order to transit warehouse (SAP TM)
   
   The receiving office clerk sends an unloading request message containing freight order information to SAP EWM. (This step can be done automatically.) SAP EWM automatically creates a vehicle and a transportation unit (TU), and assigns the expected HU containers (ULDs) to the TU.

4. Truck drives to door (SAP EWM)
   
   The receiving office clerk selects the freight order for delivery in SAP EWM, assigns a free door to the TU, sets the status 'Docked at Door', and tells the truck driver to drive to the assigned door. SAP EWM sends a notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to 'Arrived'.

5. Unload ULDs from truck (SAP EWM)
   
   A warehouse worker unloads the ULDs from the truck to the inbound staging area behind the door. A warehouse worker then receives the ULDs using a radio frequency (RF) device. He or she scans or enters the ULD ID. The system automatically posts goods receipt in SAP EWM for each ULD and its contents. With the last ULD, the warehouse worker confirms the receiving completion for the truck in SAP EWM. This triggers the sending of an unloading notification message containing the received ULDs to SAP TM. The SAP TM system updates freight order and freight units.

6. Truck leaves (SAP EWM)
   
   The truck leaves the door and the premises. The receiving office clerk confirms the departure from the checkpoint, and therefore from the door. SAP EWM sends a notification message for departure from checkpoint to SAP TM. SAP TM updates status of the current stage of the freight order.

7. Unload cargo from ULDs (SAP EWM)
   
   A warehouse worker unloads the HUs from the ULD using an RF device: he or she scans the label of each unloaded HU. With the last HU of an ULD, the warehouse worker confirms the unloading completion in SAP EWM. This triggers the sending of an unloading notification message containing the ULD and its contents to SAP TM. SAP TM updates the air freight booking.

8. Putaway HUs (SAP EWM)
   
   The warehouse worker chooses the equipment necessary for the putaway, for example, a forklift truck and an RF device, and logs on as a resource. He or she then picks an HU from the inbound staging area and scans its ID. The system automatically creates a warehouse order and proposes a destination bin. The
driver brings the package to the destination bin and confirms the putaway. He or she proceeds in the same way with all HUs until the inbound staging area is empty.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Send Unloading Request 1 to TW (TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td></td>
<td>The system updates freight booking after departure from previous TW</td>
</tr>
<tr>
<td></td>
<td>Transportation planner sends an unloading request message to EWM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td>The system creates planned HUs, planned ULD HUs, an inbound delivery, and assigns planned HUs to ID in EWM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Truck Arrives at Checkpoint (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Truck arrives at checkpoint</td>
<td>GR office clerk identifies freight booking and creates a freight order for delivery (from airport to TW)</td>
</tr>
<tr>
<td>Truck driver goes to GR office</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Send Unloading Request 2 to TW (TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td></td>
<td>The system creates a transportation unit (TU). If given from TM, ULD HUs are assigned to TU in EWM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Truck Drives to Door (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Truck docks at door</td>
<td>GR office clerk assigns TU to door and sets status ‘docked at door’</td>
</tr>
<tr>
<td>The EWM system sends an unloading notification message for arrival at checkpoint to TM</td>
<td></td>
</tr>
<tr>
<td>The TM system updates freight order (status arrived)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Unload ULDs from Truck (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Warehouse worker unloads ULD HUs from truck</td>
<td>Warehouse worker scans ULD HU labels on inbound staging area</td>
</tr>
<tr>
<td>The system posts goods receipt for the received ULD HUs and their sub-HUs</td>
<td></td>
</tr>
<tr>
<td>Warehouse worker confirms receiving completion for TU</td>
<td></td>
</tr>
<tr>
<td>The EWM system sends an unloading notification message to TM</td>
<td></td>
</tr>
<tr>
<td>The TM system updates freight order, freight booking and freight units</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 6</th>
<th>Truck Leaves (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Truck leaves</td>
<td>GR office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td>The EWM system sends an unloading notification message to TM</td>
<td></td>
</tr>
<tr>
<td>The TM system updates freight order (status departed)</td>
<td></td>
</tr>
</tbody>
</table>
2.7 Process: Shipping to Next Transit Warehouse

This process is identical to Process: Shipping to Next Transit Warehouse described in chapter 2.2. It is executed in transit warehouse USLA (Los Angeles, USA).

2.8 Process: Receiving from Transit Warehouse

This process is identical to Process: Receiving from Transit Warehouse described in chapter 2.3. It is executed in transit warehouse USPH (Phoenix, USA) or USSA (San Diego, USA).

2.9 Process: Shipping to Consignee

You use this business process to ship cargo to a consignee from a transit warehouse managed with SAP Extended Warehouse Management (SAP EWM). After the creation of a freight order from the transit warehouse to a consignee, SAP Transportation Management (SAP TM) sends the outbound planning information to SAP EWM. When the truck arrives, you identify the freight order in SAP EWM and post the arrival at checkpoint. The truck drives to a door. You load the requested handling units (HUs) directly from their storage bin, or you stage the HUs to a staging area first before loading them onto the truck. The truck departs from the door and you post the departure from checkpoint. In this process, SAP EWM informs SAP TM about arrival at checkpoint, loading completion, and departure from checkpoint. The notification of the loading completion includes information about the loaded HUs. In this process, you print the waybills in SAP TM before handing them over to the truck driver.

Process

This business process runs as follows:

1. Create freight order (SAP TM)
   The transportation planner carries out the transportation planning for the freight units. This creates a freight order for transporting the cargo to the consignee. He or she assigns the carrier to the freight order in SAP TM, and communicates the freight order number to the carrier.

2. Send loading request to transit warehouse (SAP TM)
   When the transportation planning is complete, the transportation planner sends a loading request message to SAP EWM. (This step can be done automatically.) SAP EWM automatically creates a vehicle, a transportation unit (TU), an outbound delivery order, and planned HUs. The planned HUs are assigned to the TU.

3. Truck arrives at checkpoint (SAP EWM)
   When the truck arrives, the shipping office clerk selects the freight order reference. The shipping office clerk selects the freight order in SAP EWM. He or she assigns a free door to the TU, sets the status ‘Docked at Door’, and tells the truck driver to drive to the assigned door. SAP EWM sends a notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ‘Arrived’.
With the arrival at checkpoint, SAP EWM creates staging warehouse tasks (WTs) for HUs that must be staged (optional). The system gathers the WTs into warehouse orders (WOs) to optimize the picking. The system assigns the WOs to one or more queues according to specific criteria, such as the activity area and the type of resource necessary to access the storage bins.

4. **Stage HUs (optional) (SAP EWM)**

A warehouse worker picks and stages the HUs to the outbound staging area using a radio frequency (RF) device. For this purpose, he or she chooses the equipment necessary for the picking, for example, a forklift truck and an RF device. He or she logs on to the system as a resource. He or she receives the first WO of the queue he or she is assigned to on the RF device, drives to the source bin of the first WT displayed on the RF device, picks the first HU from the source bin, and scans its label. He or she drops the HU at the staging area and scans the staging bin to confirm this step in the system.

He or she proceeds in the same way with all the requested HUs.

5. **Load truck (SAP EWM)**

A warehouse worker begins to load the truck from the staging area. This step is carried out using an RF device.

The warehouse worker chooses the equipment necessary for the loading, for example, a forklift truck and an RF device, and logs on as a resource. He or she scans the door bin to start the loading of the TU in the system. He or she then picks an HU from the staging area and scans its label. He or she loads the HU onto the truck and proceeds with the next HU until the staging area is empty. He or she checks for HUs from other areas that have not yet been loaded, for example, high-value or overdimensional cargo, and picks and loads these as well. With the last HU, the warehouse worker confirms the loading completion in SAP EWM. This triggers the sending of a loading notification message containing the loaded HUs to SAP TM. SAP TM updates the freight order and freight units.

In this step, you can also print a road waybill in SAP TM (optional).

6. **Truck leaves (SAP EWM)**

The truck leaves the door and the premises. The shipping office clerk confirms the departure from the checkpoint, and therefore from the door. SAP EWM posts the goods issue and sends a notification message for departure from checkpoint to SAP TM. SAP TM updates the execution status of the freight order.

7. **Deliver packages to consignee (SAP TM)**

The carrier delivers the packages to the consignee, and informs the customer service agent about this event. The customer service agent confirms the delivery to the consignee in the system and sets the status of the freight order to ‘Delivered’.
<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Create Freight Order (TM)</td>
<td>Transportation planner creates a freight order (from TW to consignee)</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Send Loading Request to TW (TM)</td>
<td>Transportation planner sends a loading request message to EWMM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system creates a transportation unit (TU), an outbound delivery order and assigns planned HUs to ODOs in EWMM</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Truck Arrives at Checkpoint (EWMM)</td>
<td>Truck arrives at checkpoint</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Truck driver goes to shipping office</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Truck docks at door</td>
</tr>
<tr>
<td></td>
<td></td>
<td>With the arrival at door, the EWMM system creates staging WOs for HUs that must be staged, e.g. DG</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWMM system sends an unloading notification message for arrival at checkpoint to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status arrived)</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>Stage HUs (optional) (EWMM)</td>
<td>Warehouse worker picks and stages HUs to outbound staging area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms stage WOs</td>
</tr>
<tr>
<td><strong>Step 5</strong></td>
<td>Load Truck (EWMM)</td>
<td>Warehouse worker picks and loads HUs directly from outbound staging area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker scans HU labels upon loading</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker queues for not yet loaded HUs from other areas (e.g. high value)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the last HU is loaded, the system closes the TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWMM system sends a loading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order and freight units</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system prints road waybill for freight order</td>
</tr>
<tr>
<td><strong>Step 6</strong></td>
<td>Truck leaves (EWMM)</td>
<td>Truck leaves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shipping office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWMM system posts goods issue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWMM system sends a loading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td><strong>Step 7</strong></td>
<td>Deliver Packages to Consignee (TM)</td>
<td>Carrier delivers the packages at the consignee’s location and informs the customer service</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Customer service confirms the delivery of the freight order (TM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status delivered)</td>
</tr>
</tbody>
</table>
3 Test Cases of LCL Air Freight Scenario

You can use this following test cases to run the LCL Air Freight scenario in warehouse numbers JPTY, JPNR, USLA, and USPH, managed by SAP Extended Warehouse Management (SAP EWM).

The test cases use the following applications in SAP Transportation Management (SAP TM), which you can find in the Transportation Management menu of the NetWeaver Business Client (NWBC):

- Forwarding Order Management → Forwarding Order → Create Forwarding Order
- Freight Order Management → Road → Create Road Freight Order
- Freight Order Management → Air → Create Air Freight Order

The test cases use the following applications in SAP EWM, which you can find in the Extended Warehouse Management menu of the NWBC:

- Transit Warehousing → Process Single Freight Order
- Transit Warehousing → Process Freight Orders
- Transit Warehousing → Prepare Loading or Unloading
- Transit Warehousing → Handling-Unit Stock List

The test cases use the following transactions in SAP EWM, which you can find on the SAP Easy Access screen for Extended Warehouse Management:

- Execution → Log On to RF Environment (transaction /SCWM/RFUI)

3.1 Test Case: Receiving from Shipper

In SAP EWM, make sure you execute the steps of this test case in warehouse JPTY.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create forwarding order (SAP TM)</td>
<td>Customer Service Clerk</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM) in the Solution Manager system</td>
<td>Note down the forwarding order number for later use</td>
</tr>
<tr>
<td>2</td>
<td>Create freight order for stage 1 for pick up from shipper (SAP TM)</td>
<td>Transportation Planner</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM) in the Solution Manager system</td>
<td>Note down the freight order number for later use</td>
</tr>
<tr>
<td>3</td>
<td>Send unloading request to transit warehouse (SAP TM)</td>
<td>Transportation Planner</td>
<td>1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order. 2. Enter the freight order number noted down in step 2 and press Continue. 3. From the Set Item Status drop down list, choose Set to Cargo Ready for Unloading. 4. Press Save. 5. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.</td>
<td>The freight order is transferred to SAP EWM. The corresponding objects are now created in SAP EWM, like vehicle, transportation unit (TU), and inbound delivery as freight order.</td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
<td>Role</td>
<td>Instructions</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>------</td>
<td>-------------</td>
<td></td>
</tr>
</tbody>
</table>
| 4    | Assign a door to the TU and post the arrival at the door (SAP EWM) | Receiving Office Clerk | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 2. Leave the TOR Stop ID field empty and press Continue.  
3. On the TUs/ TU Containers tab page, select the row of the TU.  
4. Choose Arrival at Door and assign a free door.  
5. The TU has the status Arrival and At Door, and a notification message is sent to SAP TM. |
| 5    | Receive the handling units (HUs) (SAP EWM) | Warehouse Clerk | 1. Start transaction /SCWM/RFUI.  
2. Log on to the warehouse JPTY as resource <Your Name> with presentation device PD01  
3. Choose Inbound Processes → Receiving of Handling Units → Receiving by TU/Door (TW) (fast path 347).  
4. Enter the door you used in step 4.  
5. Press Enter.  
6. Press F1 List.  
7. Copy the first HU from the list.  
8. Choose F7 Back.  
9. Enter the HU you just copied.  
10. Repeat steps 6 to 9 until all HUs are received.  
11. Answer the question Receiving complete? with Yes.  
12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).  
6. Goods receipt is posted for the HUs, and an unloading notification message with the actual data is sent to SAP TM. Note down the HU numbers for later use. |
| 6    | Truck leaves (SAP EWM) | Receiving Office Clerk | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 2 and press Continue.  
3. Press Departure from Checkpoint.  
5. The TU has the status Departure, and a notification message with the departed status is sent to SAP TM. |
| 7    | Put away the HUs (SAP EWM) | Warehouse Worker | 1. Start transaction /SCWM/RFUI.  
2. Log on to the warehouse JPTY as resource <Your Name> with presentation device PD01  
3. Choose Inbound Processes → Putaway → Putaway by HU (fast path 331).  
4. Enter the HU number noted down in step 5 and press Enter.  
5. Verify the destination bin and the HU number.  
6. Repeat this procedure for all the HUs you received before.  
7. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).  
8. The HUs are putaway into the destination storage type. |
### 3.2 Test Case: Shipping to Next Transit Warehouse

#### Prerequisites
You have executed the test case Receiving from Shipper in warehouse JPTY.

#### Process
In SAP EWM, make sure you execute the steps of this test case in warehouse JPTY.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create freight</td>
<td>Transportation Planner</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM) in the Solution Manager system</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM). Note down the freight order number for later use.</td>
</tr>
<tr>
<td></td>
<td>order for stage 2 for pre-carriage (SAP TM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Send loading</td>
<td>Transportation Planner</td>
<td>1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order. 2. Enter the freight order number noted down in step 1 and press Continue. 3. From the Set Status drop down list choose Set to Ready for Transportation Execution. 4. From the Set Item Status drop down list choose Set to Cargo Ready for Loading. 5. Press Save. 6. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.</td>
<td>The freight order is transferred to SAP EWM. The corresponding objects are now created in SAP EWM, like vehicle, TU, and outbound delivery order as freight order.</td>
</tr>
<tr>
<td></td>
<td>request to transit warehouse (SAP TM)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Truck arrives at checkpoint (SAP EWM)</td>
<td>Shipping Office Clerk</td>
<td>1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order. 2. In the Freight Order field, enter the freight order number noted down in step 1. Leave the TOR Stop ID field empty and press Continue. 3. In the TUs/ TU Containers tab page, select the row of the TU. 4. Choose Arrival at Door and assign a free door.</td>
<td>The TU has the status Arrival and At Door and a notification message is sent to SAP TM. Note down the HU numbers from the screen area HUs/ HU Containers.</td>
</tr>
</tbody>
</table>
4 Stage HUs (optional) (SAP EWM) Warehouse Clerk

1. Start transaction / SCWM/RFUI.
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.
3. Choose Manual Selection → Selection by HU (fast path 22).
4. Enter the HU number noted down in step 3 and press Enter.
5. The source data is displayed. Press Enter.
6. Verify the destination bin and press Enter.
7. Repeat this procedure for all the HUs you noted down.
8. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).

The HUs are staged.

5 Load truck (SAP EWM) Warehouse Clerk

1. Start transaction / SCWM/RFUI.
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.
4. Enter the door you used in step 3.
5. Press Enter.
6. Choose List (F1).
7. Copy the first HU from the list.
8. Choose Back (F7).
9. Enter the HU you just copied.
10. Repeat step 6 to 9 until all HUs are loaded.
11. Answer the question Loading complete? with Yes.
12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).

The HUs have the status loaded, and a notification message with the actual data is sent to SAP TM.

6 Truck leaves (SAP EWM) Shipping Office Clerk

1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.
2. In the Freight Order field, enter the freight order number noted down in step 1 and press Continue.
3. Press Departure from Checkpoint.

The TU has the status Departure, and a notification message with the departed status is sent to SAP TM.

3.3 Test Case: Receiving from Transit Warehouse

Prerequisites
You have executed the test case Shipping to Next Transit Warehouse in warehouse JPTY.

Process
In SAP EWM, make sure you execute the steps of this test case in warehouse JPNR.
<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Send unloading request to transit warehouse (SAP TM)</td>
<td>Transportation Planner</td>
<td>1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order. 2. Enter the freight order number from test case Shipping to Next Transit Warehouse and press Continue. 3. From the Set Item Status drop down list, choose Set to Cargo Ready for Unloading. 4. Press Save. 5. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.</td>
<td>The freight order is transferred to SAP EWM. The corresponding objects are now created in SAP EWM, like vehicle, TU, and inbound delivery as freight order.</td>
</tr>
<tr>
<td>2</td>
<td>Assign a door to the TU and post the arrival at the door (SAP EWM)</td>
<td>Receiving Office Clerk</td>
<td>Note: Make sure you set the correct warehouse number for this process 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order. 2. In the Freight Order field, enter the freight order number noted down in step 1. Leave the TOR Stop ID field empty and press Continue. 3. In the TUs/TU Containers tab page, select the row of the TU. 4. Choose Arrival at Door and assign a free door.</td>
<td>The TU has the status Arrival and At Door, and a notification message is sent to SAP TM.</td>
</tr>
<tr>
<td>3</td>
<td>Receive the HUs (SAP EWM)</td>
<td>Warehouse Clerk</td>
<td>1. Start transaction /SCWM/ RFUI. 2. Log on to the warehouse as resource &lt;Your Name&gt; with presentation device PD01. 3. Choose Inbound Processes → Receiving of Handling Units → Receiving by TU/ Door (TW) (fast path 347). 4. Enter the door you used in step 2. 5. Press Enter. 6. Press F1List. 7. Copy the first HU from the list. 8. Choose F7Back. 9. Enter the HU you just copied. 10. Repeat steps 6 to 9 until all HUs are received. 11. Answer the question Receiving complete? with Yes. 12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).</td>
<td>Goods receipt is posted for the HUs, and a notification message with the actual data is sent to SAP TM. Note down the HU numbers for later use.</td>
</tr>
</tbody>
</table>
4 Truck leaves (SAP EWM) Receiving Office Clerk
1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.
2. In the Freight Order field, enter the freight order number noted down in step 1 and press Continue.
3. Press Departure from Checkpoint.

The TU has the status Departure and a notification message with the departed status is sent to SAP TM.

5 Putaway the HUs (SAP EWM) Warehouse Worker
1. Start transaction /SCWM/RFUI.
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.
3. Choose Inbound Processes → Putaway → Putaway by HU (fast path 331).
4. Enter the HU number noted down in step 3 and press Enter.
5. Verify the destination bin and the HU number.
6. Repeat this procedure for all the HUs you received.
7. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).

The HUs are putaway into the destination storage type.

3.4 Test Case: Loading Cargo onto ULD

Prerequisites
You have executed the test case Receiving from Transit Warehouse in warehouse JPNR.

Process
In SAP EWM, make sure you execute the steps of this test case in warehouse JPNR.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create air freight booking for stage 3 for main carriage (SAP TM)</td>
<td>Transportati on Planner</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM) in the Solution Manager system</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM). Note down the air freight booking number for later use. (You can find it in column Document of stage 3 of your forwarding order.)</td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
<td>Activity</td>
<td>Details</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
<td>----------</td>
<td>---------</td>
<td></td>
</tr>
</tbody>
</table>
| 2 | Send loading request to transit warehouse (SAP TM) | Transportati on Planner | 1. From the Transportation Management menu in NWBC, choose Freight Order Management → Air → Edit Air Freight Booking.  
2. Enter the air freight booking number noted down in step 1 and press Continue.  
3. From the Set Item Status drop down list choose Set to Cargo Ready for Loading.  
4. Press Save.  
5. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.  
The air freight booking is now transferred to SAP EWM.  
The corresponding objects are created in SAP EWM, like an outbound delivery order as loading preparation. |
| 3 | Prepare packing (SAP EWM) | Warehouse Clerk | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Prepare Loading and Unloading.  
2. In the Air Freight Booking field, enter the air freight booking number noted down in step 2.  
3. Select your air freight booking and press Show Details.  
4. Press Create WT on the toolbar on top to create the staging warehouse tasks for the transit HUs to be brought to the packing station (alternatively, use the button Create WT in the HU tab page).  
Warehouse tasks for the staging of the transit HUs are created.  
Note down the warehouse task numbers and the HU numbers from the HU area for later use. |
| 4 | Stage HUs (SAP EWM) | Warehouse Clerk | 1. Start transaction /SCWM/RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01  
3. Choose Manual Selection → Selection by HU (fast path 22).  
4. Enter the HU number noted down in step 3 and press Enter.  
5. The source data is displayed; press Enter.  
6. Verify the destination bin and press Enter.  
7. Repeat this procedure for all the HUs you noted down before.  
8. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).  
The staging warehouse tasks are confirmed. |
### 3.5 Test Case: Shipping ULD to Airport

**Prerequisites**
You have executed the test case **Loading Cargo onto ULD** in warehouse JPNR.

**Process**
In SAP EWM, make sure you execute the steps of this test case in warehouse JPNR.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Start transaction / SCWM/ RFUI.</td>
</tr>
<tr>
<td>2.</td>
<td>Log on to the warehouse as resource &lt;Your Name&gt; with presentation device PD01.</td>
</tr>
<tr>
<td>3.</td>
<td>Choose <strong>Outbound Processes</strong> → <strong>Packing</strong> → <strong>Load HUC (TW)</strong> (fast path 42- &gt;10).</td>
</tr>
<tr>
<td>4.</td>
<td>Enter work center WC01.</td>
</tr>
<tr>
<td>5.</td>
<td>Press Enter.</td>
</tr>
<tr>
<td>6.</td>
<td>Enter one of the HU numbers (for selection of the air freight booking) and press Enter.</td>
</tr>
<tr>
<td>7.</td>
<td>Enter the external ID of the HU container in the format <code>PMC&lt;number&gt;&lt;suffix&gt;</code>, for example, PMC12345LH, and press Enter to create the HU container. PMC is the prefix of the packaging material.</td>
</tr>
<tr>
<td>8.</td>
<td>Choose <strong>List</strong> (F2).</td>
</tr>
<tr>
<td>9.</td>
<td>Copy the first HU from the list.</td>
</tr>
<tr>
<td>10.</td>
<td>Choose <strong>Back</strong> (F7).</td>
</tr>
<tr>
<td>11.</td>
<td>Enter the HU you just copied. Press Enter to pack the HU into the HU Container.</td>
</tr>
<tr>
<td>12.</td>
<td>Repeat steps 8 to 11 until all the HUs are packed.</td>
</tr>
<tr>
<td>13.</td>
<td>Answer the question <strong>Do you want to set the HUC to Completed?</strong> with <strong>Yes</strong>.</td>
</tr>
<tr>
<td>14.</td>
<td>After you are finished, choose <strong>Back</strong> (F7) until you come to the logoff screen and press <strong>Logoff</strong> (F1) and <strong>Save</strong> (F1).</td>
</tr>
</tbody>
</table>

The HU container is created and loaded. It has the status **Completed**. A notification message with the actual data of the HU container is sent to SAP TM.
<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create a freight order for pick up from gateway (SAP TM)</td>
<td>Customer Service Clerk</td>
<td>1. From the <em>Transportation Management</em> menu in NWBC, choose <em>Freight Order Management</em> → <em>Air</em> → <em>Edit Air Freight Booking</em>. 2. Enter the air freight booking number used in test case <em>Loading Cargo onto ULD</em> and press <em>Continue</em>. 3. Choose the <em>Capacity and Cargo</em> tab page. 4. Select the row of your ULD. 5. From the <em>Create Freight Order for Pick-Up</em> drop down list, choose <em>Create Freight Order for Pick-Up</em>. 6. Press <em>Save</em>.</td>
<td>A freight order is created. Note down the freight order number for later use. (You can find the freight order number in column <em>Freight Order for Pick-Up</em> in the <em>Cargo</em> tab page of your air freight booking.)</td>
</tr>
<tr>
<td>2</td>
<td>Send loading request to transit warehouse (SAP TM)</td>
<td>Transportati on Planner</td>
<td>1. From the <em>Transportation Management</em> menu in NWBC, choose <em>Freight Order Management</em> → <em>Road</em> → <em>Edit Road Freight Order</em>. 2. Enter the freight order number noted down in step 1 and press <em>Continue</em>. 3. In the <em>General Data</em> tab page, enter a carrier, for example, OAF-CR-03. 4. From the <em>Set Status</em> drop down list, choose <em>Set to Ready for Transportation Execution</em>. 5. From the <em>Set Item Status</em> drop down list, choose <em>Set to Cargo Ready for Loading</em>. 6. Press <em>Save</em>. 7. Choose the <em>Output Management</em> tab page and check that <em>TOR_LDAP_REQ</em> was successfully processed.</td>
<td>The freight order is now transferred to SAP EWM. The corresponding objects are created in SAP EWM, like vehicle and TU.</td>
</tr>
<tr>
<td>3</td>
<td>Assign a door to the TU and post the arrival at door (SAP EWM)</td>
<td>Receiving Office Clerk</td>
<td>1. From the <em>Extended Warehouse Management</em> menu in NWBC, choose <em>Transit Warehousing</em> → <em>Process Single Freight Order</em>. 2. In the <em>Freight Order</em> field, enter the freight order number noted down in step 1. Leave the <em>TOR Stop ID</em> field empty and press <em>Continue</em>. 3. On the <em>TUs/TU Containers</em> tab page, select the row of the TU. 4. Choose <em>Arrival at Door</em> and assign a free door.</td>
<td>The TU has the status <em>Arrival</em> and <em>At Door</em> and a notification message is sent to SAP TM. Note down the HU container numbers from the HUs / HU Containers screen area.</td>
</tr>
</tbody>
</table>
4 Load truck
(SAP EWM) Warehouse worker

1. Start transaction /SCWM/ RFUI.
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.
4. Enter the door you used in step 3.
5. Press Enter.
6. Choose List (F1).
7. Copy the first HU container from the list.
8. Choose Back (F7).
9. Enter the HU container you just copied.
10. Repeat steps 6 to 9 until all HU containers are loaded.
11. Answer the question Loading complete? with Yes.
12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).

The HU containers have the status Loaded, and a notification message with the actual data is sent to SAP TM.

6 Truck leaves
(SAP EWM) Shipping Office Clerk

1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.
2. In the Freight Order field, enter the freight order number noted down in step 1 and press Continue.
3. Press Departure from Checkpoint.

The TU has the status Departure, and a notification message with the departed status is sent to SAP TM.

3.6 Test Case: Receiving and Unloading ULD

Prerequisites
You have executed the test case Shipping ULD to Airport in warehouse JPNR.

Process
In SAP EWM, make sure you execute the steps of this test case in warehouse USLA.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
</table>
| 1    | Create import air freight booking (SAP TM) | Transportation Planner | 1. From the Transportation Management menu in NWBC, choose Freight Order Management → Air → Edit Air Freight Booking.  
2. Enter the air freight booking number used in test case Loading Cargo onto ULD and press Continue.  
3. From the Set Status drop down list, choose MAWB Finalized.  
4. From the Set Status drop down list, choose Uplift Confirmed.  
5. Press Save. | An import air freight booking is created. Note down the freight booking number from the Document Flow tab page for later use.  
The import air freight booking has the lifecycle status Draft. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td><strong>Send unloading request for import air freight booking to transit warehouse (SAP TM)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Transportation Planner</strong></td>
</tr>
<tr>
<td>1.</td>
<td>From the <em>Transportation Management</em> menu in NWBC, choose <em>Freight Order Management ➔ Air ➔ Edit Air Freight Booking</em>.</td>
</tr>
<tr>
<td>2.</td>
<td>Enter the import air freight booking number noted down in step 1 and press <em>Continue</em>.</td>
</tr>
<tr>
<td>3.</td>
<td>Choose the <em>Document Flow</em> tab page, and navigate to the import forwarding order.</td>
</tr>
<tr>
<td>4.</td>
<td>Choose <em>Edit</em> to edit the import forwarding order.</td>
</tr>
<tr>
<td>5.</td>
<td>Press <em>Set to in Process</em>.</td>
</tr>
<tr>
<td>6.</td>
<td>Press <em>Save</em>.</td>
</tr>
<tr>
<td>7.</td>
<td>From the <em>Set Status</em> drop down list of the import air freight booking, choose <em>Set to in Process</em>.</td>
</tr>
<tr>
<td>8.</td>
<td>From the <em>Set Status</em> drop down list of the import air freight booking choose <em>Set to Arrived at Final Airport of Destination</em>.</td>
</tr>
<tr>
<td>9.</td>
<td>Press <em>Save</em>.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td>The following steps 10 – 13 may not be required if these status values were already automatically set by the system.</td>
</tr>
<tr>
<td>10.</td>
<td>From the <em>Set Status</em> drop down list of the import air freight booking, choose <em>Set to MAWB Finalized</em>.</td>
</tr>
<tr>
<td>11.</td>
<td>Press <em>Save</em>.</td>
</tr>
<tr>
<td>12.</td>
<td>From the <em>Set Status</em> drop down list of the import air freight booking, choose <em>Set to In Execution</em>.</td>
</tr>
<tr>
<td>13.</td>
<td>Press <em>Save</em>.</td>
</tr>
<tr>
<td>14.</td>
<td>Choose the <em>Overview</em> tab page. Select the row for final airport of destination, for example, AF-JL-LAX, and from the <em>Set to Loaded</em> drop down list, choose <em>Set to Departed</em>.</td>
</tr>
<tr>
<td>15.</td>
<td>Press <em>Save</em>.</td>
</tr>
<tr>
<td>16.</td>
<td>From the drop down list <em>Set Item Status</em> of the import air freight booking, choose <em>Set to Cargo Ready for Unloading</em>.</td>
</tr>
<tr>
<td>17.</td>
<td>Press <em>Save</em>.</td>
</tr>
<tr>
<td>18.</td>
<td>Choose the <em>Output Management</em> tab page and check that <em>TOR_LDAP_REQ</em> was successfully processed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td><strong>Create a freight order for delivery of HU containers at import gateway (SAP TM)</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Receiving Office Clerk</strong></td>
</tr>
<tr>
<td>1.</td>
<td>Choose the <em>Capacity and Cargo</em> tab page of the Import air freight booking, and select the ULDs you want to receive.</td>
</tr>
<tr>
<td>2.</td>
<td>From the <em>Create</em> drop down list, choose <em>Create Freight Order for Delivery</em>.</td>
</tr>
<tr>
<td>3.</td>
<td>Press <em>Save</em>.</td>
</tr>
</tbody>
</table>

**Note**

A freight order for delivery is created. Note down the freight order number for later use (you can find it in the document flow of your import air freight booking).
<table>
<thead>
<tr>
<th>Step</th>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Send unloading request for freight order to transit warehouse (SAP TM)</td>
<td><strong>Receiving Office Clerk</strong>&lt;br&gt;1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order.&lt;br&gt;2. Enter the freight order number from step 3 and press Continue.&lt;br&gt;3. In the General Data tab page enter a carrier, for example OAF-CR-05.&lt;br&gt;4. From the Set Status drop down list, choose Set to Ready for Transportation Execution.&lt;br&gt;5. Choose the Stages tab page.&lt;br&gt;6. Select Stage 10.&lt;br&gt;7. Press Set to Departed.&lt;br&gt;8. From the Set Item Status drop down list, choose Set to Cargo Ready for Unloading.&lt;br&gt;9. Press Save.&lt;br&gt;10. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.&lt;br&gt;In the Stages tab page of the freight order, check the source and destination location (Source: airport AF-J L-LAX, destination: gateway AF-GW-USLAX). The freight order is now transferred to SAP EWM. The corresponding objects are created in SAP EWM like vehicle and TU.</td>
</tr>
<tr>
<td>5</td>
<td>Assign a door to the TU and post the arrival at the door (SAP EWM)</td>
<td><strong>Receiving Office Clerk</strong>&lt;br&gt;Note&lt;br&gt;Make sure you set the correct warehouse number for this process&lt;br&gt;1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.&lt;br&gt;2. In the Freight Order field, enter the freight order number noted down in step 3. Leave the TOR Stop ID field empty and press Continue.&lt;br&gt;3. In the TUs/ TU Containers tab page, select the row of the TU.&lt;br&gt;4. Choose Arrival at Door and assign a free door.&lt;br&gt;TheTU has the status Arrival and At Door and a notification message is sent to SAP TM.</td>
</tr>
</tbody>
</table>
|   | Receive the HU containers (SAP EWM) | Warehouse Clerk | 1. | Start transaction / SCWM / RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.  
3. Choose Inbound Processes → Receiving of Handling Units → Receiving by TU / Door (TW) (fast path 347).  
4. Enter the door you used in step 5.  
5. Press Enter.  
6. Choose List (F1).  
7. Copy the first HU container from the list.  
8. Choose Back (F7).  
9. Enter the HU Container you just copied.  
10. Repeat steps 6 to 9 until all the HU containers are received.  
11. Answer the question Receiving complete? with Yes.  
12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1). | Goods receipt is posted for the HUs, and a notification message with the actual data is sent to SAP TM.  
Note down the HU container numbers for later use. |
|---|---|---|---|---|
| 6 | Receive the HU containers (SAP EWM) | Warehouse Clerk | 1. | Start transaction / SCWM / RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.  
3. Choose Inbound Processes → Receiving of Handling Units → Receiving by TU / Door (TW) (fast path 347).  
4. Enter the door you used in step 5.  
5. Press Enter.  
6. Choose List (F1).  
7. Copy the first HU container from the list.  
8. Choose Back (F7).  
9. Enter the HU Container you just copied.  
10. Repeat steps 6 to 9 until all the HU containers are received.  
11. Answer the question Receiving complete? with Yes.  
12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1). | Goods receipt is posted for the HUs, and a notification message with the actual data is sent to SAP TM.  
Note down the HU container numbers for later use. |
| 7 | Truck leaves (SAP EWM) | Receiving Office Clerk | 1. | From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 3 and press Continue.  
3. Press Departure from Checkpoint. | The TU has the status Departure, and a notification message with the departed status is sent to SAP TM.  
Note down the HU container numbers for later use. |
| 8 | Unload the HU container (SAP EWM) | Warehouse Worker | 1. | Start transaction / SCWM / RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.  
3. Choose Inbound Processes → Receiving of Handling Units → Unload HUC (TW) (fast path 348).  
4. Enter the HU container number noted down in step 9 and press Enter.  
5. Choose List (F1).  
6. Copy the first HU from the list.  
7. Choose Back (F7).  
8. Enter the HU you just copied.  
9. Repeat steps 6 to 9 until all the HUs are received.  
10. Answer the question Unloading complete? with Yes.  
11. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1). | The HUs are unloaded from the HU container, and a notification message with the actual data is sent to SAP TM.  
Note down the HU numbers for later use. |
3.7 Test Case: Shipping to Next Transit Warehouse

**Prerequisites**
You have executed the test case Receiving and Unloading ULD in warehouse USLA.

**Process**
In SAP EWM, make sure you execute the steps of this test case in warehouse USLA.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create freight order for stage 4 for on-carriage (SAP TM)</td>
<td>Transportation Planner</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM) in the Solution Manager system</td>
<td>Note down the freight order number for later use</td>
</tr>
<tr>
<td>2</td>
<td>Execute steps 2-6 of test case Shipping to Next Transit Warehouse (chapter 3.2)</td>
<td>See test case Shipping to Next Transit Warehouse</td>
<td>See test case Shipping to Next Transit Warehouse</td>
<td>See test case Shipping to Next Transit Warehouse</td>
</tr>
</tbody>
</table>

3.8 Test Case: Receiving from Transit Warehouse

**Prerequisites**
You have executed the test case Shipping to Next Transit Warehouse in warehouse USLA.

**Process**
In SAP EWM, make sure you execute the steps of this test case in warehouse USPH.
### Test Case: Shipping to Consignee

#### Prerequisites
You have executed the test case Receiving from Transit Warehouse in warehouse USPH.

#### Process
In SAP EWM, make sure you execute the steps of this test case in warehouse USPH.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create freight order for stage 5 for delivery (SAP TM)</td>
<td>Transportatio Planner</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM)</td>
<td>See Testcase for LCL Air Freight Scenario (SAP TM) Note down the freight order number for later use</td>
</tr>
<tr>
<td>2</td>
<td>Execute steps 2-6 of test case Shipping to Next Transit Warehouse (chapter 3.2)</td>
<td>See test case Shipping to Next Transit Warehouse</td>
<td>See test case Shipping to Next Transit Warehouse</td>
<td>See test case Shipping to Next Transit Warehouse</td>
</tr>
<tr>
<td>3</td>
<td>Truck arrives at consignee (SAP TM)</td>
<td>Customer Service Agent</td>
<td>1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order.  2. Enter the freight order number noted down in step 1 and press Continue.  3. From the drop down list Set Status choose Set to Arrived.  4. Press Save.</td>
<td></td>
</tr>
</tbody>
</table>
## 4 Processes of LCL Ocean Freight Scenario

The LCL Ocean Freight scenario contains the following processes, executed in the following warehouses:

<table>
<thead>
<tr>
<th>Step</th>
<th>Process</th>
<th>Warehouse</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Receiving from Shipper</td>
<td>J PTY (Tokyo, Japan)</td>
</tr>
<tr>
<td>2</td>
<td>Shipping to Next Transit Warehouse</td>
<td>J PTY (Tokyo, Japan)</td>
</tr>
<tr>
<td>3</td>
<td>Receiving from Transit Warehouse</td>
<td>J PNR (Narita, Japan)</td>
</tr>
<tr>
<td>4</td>
<td>Loading Cargo into Container</td>
<td>J PNR (Narita, Japan)</td>
</tr>
<tr>
<td>5</td>
<td>Shipping Container to Seaport</td>
<td>J PNR (Narita, Japan)</td>
</tr>
<tr>
<td>6</td>
<td>Receiving and Unloading Container</td>
<td>USLA (Los Angeles, USA)</td>
</tr>
<tr>
<td>7</td>
<td>Shipping to Next Transit Warehouse</td>
<td>USLA (Los Angeles, USA)</td>
</tr>
<tr>
<td>8</td>
<td>Receiving from Transit Warehouse</td>
<td>USPH (Phoenix, USA) or USSA (San Diego, USA)</td>
</tr>
<tr>
<td>9</td>
<td>Shipping to Consignee</td>
<td>USPH (Phoenix, USA) or USSA (San Diego, USA)</td>
</tr>
</tbody>
</table>

Only the processes and warehouses in bold differ from the LCL Air Freight scenario. This chapter describes only these processes.

### Note

For simplification purposes, steps 3 to 7 are executed in warehouse numbers J PNR and USLA, which exist as gateways and are also used in the air freight scenario, but it would also be possible to use dedicated container freight stations.
4.1 Process: Loading Cargo into Container

You use this business process to load cargo into containers in a transit warehouse (container freight station) managed with SAP Extended Warehouse Management (SAP EWM). In SAP Transportation Management (SAP TM), a transportation planner creates an ocean freight booking for the main carriage. With the finalization of the ocean freight booking, SAP TM sends the outbound planning information to the SAP EWM system managing the exporting container freight station. In SAP EWM, you then proceed with the loading preparation: you stage the requested handling units (HUs), you print the master bill of lading (MBOL) labels for the HUs, and you fetch the requested container. You then create a transportation unit container (TU container) for each container, and load the HUs into the container. While loading the HUs, you attach an MBOL label to each HU. With the loading completion of the container, SAP EWM sends a notification message containing the container identifier and the content of the container to SAP TM.

Process

This business process runs as follows:

1. Create and finalize ocean freight booking (SAP TM)
   - The transportation planner creates an ocean freight booking. He or she assigns a master sea bill of lading number to the ocean freight booking in SAP TM. Once the ocean carrier confirms the pre-booking, the transportation planner finalizes the transportation planning for the requested HUs.

2. Send loading request to transit warehouse (SAP TM)
   - With the completion of the transportation planning, the transportation planner sends a loading request message containing ocean freight booking information to SAP EWM. SAP EWM creates an outbound delivery order, planned HUs, and planned containers.

3. Dock container to door (SAP EWM)
   - A warehouse clerk monitoring the due freight bookings checks the requested containers for the ocean freight booking. A warehouse worker fetches the requested containers and docks the containers to doors. The warehouse clerk creates a TU container for each container in SAP EWM, and sets the status docked at door. He or she creates warehouse tasks to stage the requested HUs to the staging area used for the loading of cargo into containers. The system gathers the warehouse tasks into warehouse orders to optimize the picking.

4. Stage HUs (SAP EWM)
   - A warehouse worker picks and stages the HUs to the staging area. For this purpose, he or she chooses the equipment necessary for the picking, for example, a forklift truck and a radio frequency (RF) device. He or she logs on to the system as a resource. He or she receives the first warehouse order of the queue he or she is assigned to on the RF device, drives to the source bin of the first warehouse task displayed on the RF device, and picks the first HU from the source bin and scans its label. He or she drops the HU at the staging area and scans the staging area bin to confirm this step in the system.
   - He or she proceeds in the same way with all the requested HUs.

5. Load cargo into container (SAP EWM)
   - A warehouse worker begins to load the container from the staging area. This step is carried out using an RF device.
   - The warehouse worker chooses the equipment necessary for the loading, for example, a forklift truck and an RF device, and logs on as a resource. He or she scans the door bin to start the loading of the TU container in the system. He or she then picks an HU from the staging area and scans its label. He or she loads the HU into the container and proceeds with the next HU until the staging area is empty. With the last HU, the warehouse worker confirms the loading completion of the TU container in SAP EWM. This triggers the sending of a loading notification message containing the container ID and its content to SAP TM. SAP TM system updates the ocean freight booking.

6. Undock container from door (SAP EWM)
   - A warehouse worker undocks the TU container from the door and confirms this step in the system.
## Load Container in Transit Warehouse

<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong>  &lt;br&gt;Create Ocean Freight Booking and Assign Freight Units (TM)</td>
<td>Transportation planner creates an ocean freight booking</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation planner enters container information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation planner assigns freight units to container</td>
</tr>
<tr>
<td><strong>Step 2</strong>  &lt;br&gt;Send Loading Request 1 to TW (TM)</td>
<td>Transportation planner sends a loading request message to EWM (step can be done automatically)</td>
<td>The system creates an ODO, planned HUs, planned TUs, and assigns planned HUs to ODO in EWM</td>
</tr>
<tr>
<td><strong>Step 3</strong>  &lt;br&gt;Dock Container to Door (EWM)</td>
<td>Warehouse worker fetches requested containers and docks each one to a door</td>
<td>Warehouse clerk checks requested containers for freight booking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse clerk creates a TU container. He enters container number and door and sets status ‘docked at door’.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EWM system copies freight booking reference and container information from planned TU to TU</td>
</tr>
<tr>
<td><strong>Step 4</strong>  &lt;br&gt;Stage HUs (optional) (EWM)</td>
<td>Warehouse worker picks and stages HUs to outbound staging area</td>
<td>Warehouse worker confirms stage WGs</td>
</tr>
<tr>
<td><strong>Step 5</strong>  &lt;br&gt;Load Cargo into Container (EWM)</td>
<td>Warehouse worker picks and loads HUs directly from outbound staging area</td>
<td>Warehouse worker scans door once and HU labels upon loading</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker picks and loads additional HUs from other areas</td>
<td>Warehouse worker queries for not yet loaded HUs from other areas (DG, high value)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the last HU is loaded, the system closes the TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends a loading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight booking and freight units</td>
</tr>
<tr>
<td><strong>Step 6</strong>  &lt;br&gt;Undock Container from Door (EWM)</td>
<td></td>
<td>Shipping office clerk undocks container form door</td>
</tr>
</tbody>
</table>
4.2 Process: Shipping Container to Seaport

You use this business process to ship containers from your transit warehouse (container freight station) to the seaport. When the truck arrives, you create a freight order for pick-up with reference to the ocean freight booking in SAP Transportation Management (SAP TM). SAP TM sends the outbound planning information to SAP Extended Warehouse Management (SAP EWM). You identify the freight order in SAP EWM and post the arrival at checkpoint. You load the requested containers directly from their current location onto the truck. The truck leaves the premises, and you post the departure from the checkpoint. In this process, SAP EWM informs SAP TM about arrival at checkpoint, loading of the container, and departure from checkpoint. The notification of the container loading includes information about the container and the truck. In this process, you print the waybills in SAP TM before handing them over to the truck driver.

Process

This business process runs as follows:

1. Truck arrives at checkpoint (SAP EWM)
   - When the truck arrives, the truck driver gives the shipping office clerk the freight booking reference. The shipping office clerk navigates from the loading preparation in SAP EWM to the ocean freight booking in SAP TM, and create a pick-up freight order for the transfer of the container to the seaport.

2. Send loading request to transit warehouse (SAP TM)
   - The shipping office clerk sends a loading request message to SAP EWM. SAP EWM automatically creates a vehicle and a transportation unit (TU), and assigns the requested container to the TU.

3. Set arrival at checkpoint (SAP EWM)
   - The shipping office clerk selects the freight order for pick-up in SAP EWM and posts the arrival at checkpoint. SAP EWM sends a notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ‘Arrived’.

4. Load container onto truck (SAP EWM)
   - A yard worker loads the container onto the truck. The shipping office clerk confirms the loading of the TU container in SAP EWM. This triggers the sending of a loading notification message containing the TU container to SAP TM. SAP TM updates freight order, freight units, and ocean freight booking. In this step, you can also print a road waybill in SAP TM (optional).

5. Truck leaves (SAP EWM)
   - The truck leaves the premises. The shipping office clerk confirms the departure from the checkpoint. SAP EWM posts the goods issue and sends a notification message for departure from checkpoint to SAP TM. The SAP TM system updates the execution status of the freight order.
## Ship Container to Seaport

<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
</table>
| Step 1 Truck Arrives at Checkpoint (EWM) | Truck arrives at checkpoint  
Truck driver goes to shipping office | Shipping office clerk identifies freight booking and creates a pick-up freight order with container numbers (from TW to seaport) |
| Step 2 Send Loading Request to TW (TM) | | Shipping office clerk sends a loading request message to EWM (step can be done automatically)  
The system creates a TU and assigns TU container to TU in EWM |
| Step 3 Set Arrival at Checkpoint (EWM) | | Shipping office clerk identifies TU, and sets status 'arrival at checkpoint'  
The EWM system sends an unloading notification message for arrival at checkpoint to TM  
The TM system updates freight order (status arrived) |
| Step 4 Load Container onto Truck (EWM) | Yard worker loads containers onto truck | Shipping office clerk checks containers to be loaded onto truck  
Shipping office clerk confirms loading completion.  
The EWM system sends a loading notification message to TM  
The TM system updates freight order, and freight units and freight booking  
The TM system prints road waybill for freight order (optional) |
| Step 5 Truck Leaves (EWM) | Truck leaves | Shipping office clerk sets departure from checkpoint for TU  
The EWM system posts goods issue  
The EWM system sends a loading notification message to TM  
The TM system updates freight order (status departed) |
4.3 Process: Receiving and Unloading Container

You use this business process to receive containers from the seaport in a transit warehouse (importing container freight station) managed with SAP Extended Warehouse Management (SAP EWM). With the uplift confirmation, SAP Transportation Management (SAP TM) creates an import ocean freight booking based on the export ocean freight booking data. SAP TM sends the inbound planning information to SAP EWM. When the truck arrives, you create a freight order for delivery with reference to the import freight booking in SAP TM. SAP TM sends the freight order information to SAP EWM. You select the freight order in SAP EWM and post the arrival at checkpoint.

You unload the container from the truck. This triggers the sending of an unloading notification message for the container to SAP TM. SAP TM updates freight units and freight order. The truck leaves, and you post the departure from the checkpoint, which is also communicated to SAP TM. You then dock the container to a door and unload the handling units (HUs) from the container. With the lastHU of a container, you confirm the unloading completion in SAP EWM. This triggers the sending of an unloading notification message containing the container and its content to SAP TM. SAP TM updates freight units and ocean freight booking. After completion of the transportation unit container (TU container), you then put away HUs with the same destination region on the same storage bin, where they are available for the on-carriage to the next location.

Process

This business process runs as follows:

1. Send unloading request for freight booking to transit warehouse (SAP TM)
   With the uplift confirmation, SAP TM creates an import ocean freight booking from the export ocean freight booking. SAP TM sends an unloading request message containing freight booking information to SAP EWM. SAP EWM automatically creates an inbound delivery, planned HUs, and planned TU containers, and assigns the planned HUs to the inbound delivery.

2. Truck arrives at checkpoint (SAP EWM)
   When the truck arrives, the truck driver gives the receiving office clerk the freight booking reference. The receiving office clerk navigates from the unloading preparation in SAP EWM to the freight booking in SAP TM, and creates a freight order for delivery of the container to the transit warehouse.

3. Send unloading request for freight order to transit warehouse (SAP TM)
   The receiving office clerk sends an unloading request message containing freight order information to SAP EWM. (This step can be done automatically.) SAP EWM automatically creates a vehicle and a transportation unit (TU), and assigns the expected TU containers to the TU.

4. Set arrival at checkpoint (SAP EWM)
   The receiving office clerk selects the freight order for delivery in SAP EWM and posts the arrival at checkpoint. SAP EWM sends a notification message for arrival at checkpoint to SAP TM. SAP TM sets status of the current stage of the freight order to ‘Arrived’.

5. Unload container from truck (SAP EWM)
   A yard worker unloads the container from the truck and confirms this step in the system. This triggers the sending of an unloading notification message for the container to SAP TM. The SAP TM system updates freight order.

6. Move container to door (SAP EWM)
   The receiving office clerk assigns the container to a door. A yard worker docks the container to the door.

7. Truck leaves (SAP EWM)
   The truck leaves the premises. The receiving office clerk confirms the departure from the checkpoint. SAP EWM sends a notification message for departure from checkpoint to SAP TM. SAP TM updates the execution status of the freight order.

8. Unload container and receive packages (SAP EWM)
   A warehouse worker unloads the HUs from the container to the inbound staging area behind the door. A warehouse worker then receives the HUs by scanning their label with a radio frequency (RF) device. Goods receipt is posted in SAP EWM for each received HU. With the last HU, the warehouse worker confirms the receiving completion of the TU container in SAP EWM. This triggers the sending of an unloading notification message containing the received HUs to SAP TM. SAP TM updates freight order and freight units.

9. Complete the TU container (SAP EWM)
   A yard worker moves the TU container away from the door and this step is confirmed in the system.

10. Putaway HUs (SAP EWM)
    The warehouse worker chooses the equipment necessary for the putaway, for example, a forklift truck and an RF device, and logs on as a resource. He or she then picks an HU from the inbound staging area and
scans its label. The system automatically creates a warehouse order and proposes a destination bin. The driver brings the package to the destination bin and confirms the putaway. He or she proceeds in the same way with all HUs until the inbound staging area is empty.

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Send Unloading Request 1 to TW (TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td></td>
<td>The system updates freight booking after departure from previous TW</td>
</tr>
<tr>
<td></td>
<td>Transportation planner sends an unloading request message to EWM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td>The system creates a TU container, an inbound delivery and HUs in EWM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 2</th>
<th>Truck Arrives at Checkpoint (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Truck arrives at checkpoint</td>
<td>GR office clerk identifies freight booking and creates a freight order for delivery (from seaport to TW)</td>
</tr>
<tr>
<td>Truck driver goes to GR office</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 3</th>
<th>Send Unloading Request 2 to TW (TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td></td>
<td>GR office clerk sends an unloading request message to EWM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td>The system creates a transportation unit and assigns the TU container to it in EWM</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 4</th>
<th>Set Arrival at Checkpoint (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td></td>
<td>GR office clerk identifies TU and sets status ‘arrival at checkpoint’</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends an unloading notification message for arrival at checkpoint to TM</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight order (status arrived)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Unload Container from Truck (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Yard worker unloads containers from truck</td>
<td>Shipping office clerk unassigns TU container from TU</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight order and freight units and freight booking</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 6</th>
<th>Move Container to Door (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Yard worker docks container at door</td>
<td>GR office clerk assigns TU container to door and sets status ‘docked at door’</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 7</th>
<th>Truck Leaves (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Truck leaves</td>
<td>GR office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td>Step 8</td>
<td>Unload TU Container and Receive Packages (EWM)</td>
</tr>
<tr>
<td>--------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker unloads HUs from container</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker scans HU labels on inbound staging area</td>
</tr>
<tr>
<td></td>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker confirms receiving completion for TU container</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight units and freight booking</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 9</th>
<th>Complete TU container (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yard worker moves container away from door</td>
</tr>
<tr>
<td></td>
<td>GR office clerk confirms the completion of the TU container</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 10</th>
<th>Pullaway HUs (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Warehouse worker brings HUs to destination bin</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker confirms pullaway WOs</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker scans HU label</td>
</tr>
<tr>
<td></td>
<td>The EWM system creates pullaway WO and proposes a destination bin</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends pullaway WO to receiving department</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight units and freight booking</td>
</tr>
</tbody>
</table>
5 Test Cases of LCL Ocean Freight Scenario

You can use this following test cases to run the LCL Ocean Freight scenario in warehouse numbers JPTY, JPNR, USLA, and USPH, managed by SAP Extended Warehouse Management (SAP EWM).

Only the test cases differing from the LCL Air Freight scenario are described here.

5.1 Test Case: Loading Cargo into Container

Prerequisites
You have executed the test case Receiving from Transit Warehouse in warehouse JPNR.

Process
In SAP EWM, make sure you execute the steps of this test case in warehouse JPNR.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Create ocean freight booking for stage 3 for main carriage SAP Transportation Management (SAP TM)</td>
<td>Transportation Planner</td>
<td>See Testcase for LCL Ocean Freight Scenario (SAP TM) in the Solution Manager system</td>
<td>See Testcase for LCL Ocean Freight Scenario (SAP TM). Note down the ocean freight booking number for later use. (You can find the ocean freight booking number in column Document of stage 3 of your forwarding order.)</td>
</tr>
<tr>
<td>2</td>
<td>Send loading request to transit warehouse (SAP TM)</td>
<td>Transportation Planner</td>
<td>1. From the Transportation Management menu in NWBC, choose Freight Order Management → Ocean → Edit Ocean Freight Booking. 2. Enter the ocean freight booking number noted down in step 1 and press Continue. 3. From the Set Item Status drop down list, choose Set to Cargo Ready for Loading. 4. Press Save. 5. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed</td>
<td>The ocean freight booking is now transferred to SAP EWM. The corresponding objects are created in SAP EWM, like an outbound delivery order as loading preparation.</td>
</tr>
</tbody>
</table>
| 3 | Dock container at door (SAP EWM) | Warehouse Clerk | 1. From the *Extended Warehouse Management* menu in NWBC, choose *Transit Warehousing → Prepare Loading and Unloading*.  
2. In the *Freight Booking* field of the selection screen, enter the ocean freight booking number noted down in step 1.  
3. Select your ocean freight booking by pressing on the ocean freight booking number.  
4. Choose tab page *TUs/TU Containers*.  
5. Select a line of a planned transportation unit container (TU container) and press button *Create TU Container*.  
6. Optionally, in the dialog box, you can enter a value for the transportation unit (TU).  
7. On the *TUs/TU Containers* tab page, select the row of the TU.  
8. Choose *Arrival at Door* and assign a free door.  
9. Press *Create WT* on the toolbar on top to create the staging warehouse tasks for the transit handling units (HUs) to be brought to the staging area. (Alternatively, use the button *Create WT* in the HU tab page.) Note down the warehouse task numbers and the TU container number from area *TU container* for later use. |
|---|---|---|---|
| 4 | Stage HUs (SAP EWM) | Warehouse Clerk | 1. Start transaction / SCWM/RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.  
4. Enter the HU number noted down in step 3 and press *Enter*.  
5. The source data is displayed. Press *Enter*.  
6. Verify the destination bin and press *Enter*.  
7. Repeat this procedure for all the HUs you noted down before.  
8. After you are finished, choose *Back (F7)* until you come to the logoff screen and press *Logoff (F1)* and *Save (F1)*. The staging warehouse tasks are confirmed |
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 5 | Load transit HUs into TU container (SAP EWM) | Warehouse Clerk | 1. Start transaction / SCWM/ RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.  
4. Enter the door you used in step 3.  
5. Press Enter.  
6. Press List (F1).  
7. Copy the first HU from the list.  
8. Choose Back (F7).  
9. Enter the HU you just copied.  
10. Repeat steps 6 to 9 until all HUs are loaded.  
11. Answer the question Loading complete? with Yes.  
12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1). | The TU container has the status Completed, and a notification message with the actual data of the TU container is sent to SAP TM. |
| 6 | Undock TU container from door (SAP EWM) | Warehouse Clerk | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Prepare Loading and Unloading.  
2. In the Freight Booking field of the selection screen, enter the ocean freight booking number noted down in step 1.  
3. Select your ocean freight booking by pressing on the ocean freight booking number.  
5. Press button Departure from Door. | The TU container is no longer docked at the door. |

### 5.2 Test Case: Shipping Container to Seaport

**Prerequisites**

You have executed the test case Loading Cargo into Container in warehouse JPNR.

**Process**

In SAP EWM, make sure you execute the steps of this test case in warehouse JPNR.
<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
</table>
| 1    | Create a freight order for pick-up from transit warehouse (SAP TM) | Customer Service Clerk    | 1. From the Transportation Management menu in NWBC, choose Freight Order Management → Ocean → Edit Ocean Freight Booking.  
2. Enter the ocean freight booking number used test case Loading Cargo into Container and press Continue.  
3. Choose the Capacity and Cargo tab page.  
4. Select the row of your container.  
5. From the Create Freight Order for Pick-Up drop down list, choose Create Freight Order for Pick-Up.  
6. Press Save.                                                                 | A freight order is created. Note down the freight order number for later use. (You can find the freight order number in column Freight Order for Pick-Up on the Cargo tab page of your ocean freight booking.) |
| 2    | Send loading request to transit warehouse (SAP TM) | Transportation Planner    | 1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order.  
2. Enter the freight order number noted down in step 1 and press Continue.  
3. In the General Data tab page, enter a carrier, for example, OAF-CR-03.  
4. From the Set Status drop down list, choose Set to Ready for Transportation Execution.  
5. From the Set Item Status drop down list, choose Set to Cargo Ready for Loading.  
6. Press Save.  
7. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.                                                                 | The freight order is now transferred to SAP EWM.  
The corresponding objects are now created in SAP EWM, like vehicle and TU.                                                                                                                                     |
| 3    | Post the arrival at the checkpoint (SAP EWM) | Receiving Office Clerk    | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 1 and press Continue.  
3. Leave the TOR Stop ID field empty and press Continue.  
4. In the TUs/ TU Containers tab page, select the row of the TU.  
5. Choose Arrival at Checkpoint.                                                                 | The TU has the status Arrival and At Door, and a notification message is sent to SAP TM. Note down the TU container number from the area TUs/ TU Containers. |
2. In the Freight Order field, enter the freight order number noted down in step 1 and press Continue.  
3. In the TUs/ TU Containers tab page, select the row of the TU container.  
4. Choose Load TU Container.                                                                                                                                                                               | The TU container is loaded on the TU. The TU container has the status Loaded/ Coupled, and a notification message with the actual data is sent to SAP TM.                  |
5.3 Test Case: Receiving and Unloading Container

Prerequisites
You have executed the test case Shipping Container to Seaport in warehouse JPNR.

Process
In SAP EWM, make sure you execute the steps of this test case in warehouse USLA.

<table>
<thead>
<tr>
<th>Step</th>
<th>Step Description</th>
<th>Step Processor</th>
<th>Input Data</th>
<th>Expected Results</th>
</tr>
</thead>
</table>
| 1    | Create import ocean freight booking (SAP TM) | Transportation Planner | 1. From the Transportation Management menu in NWBC, choose Freight Order Management ➔ Ocean ➔ Edit Ocean Freight Booking.  
2. Enter the ocean freight booking Number used test case Shipping Container to Seaport and press Continue.  
3. From the Set Status drop down list, choose Shipped On Board.  
4. Press Save. | An import ocean freight booking is created. Note down the freight booking number from the Document Flow tab page for later use.  
The import ocean freight booking has the lifecycle status Draft. |
2. Send unloading request to transit warehouse (SAP TM)

Transportation Planner

1. From the Transportation Management menu in NWBC, choose Freight Order Management → Ocean → Edit Ocean Freight Booking.
2. Enter the import ocean freight booking number noted down in step 1 and press Continue.
3. Choose the Document Flow tab page and navigate to the import forwarding order.
4. Choose Edit to edit the import forwarding order.
5. Press Set to In Process.
6. Press Save.
7. From the Set Status drop down list of the import ocean freight booking, choose Set to In Process.
8. From the Set Status drop down list of the import ocean freight booking, choose Set to Arrived at Final Port of Discharge.
9. Press Save.
10. Choose the Overview tab page of the import ocean freight booking. Select the row for final seaport of destination, for example, AF-J-LAX, and from the Set to Loaded drop down list, choose Set to Departed.
11. Press Save.
12. From the Set Item Status drop down list of the import ocean freight booking, choose Set to Cargo Ready for Unloading.
13. Press Save.
14. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed.

3. Create a freight order for delivery to unload TU container at import transit warehouse (SAP TM)

Receiving Office Clerk

1. In the import ocean freight booking, choose the Capacity and Cargo tab page and select the container you want to receive.
2. From the Create drop down list, choose Create Freight Order for Delivery.
3. Press Save.

After setting the import forwarding order to In Process, the import forwarding order is in the status In Planning.

After setting the import ocean freight booking to In Process, the import ocean freight booking is in the status In Process.

Check that the ocean freight booking is now transferred to SAP EWM using the SAP EWM application Prepare Loading or Unloading.

A freight order for delivery is created. You find the document number in the document flow of your import ocean freight booking. Note down the freight order number for later use.
<table>
<thead>
<tr>
<th>Step</th>
<th>Action Description</th>
<th>Role</th>
<th>Details</th>
</tr>
</thead>
</table>
| 4 | Send unloading request to transit warehouse (SAP TM) | Receiving Office Clerk | 1. From the Transportation Management menu in NWBC, choose Freight Order Management → Road → Edit Road Freight Order.  
2. Enter the freight order number from step 3 and press Continue.  
3. In the General Data tab page, enter a carrier, for example, OAF-CR-05.  
4. From the Set Status drop down list, choose Set to Ready for Transportation Execution.  
5. Choose the Stages tab page.  
7. Press Set to Departed.  
8. From the Set Item Status drop down list, choose Set to Cargo Ready for Unloading.  
9. Press Save.  
10. Choose the Output Management tab page and check that TOR_LDAP_REQ was successfully processed. | In the Stages tab page of the freight order for delivery, check the source and destination location (Source: seaport AF-J L-LAX, destination: container freight station AF-GW-USLAX). The freight order is now transferred to SAP EWM. The corresponding objects are created in SAP EWM, like vehicle and TU. |
| 5 | Arrival at checkpoint (SAP EWM) | Receiving Office Clerk | Note: Make sure you set the correct warehouse number for this process  
1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 3. Leave the TOR Stop ID field empty and press Continue.  
3. Press Arrival At Checkpoint. | The TU has the status Arrival and At Door, and a notification message is sent to SAP TM |
| 6 | Unload container from truck (SAP EWM) | Receiving Office Clerk | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 3 and press Continue.  
3. In tab page TUs/TU Containers, select the TU container.  
4. Press Unload TU Container. | The TU container is unloaded, and a notification message is sent to SAP TM |
| 7 | Truck leaves (SAP EWM) | Receiving Office Clerk | 1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order.  
2. In the Freight Order field, enter the freight order number noted down in step 3 and press Continue.  
3. Press Departure from Checkpoint. | The TU has the status Departure, and a notification message with the departed status is sent to SAP TM |
<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Role</th>
<th>Instructions</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Move container to door (SAP EWM)</td>
<td>Receiving Office Clerk</td>
<td>1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order. &lt;br&gt;2. In the Freight Order field, enter the freight order number noted down in step 3 and press Continue. &lt;br&gt;3. In the TUs/TU Containers tab page, select the row of the TU Container. &lt;br&gt;4. Choose Arrival at Door and assign a free door.</td>
<td>The TU container has the status At Door</td>
</tr>
<tr>
<td>9</td>
<td>Unload TU container and receive HUs (SAP EWM)</td>
<td>Warehouse Worker</td>
<td>1. Start transaction /SCWM/ RFUI. &lt;br&gt;2. Log on to the warehouse as resource &lt;Your Name&gt; with presentation device PD01. &lt;br&gt;3. Choose Inbound Processes → Receiving of Handling Units → Receiving by TU/Door (TW) (fast path 347). &lt;br&gt;4. Enter the door you used in step 8. &lt;br&gt;5. Press Enter. &lt;br&gt;6. Choose List (F1). &lt;br&gt;7. Copy the first HU from the list. &lt;br&gt;8. Choose Back (F7). &lt;br&gt;9. Enter the HU you just copied. &lt;br&gt;10. Repeat steps 6 to 9 until all HUs are received. &lt;br&gt;11. Answer the question Receiving complete? with Yes. &lt;br&gt;12. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1).</td>
<td>The HUs are unloaded from the TU container. A notification message with the actual data is sent to SAP TM. Note down the HU numbers for later use.</td>
</tr>
<tr>
<td>10</td>
<td>Complete the TU container (SAP EWM)</td>
<td>Receiving Office Clerk</td>
<td>1. From the Extended Warehouse Management menu in NWBC, choose Transit Warehousing → Process Single Freight Order. &lt;br&gt;2. In the Freight Order field, enter the freight order number noted down in step 3 and press Continue. &lt;br&gt;3. In the TUs/TU Containers tab page select the row of the TU container. &lt;br&gt;4. Press button Complete Unloaded/Decoupled TU.</td>
<td>The TU container is completed.</td>
</tr>
</tbody>
</table>
|   | Putaway HUs (SAP EWM) | Warehouse Worker | 1. Start transaction / SCWM/ RFUI.  
2. Log on to the warehouse as resource <Your Name> with presentation device PD01.  
3. Choose Inbound Processes → Putaway → Putaway by HU (fast path 331).  
4. Enter the HU number noted down in step 10 and press Enter.  
5. Verify the destination bin and the HU number.  
6. Repeat this procedure for all the HUs you received before.  
7. After you are finished, choose Back (F7) until you come to the logoff screen and press Logoff (F1) and Save (F1). | The HUs are putaway into the destination storage type. |
6 Exceptions

In the business scenarios, the following exceptions can occur and can be handled in SAP Extended Warehouse Management (SAP EWM) and SAP Transportation Management (SAP TM).

1. Receiving Unexpected Shipment
2. Receiving Unexpected Package
3. Receiving Packages to be Clarified
4. Missing Packages from Shipper
5. Floor Check 'Found Handling Units'
6. Floor Check 'Lost Handling Units'
7. Loading Fewer Handling Units than Planned

6.1 Exception: Receiving Unexpected Shipment

A truck arrives in the process Receiving from Shipper. You cannot identify the freight order in SAP Extended Warehouse Management (SAP EWM) because no planning of the freight order exists in SAP EWM. You log on to the SAP Transportation Management (SAP TM) system and create a self-delivery freight order according to the documents handed over by the truck driver. You either use a template or you enter the information like shipper, consignee, destination location, carrier, dates and times, and item data manually. After creation of the freight order in SAP TM, you send the inbound planning information to SAP EWM. You select the freight order in SAP EWM and post the arrival at checkpoint. From this point, the process runs as a normal receiving process in the transit warehouse. After SAP EWM has informed SAP TM about arrival at checkpoint, receiving completion, and departure from checkpoint, a customer service agent resolves the discrepancies of the self-delivery freight order by creating and assigning forwarding orders to the self-delivery freight order.
## Receive Unexpected Shipment

<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong>&lt;br&gt;Truck Arrives at Checkpoint (PwIM)</td>
<td>Truck arrives at checkpoint&lt;br&gt;Truck driver goes to GR office</td>
<td>GR office clerk searches for freight order</td>
</tr>
<tr>
<td><strong>Step 2</strong>&lt;br&gt;Create Self-Delivery Freight Order (TM)</td>
<td></td>
<td>GR office clerk creates self-delivery freight order according to bill of lading of truck driver</td>
</tr>
<tr>
<td><strong>Step 3</strong>&lt;br&gt;Send Unloading Request to TW (TM)</td>
<td></td>
<td>GR office clerk sends an unloading request message to EWM (step can be done automatically)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system creates a transportation unit, an inbound delivery and HUs in EWM</td>
</tr>
<tr>
<td><strong>Step 4</strong>&lt;br&gt;Truck Drives to Door (EWM)</td>
<td>Truck docks at door</td>
<td>GR office clerk identifies TU, assigns TU to door and sets status 'Docked at door'</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system prints HU labels (or HAWB labels)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message for arrival at checkpoint to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status arrived)</td>
</tr>
<tr>
<td><strong>Step 5</strong>&lt;br&gt;Unload Truck and Receive Packages (EWM)</td>
<td>Warehouse worker unloads packages from truck</td>
<td>Warehouse worker scans HU labels and enters weight/dimensions of packages</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker attaches HU labels to packages on inbound staging area</td>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms receiving completion for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order and freight units</td>
</tr>
<tr>
<td><strong>Step 6</strong>&lt;br&gt;Truck Leaves (EWM)</td>
<td>Truck leaves</td>
<td>GR office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EVM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td><strong>Step 7</strong>&lt;br&gt;Putaway HUs (EWM)</td>
<td></td>
<td>Warehouse worker scans HU label</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system creates putaway WO and proposes a destination bin</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker brings HU to destination bin</td>
<td>Warehouse worker confirms putaway WOs</td>
</tr>
<tr>
<td><strong>Step 8</strong>&lt;br&gt;Exception Handling for Unexpected Shipment (TM)</td>
<td></td>
<td>Customer service agent resolves discrepancies by creating and/or assigning forwarding order items to freight order</td>
</tr>
</tbody>
</table>
6.2 Exception: Receiving Unexpected Package

During the process Receiving from Shipper in SAP Extended Warehouse Management (SAP EWM) you find out that the shipper has sent you more packages than planned. You receive them as additional packages during radio frequency (RF) receiving in the transit warehouse and automatically send them to the clarification zone. SAP EWM sends the information of the unexpected packages or handling units (HUs) as a discrepancy with the notification to SAP Transportation Management (SAP TM). After clarification, which is either triggered by the SAP TM clerk or by the warehouse clerk, and the resolution of the discrepancy in SAP TM and SAP EWM, you put away the HUs to the final destination bin in the transit warehouse.

You can also handle this exception in the receiving office before the packages are actually unloaded. You compare the planned freight order in the SAP EWM system with the documents handed over by the truck driver. If packages listed on the documents from the truck driver are not contained in the freight order planned in SAP TM, you can add HUs or items to the freight order in SAP EWM before you receive the packages. This makes it easier for the warehouse worker receiving the HUs as he or she does not have to enter additional HUs using the RF device.
## Receive Unexpected Package

<table>
<thead>
<tr>
<th>Step 5</th>
<th>Unload Truck and Receive Packages (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical Activity</strong></td>
<td><strong>System Activity</strong></td>
</tr>
<tr>
<td>Warehouse worker unloads packages from truck</td>
<td>Warehouse worker scans HU labels and enters weight/dimensions of packages</td>
</tr>
<tr>
<td>Warehouse worker attaches HU labels to packages on inbound staging area</td>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td>Warehouse worker has no labels anymore but additional packages</td>
<td>Warehouse worker creates HUs and labels for the additional packages</td>
</tr>
<tr>
<td>Warehouse worker attaches the HU label to the additional packages on inbound staging area</td>
<td>Warehouse worker scans additional HU labels and enters weight/dimensions and exception of packages</td>
</tr>
<tr>
<td>The EWM system posts goods receipt for the additional received HUs</td>
<td>The EWM system sends an unloading notification message with additional HUs to TM</td>
</tr>
<tr>
<td>Warehouse worker confirms receiving completion for TU</td>
<td>The TM system updates freight order and freight units including discrepancy entries</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 6</th>
<th>Truck Leaves (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Truck leaves</strong></td>
<td><strong>GR office clerk sets departure from checkpoint for TU</strong></td>
</tr>
<tr>
<td>The EWM system sends an unloading notification message to TM</td>
<td>The TM system updates freight order (status departed)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 7</th>
<th>Putaway HUs to Clarification Zone (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse worker scans HU label</td>
<td>The EWM system creates putaway WO to clarification zone</td>
</tr>
<tr>
<td>The EWM system creates putaway WO to clarification zone</td>
<td>Warehouse worker confirms putaway WOs</td>
</tr>
<tr>
<td>Warehouse worker brings HUs to clarification zone</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 8</th>
<th>Clarification of Additional Packages (TM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse clerk calls transportation clerk (not needed if TM initiates clarification from LDP notification)</td>
<td>TM clerk resolves the discrepancies in the TM system</td>
</tr>
<tr>
<td>TM clerk clarifies the discrepancies with shipper (additional HUs)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 9</th>
<th>Maintenance of Attributes for Additional HUs (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse clerk changes content information of the additional HUs if necessary and the status from 'to be clarified' to 'clarified'</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step 10</th>
<th>Putaway HUs (EWM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse worker scans HU label</td>
<td>The EWM system creates putaway WO and proposes a destination bin</td>
</tr>
<tr>
<td>Warehouse worker brings HUs to destination bin</td>
<td>Warehouse worker confirms putaway WOs</td>
</tr>
</tbody>
</table>
6.3 Exception: Receiving Packages to be Clarified

During the receiving process in SAP Extended Warehouse Management (SAP EWM), you find out that the shipper has sent packages with attributes that do not match what was planned in the forwarding order. For example, the shipper forgot to mention that the packages are oversized or that they contain dangerous goods. As a warehouse worker, you receive the handling unit (HUs) using radio frequency (RF) receiving in the warehouse. You compare the cargo attributes (like oversized, dangerous goods, damaged) displayed on the RF device with the physical HUs and, if necessary, mark the HUs as to be clarified. As a result, SAP EWM automatically determines a destination bin in the clarification zone. SAP EWM sends the information that the packages or HUs need to be clarified as a discrepancy with the notification to SAP Transportation Management (SAP TM). After clarification, which is either triggered by the SAP TM clerk or by the warehouse clerk, and the resolution of the discrepancy in SAP TM and SAP EWM, you put away the HUs into the final destination in the transit warehouse.

You can also handle this exception in the receiving office before the packages are unloaded. You compare the freight order data in SAP EWM with the documents handed over by the truck driver. If they do not match, you can change HUs or items of the freight order, and mark the HUs as to be clarified in SAP EWM before you receive them. This makes it easier for the warehouse worker receiving the HUs as he or she does not need to enter additional information using the RF device.
## Receive Packages to be Clarified

<table>
<thead>
<tr>
<th>Step</th>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Unload Truck and Receive Packages (EWM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse worker unloads packages from truck</td>
<td>Warehouse worker scans HU labels and enters weight/dimensions of packages</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker attaches HU labels to packages on inbound staging area</td>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker checks content information of the received HU and sets flag 'to be clarified' in case of any differing content information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms receiving completion for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message to TM including default discrepancy code for differing HUs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order and freight units including discrepancy entries</td>
</tr>
<tr>
<td>6</td>
<td>Truck Leaves (EWM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Truck leaves</td>
<td>GR office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td>7</td>
<td>Putaway HUs to Clarification Zone (EWM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse worker brings HUs to clarification zone</td>
<td>Warehouse worker scans HU label</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system creates putaway WO to clarification zone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker brings HUs to clarification zone</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms putaway WO</td>
</tr>
<tr>
<td>8</td>
<td>Clarification of Discrepancies (TM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse clerk calls transportation clerk (not needed if TM initiates clarification from LDAP notification)</td>
<td>TM clerk resolves the discrepancies in the TM system</td>
</tr>
<tr>
<td></td>
<td>TM clerk clarifies the discrepancies with shipper</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Clarification of HUs (EWM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse clerk changes content information of the HUs if necessary and the status from 'to be clarified' to 'clarified'</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Putaway HUs (EWM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Warehouse worker brings HU to destination bin</td>
<td>Warehouse worker scans HU label</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system creates putaway WO and proposes a destination bin</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms putaway WO</td>
</tr>
</tbody>
</table>
### 6.4 Exception: Missing Packages from Shipper

During the process **Receiving from Shipper** in SAP Extended Warehouse Management (SAP EWM), you receive fewer packages than planned. During radio frequency receiving in the warehouse, you post the receiving completion after you have received all unloaded packages or handling units (HUs). SAP EWM sends the received packages or HUs with the notification to SAP Transportation Management (SAP TM). Therefore a discrepancy is created in SAP TM for the difference between the planned quantity of packages and the actual quantity of packages or HUs. After the customer service agent has clarified the discrepancy with the shipper, you resolve the discrepancy in SAP TM.

You can also handle this exception in the receiving office before the packages are received. You compare the freight order data in SAP EWM with the documents handed over by the truck driver. If fewer packages are listed on the truck driver’s documents than in the planned freight order from SAP TM, you can delete HUs or items from the planned freight order in SAP EWM before you receive them.

<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td><strong>Physical Activity</strong></td>
<td>Warehouse worker unloads packages from truck</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker attaches HU labels to packages on inbound staging area</td>
</tr>
<tr>
<td></td>
<td><strong>System Activity</strong></td>
<td>Warehouse worker scans HU labels and enters weight/dimensions of packages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The system posts goods receipt for the received HU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Warehouse worker confirms receiving completion for HU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message to TM with less HUs than planned</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order and freight units including discrepancy entries</td>
</tr>
<tr>
<td>6</td>
<td><strong>Physical Activity</strong></td>
<td>Truck leaves</td>
</tr>
<tr>
<td></td>
<td><strong>System Activity</strong></td>
<td>GR office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system sends an unloading notification message to TM</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td>7</td>
<td><strong>Physical Activity</strong></td>
<td>Warehouse worker scans HU label</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EWM system creates putaway WO and proposes a destination bin</td>
</tr>
<tr>
<td></td>
<td><strong>Physical Activity</strong></td>
<td>Warehouse worker brings HUs to destination bin</td>
</tr>
<tr>
<td></td>
<td><strong>Physical Activity</strong></td>
<td>Warehouse worker confirms putaway WOs</td>
</tr>
<tr>
<td>8</td>
<td><strong>Physical Activity</strong></td>
<td>TM clerk clarifies with shipper/sending TW what has happened to missing packages/HUs</td>
</tr>
<tr>
<td></td>
<td><strong>System Activity</strong></td>
<td>TM clerk adjusts TM documents accordingly in the TM system</td>
</tr>
</tbody>
</table>
6.5 Exception: Floor Check ‘Found Handling Units’

Either a warehouse clerk regularly performs a physical check of outbound staging areas when they are expected to be empty, or a clerk in SAP Transportation Management (SAP TM) advises the warehouse that a handling unit (HU) is missing at the next location and was possibly not loaded in your transit warehouse, although the goods issue was posted in SAP Extended Warehouse Management (SAP EWM). If you find a physical HU in the warehouse that does not exist anymore in the SAP EWM system, you can re-create it in SAP EWM using either the radio frequency transaction for floor check or the desktop application Handling-Unit Stock List. The transportation planner in SAP TM can then create a new plan for shipping this HU to the next location.

<table>
<thead>
<tr>
<th>Floor Check for Found HUs (GI Posted but not Loaded)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PreStep 1 in TW2 (optional)</strong></td>
</tr>
<tr>
<td>Unload Truck and Receive Less HUs than Planned (EWM)</td>
</tr>
<tr>
<td>Physical Activity</td>
</tr>
<tr>
<td>Warehouse worker unloads HUs from truck</td>
</tr>
<tr>
<td>System Activity</td>
</tr>
<tr>
<td>Warehouse worker scans HU labels</td>
</tr>
<tr>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td>As receiving completion is not prompted Warehouse</td>
</tr>
<tr>
<td>worker confirms receiving completion for TU manually</td>
</tr>
<tr>
<td>The EWM system sends an unloading notification message to TM with less HUs than planned</td>
</tr>
<tr>
<td>The TM system updates freight order and freight units including discrepancy entries</td>
</tr>
<tr>
<td><strong>PreStep 2 in TW2 (optional)</strong></td>
</tr>
<tr>
<td>Clarification of Missing HU (TM)</td>
</tr>
<tr>
<td>Physical Floor Check (EWM)</td>
</tr>
<tr>
<td>TM clerk clarifies with sending TW (TW1) what has happened to missing HUs</td>
</tr>
<tr>
<td>TM clerk adapts TM documents about missing HUs in TM system</td>
</tr>
<tr>
<td><strong>Step 1 in TW1</strong></td>
</tr>
<tr>
<td>Warehouse clerk checks and finds HUs on the outbound staging area (floor)</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
</tr>
<tr>
<td>System Floor Check (EWM)</td>
</tr>
<tr>
<td>Warehouse clerk cannot find the found HU numbers in SAP EWM</td>
</tr>
<tr>
<td>Warehouse clerk creates the HUs in SAP EWM (by copying historical HU data)</td>
</tr>
<tr>
<td>The system posts goods receipt for found HUs onto actual bin</td>
</tr>
<tr>
<td><strong>Follow Up Step 1</strong></td>
</tr>
<tr>
<td>Create Freight Order (TM)</td>
</tr>
<tr>
<td>Transportation planner creates a new freight order (from TW1 to TW2) for the found HUs</td>
</tr>
</tbody>
</table>
6.6 Exception: Floor Check ‘Lost Handling Units’

Either a warehouse clerk regularly performs a system check of outbound staging areas that are physically empty, or a clerk in SAP Transportation Management (SAP TM) advises the warehouse that an unexpected handling unit (HU) was received in the next location and was possibly physically loaded in your transit warehouse, although no goods issue was posted in SAP Extended Warehouse Management (SAP EWM). If you find an HU in the SAP EWM system that does not exist physically in the warehouse, you can post a goods issue for this HU as the next location already re-created the HU as an additional HU. By doing this you keep your HU stock accurate in the SAP EWM system.

**Floor Check for Lost HUs (Loaded but not GI Posted)**

<table>
<thead>
<tr>
<th>Physical Activity</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warehouse worker unloads HUs from truck</td>
<td>Warehouse worker scans HU labels and enters weight/dimensions of packages</td>
</tr>
<tr>
<td>Warehouse worker has additional physical HUs to scan</td>
<td>The system posts goods receipt for the received HUs</td>
</tr>
<tr>
<td>Receiving Completion is prompted by the system to the warehouse worker</td>
<td>Warehouse worker creates HUs for the additional HUs</td>
</tr>
<tr>
<td>The EWM system posts goods receipt for the additional received HUs</td>
<td>Warehouse worker confirms receiving completion for TU</td>
</tr>
<tr>
<td>The EWM system sends an unloading notification message with additional HUs to TM</td>
<td>The TM system updates freight order and freight units including discrepancy entries</td>
</tr>
</tbody>
</table>

- **PreStep 1 in TW2 (optional)**
  - Unload Truck and Receive Additional HUs (EWM)
  - TM clerk clarifies with sending TW (TW1) what has happened to additional HU
  - TM clerk resolves the discrepancies in TM system

- **Step 1 in TW1**
  - Physical Floor Check (EWM)
  - Optional: TM clerk informs warehouse clerk in TW1 to check for lost HUs
  - Warehouse clerk checks empty floor on outbound staging area

- **Step 2**
  - System Floor Check (EWM)
  - Warehouse clerk double checks for the lost HUs in TW1 (optional)
  - Warehouse clerk post GI for the HUs in SAP EWM
  - The system posts document for ‘lost’ HUs in TW1

- **Follow Up Step 1**
  - Create Freight Order (TM)
  - Transportation planner creates a new freight order (from TW1 to TWx) for the additional HUs in TW2
6.7 Exception: Loading Fewer Handling Units than Planned

During a loading process in SAP Extended Warehouse Management (SAP EWM), not all planned handling units (HUs) can actually be loaded onto the truck (for example, there is not enough space on the truck). During radio frequency loading in the warehouse, you post the loading completion after you have loaded all HUs that could actually be loaded. SAP EWM sends the actual load information with the notification to SAP Transportation Management (SAP TM). Therefore a discrepancy is created in SAP TM for the difference between the planned HUs and the loaded HUs. After clarification of the discrepancy, you resolve the discrepancy in SAP TM.

<table>
<thead>
<tr>
<th>Loading Less HUs than Planned</th>
<th>System Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> Create Freight Order (TM)</td>
<td>Transportation planner creates a freight order (from TW)</td>
</tr>
<tr>
<td><strong>Step 2</strong> Send Loading Request to TW (TM)</td>
<td>Transportation planner sends a loading request message to EWM</td>
</tr>
<tr>
<td><strong>Step 3</strong> Truck Arrives at Checkpoint (EWM)</td>
<td>The system creates a transportation unit (TU), an outbound delivery order and assigns planned HUs to ODOs in EWM</td>
</tr>
<tr>
<td></td>
<td>Truck arrives at checkpoint</td>
</tr>
<tr>
<td></td>
<td>Truck driver goes to shipping office</td>
</tr>
<tr>
<td></td>
<td>Truck docks at door</td>
</tr>
<tr>
<td><strong>Step 4</strong> Stage HUs (optional) (EWM)</td>
<td>Warehouse worker picks and stages HUs to outbound staging area</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker confirms stage WOs</td>
</tr>
<tr>
<td><strong>Step 5</strong> Load Truck (EWM)</td>
<td>Warehouse worker picks and loads HUs directly from outbound staging area</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker scans HU labels upon loading</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker can not fit all planned HUs onto truck (limited space available)</td>
</tr>
<tr>
<td></td>
<td>Warehouse worker confirms loading completed manually</td>
</tr>
<tr>
<td></td>
<td>When loading completed is confirmed, the system closes the TU</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends a loading notification message to TM</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight order and freight units including discrepancy entries</td>
</tr>
<tr>
<td></td>
<td>The TM system prints road waybill for freight order</td>
</tr>
<tr>
<td><strong>Step 6</strong> Truck Leaves (EWM)</td>
<td>Truck leaves</td>
</tr>
<tr>
<td></td>
<td>Shipping office clerk sets departure from checkpoint for TU</td>
</tr>
<tr>
<td></td>
<td>The EWM system posts goods issue</td>
</tr>
<tr>
<td></td>
<td>The EWM system sends a loading notification message to TM</td>
</tr>
<tr>
<td></td>
<td>The TM system updates freight order (status departed)</td>
</tr>
<tr>
<td><strong>Step 7</strong> Clarification of Not Shipped HUs (TM)</td>
<td>TM clerk clarifies what shall happen to not shipped HUs</td>
</tr>
<tr>
<td></td>
<td>TM clerk resolves discrepancies in the TM system</td>
</tr>
</tbody>
</table>