Transaction Availability for Remote Sites
Content

1 Transaction Availability for Remote Sites ................................................................. 4

2 Architecture .............................................................................................................. 7
2.1 SAP ECC 6.0 (Back End) ....................................................................................... 7
2.2 Middleware ............................................................................................................ 8
2.3 User Interface (Front End) ..................................................................................... 8

3 Maintenance ............................................................................................................. 10
3.1 Work Orders .......................................................................................................... 10
   List Work Orders .................................................................................................. 10
   Create Work Order ............................................................................................... 11
   Enter History Note ................................................................................................. 12
   Add Work Order Settlement .................................................................................. 12
   View and Add Time Confirmations ....................................................................... 13
   Change Work Order ............................................................................................... 14
   Add Work Order Text Items ................................................................................... 14
   Add Work Order Materials ..................................................................................... 15
3.2 Measuring Points ................................................................................................. 16
   Update Measuring Point Current Reading Details ............................................... 16
3.3 Equipment ............................................................................................................ 17
   View Equipment Master ....................................................................................... 17

4 Inventory .................................................................................................................. 18
4.1 Materials .............................................................................................................. 18
   Material Details .................................................................................................... 18
4.2 Stock Wanted ......................................................................................................... 19
   Create Purchase Requisition Forms from Stock Wanted ....................................... 19
4.3 Purchase Requisitions ......................................................................................... 20
   Manage Purchase Requisitions ............................................................................ 21
4.4 Goods Issue .......................................................................................................... 22
   Add Goods Issue Quantity to Work Orders ......................................................... 22
4.5 Purchase Orders .................................................................................................... 23
   Goods Receipt for Purchase Orders ...................................................................... 23
   Edit and Add Service Entry Sheets ...................................................................... 23
4.6 Inter-Rig Transfers ............................................................................................... 24
   Execute Inter-Rig Transfers for Materials ............................................................ 24
4.7 Material Documents ............................................................................................. 25
   Reverse Material Documents ................................................................................ 25
4.8 BOM (Bill of Material) .......................................................... 26
    Add and Delete Bill of Material (BOM) Items. ....................... 26
4.9 Physical Inventory ............................................................. 26
    Create Physical Inventory Documents. .................................. 26
    Enter Physical Inventory Count. ........................................... 27
    Perform Physical Inventory Document Reviews and Post Differences. 28

5 Approval ................................................................................. 29
5.1 Approve or Reject Documents ............................................. 29

6 Reports .................................................................................. 30

7 Synchronization Status ........................................................... 31
7.1 View Synchronization Status ................................................ 31
7.2 View Error Archive ............................................................. 31

8 Operations Information .......................................................... 32
8.1 Monitoring ........................................................................... 32
    Start Transaction Monitor (/SAAP/TRANMON). ..................... 33
8.2 Administration and Management .......................................... 34
    Mobile Plant: Update Staging Tables for Complex and Data Tables. 35
    Process Staging Tables ....................................................... 36
    Maintain Reporting Schedule ............................................. 37

9 Initial Loading .......................................................................... 39
9.1 Configure Rigs and Initial Load ............................................ 40
9.2 Utility to Display Count of Data in Tables ............................. 41
1 Transaction Availability for Remote Sites

Product Information

Table 1:

<table>
<thead>
<tr>
<th>Product</th>
<th>transaction availability for remote sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release</td>
<td>1.0 SP04</td>
</tr>
<tr>
<td>Based On</td>
<td>SAP ERP 6.0 EHP 1 through EHP 7</td>
</tr>
<tr>
<td></td>
<td>SAP Work Manager 6.0</td>
</tr>
<tr>
<td></td>
<td>SAP SQL Anywhere 16.0 (including Mobilink Server)</td>
</tr>
<tr>
<td>Documentation Published</td>
<td>June 2016</td>
</tr>
</tbody>
</table>

Use

Companies face the challenge of efficiently conducting plant maintenance, inventory management, and materials management tasks in remote, high latency, and disconnected environments. The transaction availability for remote sites solution extends SAP transactions to be available offline, and is focused on functionality from Plant Maintenance (PM), Inventory Management (IM), and Materials Management (MM). It is always available, provides LAN-based speed, and has an easy to use interface.

Integration

The following figure illustrates the system landscape for transaction availability for remote sites solution.
Customizing

You can make Customizing settings for transaction availability for remote sites in SAP Customizing Implementation Guide (transaction SPRO) under Agentry SAP Framework Configuration > Transaction Availability for Remote Sites.

Features

The following functions are explained in this application help:

Maintenance

- Work Orders [page 10]
- Measuring Points [page 16]
- Equipment [page 17]

Inventory

- Materials [page 18]
- Stock Wanted [page 19]
- Purchase Requisitions [page 20]
- Goods Issue [page 22]
- Purchase Orders [page 23]
- Inter-Rig Transfers [page 24]
- Material Documents [page 25]
- BOM (Bill of Material) [page 26]
• **Physical Inventory** [page 26]

**Approval**

For more information, see .

**Reports**

For more information, see Reports [page 30].

**Synchronization Status**

For more information, see .

---

**More Information**

• **SAP ERP 6.0 EHP 1 through EHP 7**
  

• **SAP SQL Anywhere 16.0**
  
2 Architecture

The transaction availability for remote sites solution provides end users with communication speed as if hard-wired to their environment, constant synchronization within the remote plant regardless of connection, complete functionality in disconnected periods, and a user-friendly interface.

The architecture for this solution consists of SAP SQL Anywhere 16.0 running on the remote site as a distributed data store (remote database). Through staging tables in a consolidated database, approximately 100 essential SAP transactions are extended in the areas of:

- Plant Maintenance (PM)
- Inventory Management (IM)
- Materials Management (MM)

Processing between the SAP ECC and the staging tables within SAP occurs with ABAP jobs via exchange tables.

For more information about the components available for SAP ECC, see SAP Library for SAP ERP 6.0. Go to SAP Help Portal at http://help.sap.com and choose SAP Business Suite SAP ERP (select a relevant EHP number, for example) SAP Enhancement Package 6 for SAP ERP 6.0 Application Help.

This solution uses the following:

- SAP ECC 6.0 (Back End) [page 7]
- Middleware [page 8]
- User Interface (Front End) [page 8]

2.1 SAP ECC 6.0 (Back End)

The transaction availability for remote sites solution runs on the SAP ERP 6.0 (EHP 1 through EHP 7).

Note

There are also prerequisite add-ons SMERP and SMFND (Syclo Work Manager 6.0). These add-ons for transaction availability for remote sites include:

- ABAP code for SAP ECC
- Custom tables
- Exchange tables
- Monitoring function during installation on the SAP ECC

Recommendation

We recommend that you test for upward and downward compatibility.
2.2 Middleware

Use

In order to synchronize the *transaction availability for remote site* solution uses the middle ware *Mobilink Server 16.0*.

Features

Included in the middle ware delivery, the solution provides:

- All configuration and set up files for *transaction availability for remote sites*
- Remote data base server *SAP SQL Anywhere 16.0* (including *Mobilink Server* )
- Build scripts to generate synchronization code and database schemas
- All SAP SQL Anywhere scripts and web services for database access

**Note**

For proper Mobilink synchronization, the following defaults are recommended:

- Synchronization from the rig is every 2 minutes (configurable)
- Processing of the data from the rig is every 2 minutes (configurable)
- Template databases are built at the *Mobilink Server*
- Client machine must be large enough to hold both the database (500MB to 1 GB) and the associated report and attachment (100 GB)
- Client database needs to hold 5 years of work order history for data cleanup, database files, database active transaction logs, and database offline transaction logs
- Transaction log is cleanup by the synchronization process
- Offline log is being created at 4MB
- Log file is being removed and rotated at 4MB

2.3 User Interface (Front End)

Use

The user at the remote location (rig) connects to the *transaction availability for remote sites* solution with one of the following:

- Web UI based on SAP Sybase SQL Anywhere and UI5 technology delivered by SAP
- User interface of the customer solution
Features

The Web UI delivered by SAP includes the following:

- All front end code for web services of the SAP SQL Anywhere 16.0 (including Mobilink Server) remote database
- Transaction availability for remote sites version 1, with a focus on the large-form factor for ease of viewing
3 Maintenance

This component allows you to create and work with:

- Work Orders [page 10]
- Measuring Points [page 16]
- Equipment [page 17]

3.1 Work Orders

Use

You use this function to:

- List Work Orders [page 10]
- Create Work Order [page 11]
- Enter History Note [page 12]
- Add Work Order Settlement [page 12]
- View and Add Time Confirmations [page 13]
- Change Work Order [page 14]
- Add Work Order Text Items [page 14]
- Add Work Order Materials [page 15]

Features

Work Orders contain the work to be done for maintenance and repair of equipment. They are required to keep track of all charges (material, labors and service), assignment and settlement of costs.

3.1.1 List Work Orders

Use

On the user interface (front end), you can use this process to:

- Sort work orders
- Filter work orders
- View details of a work order
Prerequisites

You must create the work orders. See Create Work Order [page 11] for further details.

Process

To execute the process from the user interface (front end), go to MAINTENANCE WORK ORDER.

Sort work orders
1. Expand the list for full sorting capabilities.
2. Select the label of the column that you want to sort.
3. Select Sort Ascending or Sort Descending depending on how you want to sort the column.

Filter work orders
1. Expand the list for full filtering capabilities.
2. Select the column label and type the text you want to filter the column by.
3. Narrow down the list further by filtering other columns.
4. Restrict the time range of results by selecting a date range for the work orders.
5. Clear all the filters by clicking on the top left of the page.

View details of a work order
Click a line item to bring in the details page for the work order.

3.1.2 Create Work Order

Use

Use this procedure to create a work order from the user interface (front end)

Procedure

To create a work order from the user interface (front end), go to MAINTENANCE WORK ORDER.

1. Click the Create WO button to bring up a blank work order form on the right side of the page.
2. Fill in the required details and any other related information. The required details are Description, Equipment, and Main Work Center.
3. Click the search help icon for the Equipment field to view a list of possible pieces of equipments to add.
4. Sort or filter the list as desired.
5. Double-click the equipment that you want to add.
6. Select the **Breakdown** indicator if this is a corrective work order.

7. Click ✅ to finish creating the work order and to activate all the other tabs.
   The work order that you just created is displayed on the list on the left side of the page.

   ![Note]
   If you click ✅ before all required fields are filled, the system brings up an error and highlights the missing fields.

### 3.1.3 Enter History Note

**Use**

Use this procedure to add the history note to a work order from the user interface (front end).

**Procedure**

To enter the history note from the user interface (front end), go to **MAINTENANCE > WORK ORDER**.

1. Select a work order where the **User Status** is **REDY**.
2. Go to the **History** tab of the work order.
3. Click the **Add Note** button at the bottom of the page.
   An **Add to Note** popup appears.
4. Enter the note and click ✅.
5. Add more history notes as required until the **User Status** is changed to **CMPL**.

### 3.1.4 Add Work Order Settlement

**Use**

Use this procedure to add work order settlements from the user interface (front end).

**Procedure**

To add a settlement to a work order from the user interface (front end), go to **MAINTENANCE > WORK ORDER**.
1. Select a work order that you want to add a settlement to.
2. Click the settlement icon in the Details view.
3. Click the Settlement button at the bottom of the page. The Add Settlement popup appears.
4. Select the Settlement Receiver from the drop-down menu.
5. Enter the percentage for the settlement receiver.
6. Enter the From and To period.
7. Click button at the bottom of the page to save the work order.
8. You can add more settlement receivers.

**Note**
- The cumulative percentage of all settlements cannot exceed 100%.
- When the total percentage is 100%, the Settlement tab is deactivated.

### 3.1.5 View and Add Time Confirmations

**Use**

Use this procedure to add time confirmations to a work order from the user interface (front end).

**Prerequisites**

The work order should have the User Status as REDY.

**Procedure**

To add a time confirmation to a work order from the user interface (front end), go to MAINTENANCE WORK ORDER.

1. Select a work order that you want to add a time confirmation to.

**Note**
- You can add a time confirmation only when the User Status for the work order is REDY.

2. Click the Operations tab and select the time confirmation icon. You can view the existing time confirmations for the work order if there are any.
3. Click the Confirmation button at the bottom of the page. The Add Time Confirmation popup appears.
4. Enter the required information including the time spent for the work.
5. Click to save the time confirmation to the work order.
6. You can add more time confirmations.
7. Select the Final indicator for the last time confirmation.

   Note
   The Confirmation button is deactivated when there is a final time confirmation.

8. You can deselect the Final indicator to remove the final confirmation.
9. You can now add additional time confirmations to the work order.

### 3.1.6 Change Work Order

**Use**

Use this procedure to make changes to a work order from the user interface (front end).

**Prerequisites**

The work order should exist and the User Status should not be CMPL.

**Procedure**

To change a work order from the user interface (front end), go to MAINTENANCE >> WORK ORDER >.

1. Click the work order that you want to edit.
2. Edit the required details in any of the tabs.
3. Click to save the changes.

### 3.1.7 Add Work Order Text Items

**Use**

Use this procedure to add text items to a work order from the user interface (front end).
Procedure

To add a text item to a work order from the user interface (front end), go to MAINTENANCE » WORK ORDER »

1. Select a work order that you want to add a text item to.
2. Click the Components tab at the top of the page.
   The Components Needed page appears.
3. Click the Text Item button at the bottom of the page.
   The Add Text Item popup appears.
4. Enter Description and Long Text.
5. Enter Price Estimation and the corresponding Currency.
6. Enter Qty Reqd (quantity required) and the corresponding Unit.
7. Click button at the bottom of the page to save the work order.
8. You can add more text items.

Note

You can only add either text items or materials on the Components Needed page. Once you add a text item, the Material List button at the bottom of the page will be deactivated.

For more information, see Add Work Order Materials [page 15].

3.1.8 Add Work Order Materials

Use

Use this procedure to add materials to a work order from the user interface (front end).

Procedure

To add a material to a work order from the user interface (front end), go to MAINTENANCE » WORK ORDER »

1. Select a work order that you want to add a material to.
2. Click the Components tab at the top of the page.
   The Components Needed page appears.
3. Click the Material List button at the bottom of the page.
   Add Components popup with a list of materials appears.
4. Select the material that you want to add.
5. Once the selected material is added on Components Needed page, enter Qty Reqd (quantity required).
6. Click button at the bottom of the page to save the work order.
7. You can add more materials.

**Note**

You can only add either text items or materials on the *Components Needed* page. Once you add a material, the *Text Item* button at the bottom of the page will be deactivated.

For more information, see *Add Work Order Text Items* [page 14].

### 3.2 Measuring Points

**Use**

You use this function to *Update Measuring Point Current Reading Details* [page 16] from the user interface (front end).

**Features**

Measuring points are physical or logical places from where statuses are collected.

**Example**

- Temperature inside a reactor
- Speed of revolution of a wind wheel

The status is described using measurement readings. Measuring points are stored in the SAP System as master data.

### 3.2.1 Update Measuring Point Current Reading Details

**Use**

Use this procedure to update the current reading details for a measuring point from the user interface (front end).

**Procedure**

To update the current reading details for a measuring point from the user interface (front end), go to

> MAINTENANCE > MEASURING POINT
1. Select the measuring point that you want to update.
2. Enter the reading value in the **Current Reading** field for the relevant line item.

   **Note**
   
   A very high or a very low value produces an error.

3. Click on when you want to update the **Tot. Count Reading** field.

   **Note**
   
   **Tot. Count Reading** is activated only when you enter a correct value for the current reading.

### 3.3 Equipment

You use this function to View Equipment Master [page 17] from the user interface (front end).

#### 3.3.1 View Equipment Master

**Use**

Use this procedure to view the equipment in the equipment master from the user interface (front end).

**Procedure**

To view an equipment master from the user interface (front end), go to [MAINTENANCE ➤ EQUIPMENT MASTER ➤].

1. Scroll through the list of equipment.
2. Sort or filter the list as desired.
4 Inventory

From the INVENTORY tab of your user interface (front end), you can manage the inventory of your materials with the following:

- Materials [page 18]
- Stock Wanted [page 19]
- Purchase Requisitions [page 20]
- Goods Issue [page 22]
- Purchase Orders [page 23]
- Inter-Rig Transfers [page 24]
- Material Documents [page 25]
- BOM (Bill of Material) [page 26]
- Physical Inventory [page 26]

4.1 Materials

You use this function to:

- View the inventory of all the material on the rig (plant)
- Review the global status of a material on all rigs
- Review the details assigned to each material
- Update the material details

4.1.1 Material Details

Use

Use this process to manage the materials in your inventory.

Process

From the INVENTORY MATERIALS tab on your user interface (front end), you can:

- View and sort the inventory of all materials on your rig, by setting filters (viewing the results in either ascending or descending order).
Note

If you want to do a global search for a material on all rigs (not just checking your own inventory stock), set the Global indicator and enter the name of the material you are searching. This is useful when you are looking to acquire a material through an inter-rig transfer.

- Print labels of each individual material. To do so, choose Print Labels.

Example

You want to print labels for each material and place it on the outside of the inventory bin, indicating which material is inside the bin.

- Review the Material Details of an individual material item on the right part of the page (by clicking the Material in question from the left part of the page)
- Update the following fields in the Material Details, if you determine that there is a discrepancy between the data shown and your actual inventory for the material in question:
  - Bin – Shows the exact location where the material is stored
  - Min Qty – Represents the minimum base recommendation amount of inventory to be kept in stock for a material. This is useful when determining your stock wanted amounts
  - Max Qty – Represents the maximum base recommendation amount of inventory to be kept in stock for a material. This is useful when determining your stock wanted amounts
  - ABC Indicator – Represents the significance of the material
  - Rig. Sp. Material Status – Indicates if the material is to be used for a specific status on the rig

Note

If you make any changes in the Material Details, choose .

4.2 Stock Wanted

You use this function to Create Purchase Requisition Forms from Stock Wanted [page 19].

4.2.1 Create Purchase Requisition Forms from Stock Wanted

Use

You create a purchase requisition form from stock wanted.
Procedure

To create a purchase requisition form from stock wanted items from your user interface (front end), go to 

[INVENTORY] [STOCK WANTED]

1. The section on the left side of the page under STOCK WANTED tab lists the inventory of stock that is wanted.
   To add stock from STOCK WANTED to your Purchase Requisition Form, click + in the Add column and the stock appears (on the right side of the page).
2. In the Long Description field, enter text describing the purchase requisition you are creating.
3. If relevant, attach a document to this purchase requisition form.

   Example

   For example, if you have special instructions to send to a vendor.

4. In the Freight Mode field, select the delivery mode of transportation for the material.
5. In the Qty Reqd field, verify the amount in this field and make any adjustments necessary.
6. In the Delivery Date field, enter your desired delivery date.
7. Choose .

   Upon saving, the system generates a local purchase requisition number and updates this number in the Local PR No. field.

   Note

   In addition to this Local PR No., the system also generates a corresponding Purchase Req. number for this purchase requisition under [INVENTORY] [PURCHASE REQUISITION]

Result

You have created a new purchase requisition form from stock wanted.

4.3 Purchase Requisitions

You use this function to manage your purchase requisition details.
4.3.1 Manage Purchase Requisitions

Use

With this procedure, you manage your purchase requisitions.

Procedure

In your user interface (front end) under ➤ INVENTORY ➤ PURCHASE REQUISITION ➤, you can:

1. Review the list of all purchase requisitions.

   - **Note**
     
     There are two types of purchase requisitions, namely material and service purchase requisitions. These purchase requisition types remain separate, so that you cannot add materials to a service purchase requisition.

2. View the approval status of a purchase requisition.

3. Add any attachments, if relevant.

   - **Note**
     
     An individual attachment file must be less 10 MB in size.

4. Make any changes to the fields:
   - *Long Description*
   - *Freight Mode*
   - *Qty Reqd*
   - *Delivery Date*
   - *Currency*

5. Add additional materials to a purchase requisition that were not part of the purchase requisition created in Create Purchase Requisition Forms from Stock Wanted [page 19]. To do so, click on the Purchase Req. in question and choose Material List button at the bottom of the page and add the appropriate materials.

   - **Note**
     
     To delete materials from the purchase requisition, click X next to the material in question.

6. Choose ✖.

Result

You have created a purchase requisition order.
4.4 Goods Issue

You use this function to issue goods to a work order.

4.4.1 Add Goods Issue Quantity to Work Orders

Use

You can add the goods issue quantity to a work order.

Procedure

From the INVENTORY GOODS ISSUE tab on your user interface (front end), you update the actual quantity of material items issued to a work order. To do so:

1. Click on the work order in question.
2. In the Storage Loc field, select the storage location you are issuing the stock from.
3. In the Issue Qty field, enter the quantity you are issuing for each component.

Note

You cannot issue more goods than are required.

4. Choose Issue Goods button at the bottom of the page to issue the quantities you have specified.

Note

The Issue Qty has been added to the Tot Qty Issued and subtracted from the In Stock quantity.
4.5 Purchase Orders

You use this function to:

- Do a Goods Receipt for Purchase Orders [page 23] for a rig (plant)
- Edit and Add Service Entry Sheets [page 23] for purchase orders

4.5.1 Goods Receipt for Purchase Orders

Use

You can do goods receipt for purchase orders.

Procedure

From the [INVENTORY › PURCHASE ORDERS › Receipt] tab on your user interface (front end), you can do goods receipt for purchase order details. To do so:

1. In the Goods Receipt field, enter the actual amount of goods coming directly to the rig.
2. In the Storage Loc field, select the storage location where the goods will be received.
3. Set the Receive All Goods indicator and choose Receive Goods to update the goods received.
   The received quantity of goods is subtracted from the Backorder.

   Note

   To print labels, choose Print Labels.

4.5.2 Edit and Add Service Entry Sheets

Use

You can edit and add a service entry sheet.
Procedure

From the \[ INVENTORY \] \[ PURCHASE ORDERS \] \[ Service Entry \] tab on your user interface (front end), you can edit a service entry sheet. To do so:

1. Go to the \[ INVENTORY \] \[ PURCHASE ORDERS \] tab on your user interface (front end).
2. Click the Order # for the purchase order service type in question. The service order appears on the right part of the page under the Service Entry tab.
3. From this page, you can:
   ○ Change the text in the Long Description field.
   ○ Add an attachment and upload it to the Service Entry Sheet.

   **Note**
   An individual attachment file must be less than 10 MB in size.
   ○ Add a new service item to the service purchase order by selecting Add Service Item. The Add Service Entry Item popup appears.
     1. In the Description field, enter the description of the service item.
     2. In the Quantity field, enter the relevant amount.
     3. In the Unit field, enter the relevant amount.
     4. In the Gross Price field, enter the price.
     5. Choose Save.
   You can also add a new service entry to this service entry sheet. To do so:
     1. Choose Service Entry at the bottom of the page.
     2. Enter the relevant information and choose Save.

4.6   Inter-Rig Transfers

You use this function to Execute Inter-Rig Transfers for Materials [page 24].

4.6.1   Execute Inter-Rig Transfers for Materials

From the \[ INVENTORY \] \[ INTER-RIG TRANSFER \] \[ Details \] tab on your user interface (front end), you can execute an inter-rig transfer by adding materials. To do so:

1. Click + on the left side of the page for each Material you would like to add. The Material is added to the Transfer Goods to Plant.
2. In the Qty to Transfer field, enter the amount for each material you would like to transfer.
3. In the Movement Type field, select the movement type applicable (if there is more than one movement type in the drop down list).
4. In the Transfer to Plant field, select the rig (plant) that will receive the goods being transferred.
5. Choose Issue Goods to issue goods to the specified transfer plant (rig).

Note
You can also print the goods issue form.

4.7 Material Documents

You use this function to Reverse Material Documents [page 25].

4.7.1 Reverse Material Documents

Use

You can reverse material documents.

Procedure

From the INVENTORY MATERIAL DOCUMENTS tab on your user interface (front end), you can reverse the movement of materials for an inter-rig transfer (for example, if the material is defective). To do so:

1. Click the appropriate Material Document on the left side of the page.
   The material in question appears under the Material Document Details on the right part of the page.
2. In the Reverse Qty field, enter the amount of goods you would like to reverse.
3. In the Reverse Movement Type field, select the reverse movement type.

Result

The Material Document Details have been updated reflecting the amount of the material to be transferred back to the rig specified.

You can print these Material Document Details by choosing .
4.8  BOM (Bill of Material)

You use this function to Add and Delete Bill of Material (BOM) Items [page 26].

4.8.1 Add and Delete Bill of Material (BOM) Items

Use

You can add and delete BOM items from your inventory.

Procedure

From the Inventory BOM tab on your user interface (front end), you can add and delete materials to a BOM.

To add a material:
1. Click on the BOM Number in question.
2. Choose Material List.
3. Select the material you would like to add and click Add.
   The material has been added to the BOM.
4. Choose .

To delete a material:
1. Click on the BOM Number in question.
2. Next to the material you want to delete click X.
   The material has been deleted from the BOM.
3. Choose .

4.9  Physical Inventory

You use this function to:

- Create Physical Inventory Documents [page 27]
- Enter Physical Inventory Count [page 27]
- Perform Physical Inventory Document Reviews and Post Differences [page 28]
4.9.1 Create Physical Inventory Documents

Use

You can create a physical inventory document.

Procedure

From the INVENTORY PHYSICAL INVENTORY Detail tab on your user interface (front end), you can view your physical inventory documents. In addition, you can also create a new physical inventory document. To do so:

2. Choose either one of the following and make the appropriate entry:
   - From Bin Range
   - From Material List
3. Choose .

Note

You can also print a physical inventory document. To do so:

1. Click on the Physical Inv Document you want to print.
   The physical inventory document details appear.
2. Choose .

4.9.2 Enter Physical Inventory Count

Use

You enter the actual physical inventory amount counted for an inventory item.

Procedure

From the INVENTORY PHYSICAL INVENTORY Count tab on your user interface (front end), you can enter the amount of physical inventory counted. To do so:

1. From the INVENTORY PHYSICAL INVENTORY Details tab on your user interface (front end), click on the Physical Inv Doc in question.
   The Physical Inventory details appear on the right side of the page.
2. Select the Count tab.
3. In the Quantity Counted column, enter in the count here field for each relevant item the actual physical amount counted.

   Note
   Once you enter a quantity in the count here field, you will only see the number entered.

4. Choose Save.

4.9.3 Perform Physical Inventory Document Reviews and Post Differences

Use

You can review a physical inventory count and post the difference from the Physical Inventory Count document.

Procedure

From the INVENTORY > PHYSICAL INVENTORY > Review tab on your user interface (front end), you can post the reason for differences in your inventory versus that of the actual amount of inventory counted. To do so:

1. From the INVENTORY > PHYSICAL INVENTORY > Details tab on your user interface (front end), click on the Physical Inv Doc in question. The Physical Inventory details appear.
2. Click on the Review tab and in the Reason column, select the reason code for each item where there is a discrepancy.

   Example
   An item was incorrectly placed in storage.

3. Choose Post Difference. The Physical Inventory review is approved and the Status of the Physical Inventory is set to CLOSED on the left side of the page.
5 Approval

This component allows you to approve or reject the following documents:

- Purchase Requisition
- Service Entry Sheet
- Purchase Order

5.1 Approve or Reject Documents

Use

Use this procedure to approve or reject documents from the user interface (front end).

Procedure

To approve or reject documents from the user interface (front end), go to APPROVAL.

1. View the list of approvals that you need to approve.
2. Click the document that you want to approve.
3. Click the Reject button at the bottom of the page to reject the document.
   The Reason for Rejection popup appears.
4. Enter the reason for rejection.
5. Click .
6. Click the Approve button at the bottom of the page to approve the document.
   The document is removed from your list of approvals.
7. The document then goes to the Approvals page of the next person on the approval list.
6 Reports

You use this function on the user interface (front end) to view the reports that have been downloaded to the rig. You can have many customer-specific reports that can be set up to automatically run on SAP ECC and then download to the rig.

To view the reports from the user interface (front end):

1. Click `REPORTS` on the menu bar.
   A list of available PDFs will appear.
2. Select a line and the available versions of the report will be listed on the right side of the page.
3. Select the report version.
   The PDF report is displayed on the details page.
7 Synchronization Status

This component allows you to:

- View Synchronization Status [page 31]
- View Error Archive [page 31]

7.1 View Synchronization Status

Use

Use this function to view the synchronization details of the documents from the user interface (front end).

Features

To view the synchronization details of the documents using the user interface (front end), go to SYNC STATUS IN PROGRESS.

7.2 View Error Archive

Use

Use this function to view the synchronization error archive from the user interface (front end).

Features

To view the synchronization error archive using the user interface (front end), go to SYNC STATUS ERROR ARCHIVE.
8 Operations Information

Certain administrative activities are required for the proper functioning of the transaction availability for remote sites solution. This component provides the operations information which covers the following topics:

- Monitoring [page 32]
  - Error Logs
  - Transaction Monitoring
  - Workload Monitoring
  - Interface Monitoring
  - Background Job Monitoring
- Administration and Management [page 34]
  - Starting and Stopping
  - Backup and Restore
  - User Management
  - Load Balancing and Scalability
  - Job Scheduling

8.1 Monitoring

Monitoring consists of the following activities:

Error Logs

Following types of error logs are available for transaction availability for remote sites:

- On the SAP ECC, you can use transaction SLG1 to view transactions that are run in the background. These will be visible under object /SAAP/SYNC, sub-object INBOUND.
- On the user interface (front end), you can view the transactions and their statuses under Synchronization Status tab. For further details, see View Error Archive [page 31]

Transaction Monitoring

Monitoring is done on the SAP ECC by using the transaction monitor (transaction /SAAP/TRANMON). This program allows you to view the processed uploaded transactions, and view, edit, reprocess or delete the failed and pending uploaded transactions in the SAP ECC. These transactions are executed on the user interface (front end) and are then synchronized with the SAP ECC. For further details, see Start Transaction Monitor (/SAAP/TRANMON) [page 33].
Workload Monitoring

Monitoring of performance on the SAP ECC side is done through standard ECC monitoring processes, for example, transaction SM50.

Interface Monitoring

Standard Mobilink logs are available to monitor success or failure of, as well as performance of synchronization events, both upload and download.

Background Job Monitoring

This is done through standard ECC job monitoring tools, for example, transaction SM37.

8.1.1 Start Transaction Monitor (/SAAP/TRANMON)

Use

This function allows you to view the Processed Transactions and the Failed and Pending Transactions in the SAP ECC (back end). These transactions are executed in the user interface (front end) and are then synchronized with the SAP ECC (back end).

The processed transactions are the ones that are successfully executed by the system. The failed and pending transactions are the ones that the system is not able to execute. This may happen as there may be some errors in the data entered for the object associated with the transaction. There may be more than one transaction pending for the same object. These transactions form a group. Only if the first transaction of the group is executed successfully or deleted, can the system can execute the next transaction.

Features

The transaction monitor has the following features for the Failed and Pending Transactions:

- **Refresh**
  Select this option to refresh the Failed and Pending Transactions list

- **Resubmit Single**
  Select this option to process a single transaction once again. You may execute this once you have corrected the errors in the object associated with the transaction. If this transaction belongs to a group, this has to be the first transaction of the group.

- **Resubmit Group**
Select this option to process all the transactions in a group once again. You may execute this once you have corrected the errors in the object associated with the group of transactions. The transactions in the group are executed in the order that they are submitted.

- **Edit**
  Select this option to edit the object associated with the transaction. After editing the object, you may want to resubmit the transaction.

- **Delete Single**
  Select this option to delete a single transaction. This may be required in the case where the system is not able to process the other transactions of the group because this transaction is the first in the group of transactions and it is not getting processed.

- **Delete Group**
  Select this option to delete a group of transactions.

- **Display Last Log(s)**
  Select this option to display the log of activities executed by the transaction monitor.

### 8.2 Administration and Management

Administration and Management consists of the following activities:

#### Starting and Stopping

Starting and stopping is relevant to remote servers and the *Mobilink Server*.

#### Backup and Restore

On the SAP ECC side of this solution, all backup and restore is handled through standard SAP processes at your installation.

The user interface (front end) database can be rebuilt or restored through an initial synchronization (RESET) of all tables. This will push all current table values from the SAP ECC down to the remote sites.

#### User Management

Standard ECC user management is used for all SAP ECC processes. For user interface (front end) user management, an LDAP server must be used in conjunction with the correlation of user interface (front end) and SAP ECC user IDs through table `/SAAP/LOCALUSER`.
Load Balancing and Scalability

The transaction availability for remote sites solution has load balancing built into its two main ECC processes – programs /SAAP/P_GET and /SAAP/P_TRN. Both these programs use parallel background jobs to process transactions. For further details on these programs, see:

- Mobile Plant: Update Staging Tables for Complex and Data Tables [page 35]
- Process Staging Tables [page 36]

Job Scheduling

You use this program to maintain your reporting schedule. You can:

- Add new reports
- Change and modify existing reports
- Set up the report schedule execution times, for example, if a report should be executed on a daily or weekly basis

For further details on this program, see Maintain Reporting Schedule [page 37].

8.2.1 Mobile Plant: Update Staging Tables for Complex and Data Tables

Use

You use this back end control program to update the staging tables for complex tables (CT), data tables (DT) and object tables (OBJ) in the case of mobile plants. The program is scheduled to run in background, generally every one or two minutes, to pick up any changes to ECC objects that needs to be transported to the remote database(s). This can also be run on demand and can be used to refresh all data in a table or just pick up changes since the last run.

Integration

This program calls the following classes to retrieve the data for the corresponding table types:

- /saap/cl_mobile_plant_sync=>fetch_dt for data tables
- /saap/cl_mobile_plant_sync=>fetch_ct for complex tables
- /saap/cl_mobile_plant_sync=>fetch_obj for object tables
Prerequisites

For regular background processing, you need to set up variants for each of the three table types – CT, DT and OBJ.

Features

Selection

- Enter the user name. The default value is system user PMBATCH.
- You can select the type of tables that you want to update, that is, data tables, complex tables or object tables.
- In the case of data tables, you can select to execute a standard update or a complete reset.
- In the case of complex tables, you can select to execute a standard update or a complete reset. For a reset, you can also select the plants (rigs) and tables to update.
- In the case of object tables, you can select to execute a standard update, a complete reset, or update existing data. You can also select the various update options. For a reset, you can also select the plants (rigs) and tables to update.

Standard Variants

- **DT** – This is used for the regular background job that is submitted periodically. It will select all changes for data tables since the last run of this variant.
- **CT** – This is used for the regular background job that is submitted every several minutes. It will select all changes for complex tables since the last run of this variant.
- **OBJ** – This is used for the regular background job that is submitted every several minutes. It will select all changes for object tables since the last run of this variant.

Activities

To access this program, from SAP ECC (back end), run transaction /SAAP/GET. You can also go to transaction SE38 and execute the program /SAAP/F_GET.

8.2.2 Process Staging Tables

Use

You use this back end control program to process the staging tables for Mobile Plant transactions. The program is scheduled to run in the background, generally every one or two minutes, to pick up all transactions from the remote database(s) that have not yet been processed. The program can also be run on demand to pick up transactions since the last run.
Features

Selection

- Enter the background RFC destination. The default value is /SAAP/SYNC_INB_TRANS
- Enter the background RFC queue prefix. The default value is /SAAP/SYNC
- Enter the user name. The default value is system user PMBATCH
- Additional options exist for Debugging and Utility

Standard Variant

STANDARD: This is the default for background scheduled jobs.

Output

The system displays log after the processing.

Activities

To access this program, from SAP ECC back end, run transaction /SAAP/TRN. You can also go to transaction SE38 and execute the program /SAAP/P_TRN.

8.2.3 Maintain Reporting Schedule

You use this report to maintain your reporting schedule. You can:

- Add new reports
- Change and modify existing reports
- Set up the report schedule execution times, for example, if a report should be executed on a daily or weekly basis

Based on the section details entered, each report is executed (according to their reporting schedule), generated into a PDF file, and downloaded to the appropriate remote databases.

To access the Maintain Reporting Schedule report:

1. Run transaction /SAAP/MANAGE_REPS.
2. In the Active Rigs for Reporting field, select the rig (plant) for which you want to maintain the reporting schedule. To list more than one rig, choose .
3. Choose .

The Maintain Reporting Schedule screen appears, listing all your existing reports. From this screen, you can, for example:

- Use standard SAP ALV tools, for example, to filter, download, and print reports
- List all currently scheduled reports, their characteristics, and a last run date
- Set up a run schedule for a particular report

To setup a run schedule for an existing report, click on the report and choose .
The **Capture Variable Values** popup appears.

1. In the **Transaction Code** and **Variant Name** fields, you do not need to enter data as these fields are automatically updated.
2. In the **Plant-FROM** and **Plant-TO** fields, select the plant or plants where the PDF report is to be downloaded.
3. In the **User** field, the default value is the login name of the current user. Note: You can override this default value and enter another user.
4. In the **Residence Time** field, enter the desired residence time. If you leave this field blank, the system will use the value from the selected report (in the report line).
5. In the **Run Schedule** field, select the relevant run schedule you want your report to be included in (for example, the daily, hourly, monthly, yearly, or on demand request reporting schedule).
6. Choose **Continue**.

   A new schedule entry has been created. You can view this entry by choosing.

To create a new report, choose **Continue**.

The **Capture Variable Values** popup appears.

1. In the **Transaction Code** field, enter the transaction code of the report.
2. In the **Sysco Appl. Name** field, select the relevant entry, either:
   - **WM** for Work Manager
   - **IM** for Inventory Manager
3. In the **Variant Name** field, enter the name of the saved variant of the report (if applicable).
4. In the **Plant Variable Name** field, enter the plant (rig) variable name. This name is the screen name of the input for the plant (rig) (if applicable), for example, **MS_WERKS-LOW**.
5. In the **Description** field, enter the description for the variant used.
6. In the **Field** field, enter text as an additional identifier. An entry in this field is optional.

### Note

On the input screen, the fields **Variable Name**, **Description**, and **Field** are listed again. These fields are parameters that can be added to override the variant entries.

7. In the **Report Description** field, enter text describing the report. This is the report name that is passed along to the remote sites.
8. In the **Output Type** field, the default value is set to **PDF**. This is the only output type supported.
9. In the **Residence Time** field, enter the number of days you want to keep the report in the system. The report is automatically deleted after the amount of days entered in this field. If you do not enter a value in this field, the default value is **365**.
10. In the **Delete flag** field, set the indicator accordingly. This field determines whether or not a report should be deleted after it is downloaded.
11. Choose **Continue**.

   A new report entry has been added and appears on the report.
9  Initial Loading

Initial loading consists of the following activities:

Rig Configuration and Initial Load

This report detects if there are live rigs for existing customers and performs a special one time only process to mark them as 'Initial Load Completed'.

For new customers and for subsequent runs for existing customers it performs the initial loads for data tables (DT Fetch), complex tables (CT Fetch), and object tables (OBJ Fetch).

Existing Customers First Report Run

When existing customers first run the report it displays all the current live rigs that are not configured for initial load. You then select the rigs that are live and mark them as 'Initial Load Complete' to prevent duplicating the initial load for these rigs.

New Customers and Subsequent Report Runs for Existing Customers

The report displays all new rigs and marks if any of the initial loads are done for each table type. The user can select the rigs that they want to load initially and indicate which type of tables to load. Once the initial load job is submitted, the screen can be refreshed to see if the initial load is finished. This step can be repeated until all three table types have initially loaded successfully. When all table types are initially loaded, the rig is marked as 'Initial Load Complete' and is locked to avoid duplicate initial loads.

Utility to Display Count of Data in Tables

This utility report validates the data after an initial load is done and provides a count of records in each table to give an indication if the initial load was done properly. Otherwise the customer has to open each table and see how many records are there. This utility program simplifies the validation work.

In addition, this program can be run any time, just to show the number of records in each table for each plant.
9.1 Configure Rigs and Initial Load

You use this back end report program to perform the initial load for rigs to use the transaction availability for remote sites solution. This program is run on demand to initialize the staging tables for complex tables (CT), data tables (DT) and object tables (OBJ).

Prerequisites

For existing customers, the first time you run this report it will display all the current live rigs and you can indicate which ones to mark as 'Initial Load - Complete' to avoid duplicate initial loads. Once a rig is flagged as 'Initial Load - Complete' it can not be initially loaded again.

Features

The Rig Configuration and Initial Load report has the following features:

- You can select rigs to mark as 'Initial Load Complete' to avoid a duplicate initial load.

  **Note**
  
  This is only on the first report run for existing customers.

- You can select any rig which does not have the Initial Load marked for initial loading.
- You can choose which set of tables to perform the initial load on; DT Fetch, CT Fetch, or OBJ Fetch.
- For the OBJ Fetch initial load there is a pop-up screen to select which object tables to load if you implemented only the inventory or plant maintenance function.
- You can refresh the screen to see if the selected initial load is done for all the selected rigs.

Selection

- Check the Select Rig checkbox to mark a rig as 'Initial Load Completed' or to select rigs for an initial load.
- The Rig and Rig Name (003) display to identify the rig.
- The Initial Load, DT Initial Load, CT Initial Load, and OBJ Initial Load columns display an ‘X’ if the initial load has been run for that rig.
- Use the 1.) DT Fetch, 2.) CT Fetch, or 3.) OBJ Fetch to perform the initial load for that set of tables.
- Use the Refresh button to monitor progress and check if the initial load is complete.
Activities

To access this program, from SAP ECC (back end), run transaction /SAAP/RGET. You can also go to transaction SE38 and execute the program /SAAP/P_GET_RIG.

9.2 Utility to Display Count of Data in Tables

You use this report to fetch the number of data records in each table for one or more plants that you specify on the selection screen. The report checks the data tables, complex tables and object tables that belong to the transaction availability for remote sites solution. This report can be run following the initial load for a rig to validate the load completed correctly.

Selection

● Enter a plant code or specify the range of plant codes to be searched.
● Press the Execute button to run the utility program.

Outputs

● The report output contains the Table Name, Plant, and Count of records in each table.

Activities

To access this utility program, from SAP ECC (back end), go to transaction SE38 and execute the program /SAAP/P_UTIL_CHECK_DATA.
Important Disclaimers and Legal Information

Coding Samples

Any software coding and/or code lines / strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, unless damages were caused by SAP intentionally or by SAP’s gross negligence.

Accessibility

The information contained in the SAP documentation represents SAP’s current view of accessibility criteria as of the date of publication; it is in no way intended to be a binding guideline on how to ensure accessibility of software products. SAP in particular disclaims any liability in relation to this document. This disclaimer, however, does not apply in cases of wilful misconduct or gross negligence of SAP. Furthermore, this document does not result in any direct or indirect contractual obligations of SAP.

Gender-Neutral Language

As far as possible, SAP documentation is gender neutral. Depending on the context, the reader is addressed directly with "you", or a gender-neutral noun (such as "sales person" or "working days") is used. If when referring to members of both sexes, however, the third-person singular cannot be avoided or a gender-neutral noun does not exist, SAP reserves the right to use the masculine form of the noun and pronoun. This is to ensure that the documentation remains comprehensible.

Internet Hyperlinks

The SAP documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. SAP does not warrant the availability and correctness of this related information or the ability of this information to serve a particular purpose. SAP shall not be liable for any damages caused by the use of related information unless damages have been caused by SAP’s gross negligence or wilful misconduct. All links are categorized for transparency (see: http://help.sap.com/disclaimer).