# Oracle Workforce Management Cloud

**WFM User Guide**

**Release 22D**

Oracle Workforce Management Cloud
WFM User Guide

Release 22D

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# Contents

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# Get Help

There are a number of ways to learn more about your product and interact with Oracle and other users.

## Get Help in the Applications

Access the online help from the user drop-down menu in the Warehouse Management application.

## Get Support

You can get support at *My Oracle Support*. For accessible support, visit *Oracle Accessiblity Learning and Support*.

## Get Training

Increase your knowledge of Oracle Cloud by taking courses at *Oracle University*.

## Join Our Community

Use *Cloud Customer Connect* to get information from industry experts at Oracle and in the partner community. You can join forums to connect with other customers, post questions, and watch events.

## Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the *Oracle Accessibility Program*. (if videos) Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

## Share Your Feedback

We welcome your feedback about Oracle Warehouse Managment. If you need clarification, or find an error, you can direct your questions via a service request to *My Oracle Support.*

# 2 System Overview

## Overview

Oracle WorkForce Management (WFM) provides visibility into the operations and the workforce that perform various activities in the facilities. With an easy-to-use configurable browser-based user interface and radio frequency (RF) functionality, WFM helps reduce labor ineffiencies, raise overall performance and improve accuracy.

WFM allows facility managers and supervisors to set goals for productive activities that users perform in the facility. Actual times spent on different activities are captured by WFM using various methods. WFM offers different reports that show the productivity of users against set goals.

## Types of Activities

Multiple activities are performed by users in a facility. These are broadly categorized into three types as described in the following topics.

### System Activities

All the activities that are performed using Oracle Cloud Warehouse Management System (OCWMS) RF device are considered to be system activities. These are productive and therefore goals are defined against each system activity.

### VAS Activities

Any Value Added Service that is performed in the facility is considered a VAS activity. These are captured directly in Oracle Cloud WFM as described under *VAS Data*. These are also productive and therefore goals are defined against each VAS activity.

### Manual Activities

Manual Activities include maintenance related effort, scheduled meetings and time spent towards unexpected events. These are also captured directly in Oracle Cloud WFM (using *Clock* feature). These are non-productive and therefore goals are not defined for such activities.

# WFM Terminology

The following acronyms represent the logical and physical entities in WFM

- **FAC** – Represents the FACILITY which is a physical entity. This could be a Distribution Center, Warehouse or a Store. Users have to clock into a facility before starting their activities in the facility. Towards the end of their work day, users have to clock out of the facility.

- **CC** – Represents a COST CENTER which is a logical entity. Depending on the business, a cost center could represent a department within a facility to which costs can be allocated. The entire facility could fall under a single cost center OR a facility could comprise of multiple cost centers.

- **WG** – Represents a WORK GROUP which is a logical entity. A cost center comprises of one or more work groups.

- **WA** – Represents a WORK AREA which could be considered as a physical area in the facility. Users have to clock into a work area before starting their activities. After completing their activities, users need to clock out of that work area . A work group comprises of one or more work areas.

- **WAA** – Represents WORK AREA ACTIVITY. These are activites that users perform within a work area. The activities performed could be *System Activities*, *VAS Activities* or *Manual Activities.* Multiple activities could be performed in a work area.

- **CI** – Represents user *Clock In and Out*. Clock-In is used to clock into the facility, work area, break, VAS Activities and Manual Activities.

- **CO** – Represents user *Clock Out.* Clock-Out is used to clock out of the facility, work area, break, VAS Activities and Manual Activities.

## A Sample Setup in WFM

Following is an example of how clients could configure WFM to suit their business:

**Note:** A set of related Work Area Activities can be grouped together under a Process.
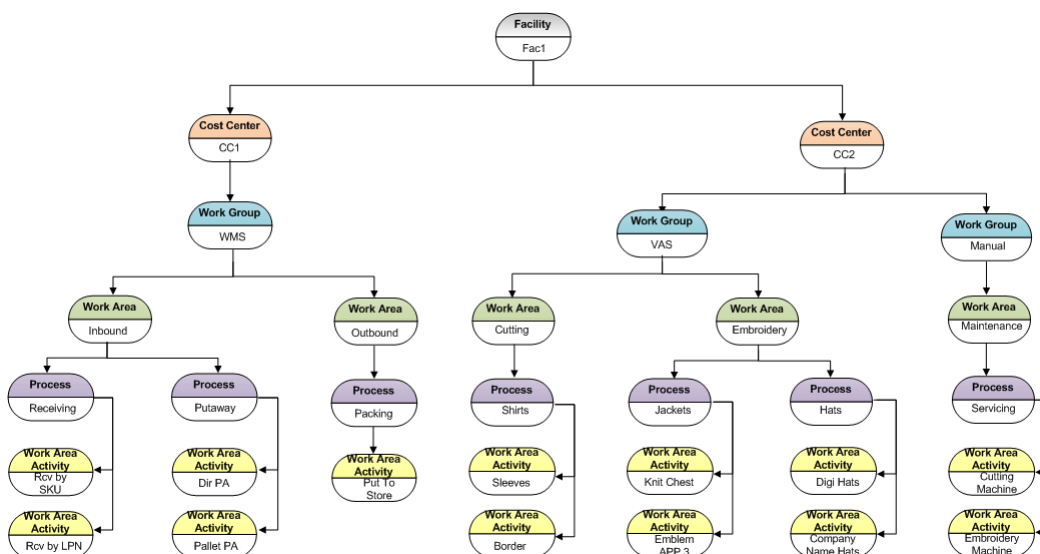
# Clock In and Out

Clocking is a process of capturing the time stamp of every user entering and exiting the facility. It also captures the user's entry and exit into Work Areas, VAS activities, Manual activities and Break.

Every user has to clock into (CI) the facility (FAC) when he enters the warehouse/building. As the next logical step, the user needs to clock into the Work Area (WA) where the user will start performing his warehouse activities (WAA – Work Area Activities). If the user needs to step out on a lunch or tea break, he needs to clock in/out to indicate that to WFM. Finally he needs to clock (CO) of the Work Area and from the Facility.

## A Sample User Work Flow in WFM

Users are required to follow a specific clock-in/clock out process. The following figure depicts a typical clock-in/out flow assuming that the user is performing activity in a single work area on this day.
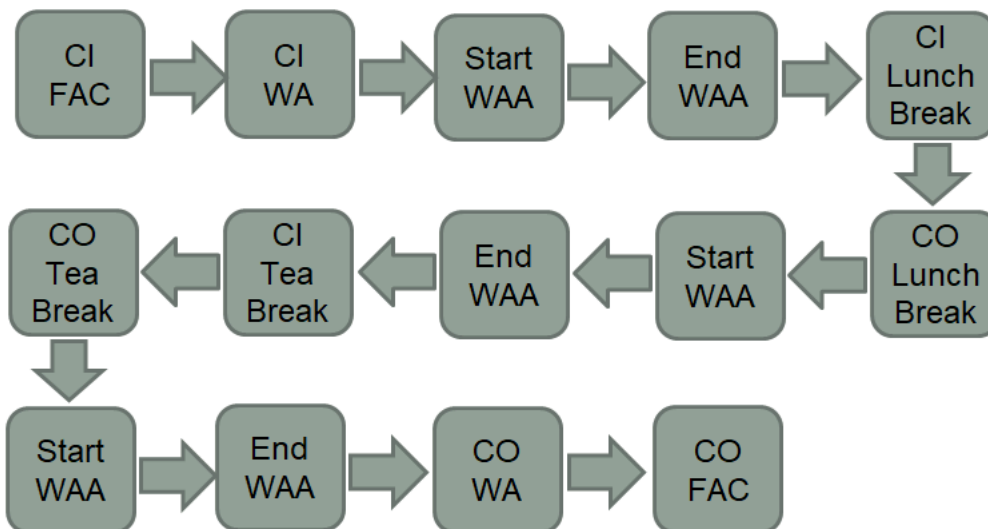
# 3 WFM – Input Data

## Input Data

There are two main inputs that go into WFM: User clock information and user activities performed on the warehouse floor. This data is then used by various reports in WFM.

The clock data is used to determine the time the user has spent in a physical or logical area, for example, total time spent in the facility, the time spent in a specific work area, time spent for a specific break or time spent on a work area activity.

User activities provide the task accomplished in terms of UOM and the time taken to achieve the task.

## Clock Data

There are multiple ways in which users can be clocked in various entities:

- *WFM Browser Clock View*: Using WFM Clock view from the browser
- *WFM RF Clock Views*: Using WFM clock options on RF hand held device
- *WMS RF Clock View*: Using WMS clock option on RF hand held device
- *External Systems*: Interface user clock information from external time management systems

## WFM Browser Clock View

Clock is a browser-based view that is typically used by a supervisor to clock users in and out of various entities. The person that has logged into the application and clocks other users is called the clocker. The clocker could either clock himself or clock other users.

### Facility Clocking

In order to to clock users into or out of a facility, set **Mode** as "Facility" and select the appropriate facility from the **Facility** drop-down. Enter the login ID of the user in the **User** field and hit the clock-in or clock-out button as required.

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## Work Area Clocking

In order to to clock users into or out of a Work Area, set **Mode** as "Work Area". Then select the appropriate facility from the **Facility** drop down and then the Work Area from the **Work Area** drop down. Enter the login ID of the user in the **User** field and hit the clock-in or clock-out button as required.



## VAS Activities Clocking

When a user or a group of users (team) need to be clocked into or out of a certain VAS activity, set Mode as "VAS". Select the appropriate facility from the **Facility** drop down, followed by the Work Area from the **Work Area** drop down. From the **Activity** drop down, Select the activity that the user or team need to work on**.** Select "user" or "team" (as required) from the **Level** drop down.Depending on the **Level** selection, enter either the login ID of the user in the **User** field OR select a team from the **Team** drop down. Next hit the clock-in or clock-out button as required.

## Manual Activities Clocking

In order to clock a user into or out of a manual activity, set Mode as "Manual". Select the appropriate facility from the **Facility** drop down, followed by the Work Area from the **Work Area** drop down. From the **Activity** drop down, select the activity that the user would be working on**.** Enter the login ID of the user in the **User** field and hit the clock-in or clock-out button as required.

| | |
|---|---|
| Mode | Manual |
| Facility | QATST01 |
| Work Area | Receiving Dock 1 |
| Activity | |
| Level (for VAS only) | WAA4 |
| | WAA3 |
| Team | WAA2 |
| Break | WAA1 |
| User * | |

## Break Clocking

To clock a user into or out of a break, set Mode as "Break". Select the appropriate facility from the **Facility** drop down, followed by the break from the **Break** drop down. Enter the login ID of the user in the **User** field and hit the clock-in or clock-out button as required.

| | |
|---|---|
| Mode | Break |
| Facility | QATST01 |
| Work Area | |
| Activity | |
| Level (for VAS only) | |
| Team | |
| Break | |
| User * | Breakfast |
| | Evening Break |
| | Lunch Break |
| | Tea/Coffee Break |

# WFM RF Clock Views

WFM offers multiple RF options for users to clock into and out of various entities while operating on the warehouse floor. The user logged into RF handheld is called the clocker. The clocker could either clock himself or clock other users.

## RF CICO

**Module**: RF-Text: CICO (wfm)

In general, this RF screen provides options for clocking users in facility and work area and also inquire about users. Depending on the role of the user that has logged into RF handheld device, the options presented on selecting this RF screen varies as shown in pictures below:

**Role**:Administrator/Employee

```
Oracle WMS QATST01/QATSTPC
        WFM CI CO
1) Employee Inq
 Choice: _____




Env:  ▓▓▓▓▓▓▓
Ctrl-T: Switch work area
Ctrl-U: Undo last action
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

**Role**:Management

```
Oracle WMS QATST01/QATSTPC
        WFM CI CO
1) Clock In Facility
2) Clock Out Facility
3) Clock In Workarea
4) Clock Out Workarea
5) Employee Inq
 Choice: _____


Env:  ▓▓▓▓▓▓
Ctrl-T: Switch work area
Ctrl-U: Undo last action
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

**Role**:Supervisor

```
Oracle WMS QATST01/QATSTPC
        WFM CI CO
1) Clock In Workarea
2) Clock Out Workarea
3) Employee Inq
 Choice: _____




Env:  ▓▓▓▓▓▓▓
Ctrl-T: Switch work area
Ctrl-U: Undo last action
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

**Role**:Guard

```
Oracle WMS QATST01/QATSTPC
        WFM CI CO
1) Clock In Facility
2) Clock Out Facility
3) Employee Inq
 Choice: _____




Env:  ▓▓▓▓▓▓▓
Ctrl-T: Switch work area
Ctrl-U: Undo last action
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

To summarize, only a user with Management role has access to all the options on this screen. A user with Guard role can only clock users at a facility level. A user with supervisor role can only clock users at a work area level. A user with Administrator or Employee role do not have the option to clock users either at the facility or the work area level. All users (regardless of role) have the option of inquiring about other users using the option **Employee Inq**.

Choosing any of the Clock In/Out options, presents you with the next screen where the user id has to be keyed in. As an example, if the "Clock In Facility" option is selected, the following screen shows up. Here the login id of the user that needs to be clocked into facility is keyed in.

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```
Oracle WMS QATST01/QATSTPC
   Clock In facility

  User: _____




Env: ▓▓▓▓▓▓▓
Ctrl-U: Undo last action
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

Unlike Clock View in the browser, RF does not provide options for Facilities or Work Area. Instead the user is clocked into the Facility/Work Area that is marked as a default for the user.

Also, to clock a user into a Work Area, the clocker (logged in user) needs to have the same default Work Area as the user. If the clocker does not have the same default *Work Area* as the user being clocked in, the following error is encountered .

```
Oracle WMS QATST01/QATSTPC
  ┌──────────────────────┐
  │usernoteligibleforwo  │
  │rkarea                │_
  └──────────────────────┘



Env: ▓▓▓▓▓▓▓▓  ....
Ctrl-U: Undo last action
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

Ctrl-U: This control key can be used to undo the last action. For example, if a particular user was clocked into facility, hitting Ctrl-U button would mark the user as not clocked into facility.

## RF VAS

**Module**: RF-Text: VAS (wfm)

This RF screen provides options to clock users (or a Team) in a VAS activity. Regardless of the role of the logged in user, the following options are presented on selecting this RF screen:

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```
 Oracle WMS QATST01/QATSTPC
 Oracle WMS QATST01/QATSTPC
         WFM VAS
1) Clock In VAS Team
2) Clock Out VAS Team
3) Clock In VAS User
4) Clock Out VAS User
5) Employee Inq
 Choice: _____




Env:  ▓▓▓▓▓▓▓▓
Ctrl-T: Switch work area
Ctrl-X: Exit App
Ctrl-W: Previous screen
Ctrl-W: Previous screen
```

On selecting "Clock In Vas Team" or "Clock In Vas User", all the VAS activities that have been configured in the logged in user's default Work Area are displayed in the next screen.

```
 Oracle WMS QATST01/QATSTPC
   VAS Activities:
1) DRYING
2) IRONING
3) WASHING




=> _____


Env:  ▓▓▓▓▓▓▓▓
Ctrl-U: Page Up
Ctrl-D: Page Down
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

After selecting an activity, the logged in user is taken to the next screen, which shows all the *Teams* that are eligible to operate in this Work Area.

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```
 Oracle WMS QATST01/QATSTPC
  VAS Teams
1) Labeling Team
2) Wrapping Team




=> _____

Env:  ▓▓▓▓▓▓▓▓
Ctrl-U: Page Up
Ctrl-D: Page Down
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

After selecting a team, the next screen varies, depending on the choice made on first screen. If "Clock In Vas Team" was selected, logged in user needs to confirm if the selected team can be clocked in. If "Clock In Vas User" was selected, the logged in user is prompted to enter the id of the user that needs to be clocked in.

Clock In Vas Team Clock In Vas User

Clocking in a team, clocks all the users of that team into the VAS activity.

If the clock out options are selected on main screen, the logged in user is prompted to enter either the id of the user or the team that needs to be clocked out. Clocking out a team, clocks out all the users of the team from that VAS activity. The team or user is clocked out from the last clocked in VAS activity.

## RF Manual

**Module**: RF-Text: MANUAL (wfm)

This RF screen provides options to clock users in a Manual activity. Regardless of the role of the logged in user, the following options are presented on selecting this RF screen:

```
 Oracle WMS QATST01/QATSTPC
 Oracle WMS QATST01/QATSTPC
        WFM Manual
 1) Clock In Manual Activity
 2) Clock Out Activity
 3) Employee Inq
  Choice: _____




Env:  ▓▓▓▓▓▓▓
Ctrl-T: Switch work area
Ctrl-X: Exit App
Ctrl-W: Previous screen
 Ctrl-W: Previous screen
```

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On selecting "Clock In Manual Activity", all the manual activities that have been configured in the logged in user's default Work Area are displayed in the next screen.

```
 Oracle WMS QATST01/QATSTPC
  Manual Activities
1) WAA1
2) WAA2
3) WAA3
4) WAA4




=>  _____

Env: [          ]
Ctrl-U: Page Up
Ctrl-D: Page Down
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

After selecting an activity, on the next screen, the logged in user is prompted to enter the id of the user that needs to be clocked in.

On selecting "Clock Out Activity" on the main screen, the logged in user is prompted to enter the id of the user that needs to be clocked out. The user is clocked out from the last clocked in manual activity.

## RF Break CI

**Module**: RF-Text: Break CI (wfm)

This RF screen can be used for clocking in users into a break. Regardless of the role of the logged in user, the following options are presented on selecting this RF screen:

```
 Oracle WMS QATST01/QATSTPC
        WFM Break CI
1) Breakfast
2) Evening Break
3) Lunch Break
4) Tea/Coffee Break




=>  _____

Env: [          ]
Ctrl-U: Page Up
Ctrl-D: Page Down
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

After selecting a break option, on the next screen the logged in user is prompted to enter the id of the user that needs to be clocked into the selected break.

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## RF Break CO

**Module**: RF-Text: Break CO (wfm)

This RF screen can be used for clocking out users from a break. Regardless of the role of the logged in user, the logged in user is prompted to enter the id of the user that needs to be clocked out.

The user is clocked out from the last clocked in break.

## RF VAS or CICO

**Module**: RF-Text: VAS or CICO (wfm)

This RF screen acts as a one-stop screen that provides all the options that have been described in invidual RF screens above. Regardless of the role of the logged in user, the following options are presented on selecting this screen.

```
Oracle WMS QATST01/QATSTPC

Oracle WMS QATST01/QATSTPC
      WFM VAS or CICO
1) Clock In/Out
2) VAS
3) Manual
4) Start break
5) End break
6) Employee Inq
 Choice: _____




Env:  ▓ ▓ ▓ ▓
Ctrl-T: Switch work area
Ctrl-X: Exit App
Ctrl-W: Previous screen
Ctrl-W: Previous screen
```

1. Clock In/Out: Choosing this option takes you through the same screenflow as *RF Cico.*
2. VAS: Choosing this option takes you through the same screenflow as *RF VAS.*
3. Manual: Choosing this option takes you through the same screenflow as *RF Manual.*
4. Start Break: Choosing this option takes you through the same screenflow as *RF Break Cl.*
5. End Break: Choosing this option takes you through the same screenflow as *RF Break CO*.
6. Employee Inq: Choosing this option takes you through the same screenflow as *RF Employee Inq.*

## RF Employee Inq

**Module**: RF-Text: Employee Inq (wfm)

This RF screen does not provide any clock options but can be used to inquire about any user. The first screen prompts for a user and on keying in the id of a user, the last clock information about the user is displayed.

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```
User: test user42
Clock in at vas
Clocker: test user4
Whse: LGF-WAREHOUSE
WA: Shrink Wrapping Area
VAS: IRONING
Team: Wrapping Team
2020-07-13 03:37:00.956957




Env: ▓ ▓ ▓ .....
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

For example, in the screenshot above, the logged in user has requested information about **test user42** . The Employee Inq screen shows that the **test user42** was last clocked into the "IRONING" VAS Activity by clocker **test user 4** on July 13th at 03:37 am.

Note: **Employee Inq** is also available as an option in all other clock RF screens except the Break RF screens.


# WMS RF Clock View

WMS provides a single RF option for user clocking. This option can only be used to clock in the fa Also, there are no validations against the requests using this screen. Any request made via this RF screen does not take into effect immediately. The clock information is captured and sent to WFM where the data is validated and users are then marked appropriately. It's advisable to use this option only when a user is absolutely sure of the order in which he is making requests.

For example, a user who is not clocked into facility ideally cannot clock into any other entity. On a WFM RF Clock option and WFM Browser Clock view, this user will not be allowed to clock into other entities. However, when WMS RF option is used, the data is simply passed to WFM, where the validations are made and then the clock request could be either rejected or accepted. User is not aware of this status unless a supervisor views in the *WFM Track Record View.*

Following topic describes the options available on this RF screen.

## RF Clock In and Clock Out User
**Module**: RF-Text: Clock In and Clock Out User

On selecting this RF screen, user is presented with the following options:

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```
 Oracle WMS QATST01/QATSTPC
CI CO User

1. CI Facility
2. CO Facility
3. CI WorkArea
4. CO WorkArea

Option:  __




Env: ▮▮▮▮▮▮▮
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

Selecting option 1 sends a "clock into current facility" request to WFM. Selecting option 2 sends a "clock out of current facility" request to WFM. The requests are validated and accepted/rejected in WFM.

```
 Oracle WMS QATST01/QATSTPC
C┌──────────────────┐
 │ Clock Out from Facil│
1│ity QATST01.        │
2└──────────────────┘
3. CI WorkArea
4. CO WorkArea

Option:  2_




Env: ▮▮▮▮▮▮▮....
Ctrl-X: Exit App
Ctrl-W: Previous screen
```

Selecting option 3 prompts the user to key in the Work Area that he needs to be clocked into. WMS only validates if the Work Area is valid. WMS does not validate if the user is eligible for the keyed in Work Area. The request is captured and sent to WFM where data is validated and either accepted or rejected.

Selecting option 4 prompts the user to key in the Work Area from where he needs to be clocked out of. WMS only validates if the Work Area is valid. WMS does not validate if the user is eligible for the keyed in Work Area. The request is captured and sent to WFM where data is validated and either accepted or rejected.

## External Systems

If a facility uses a time management system to capture user's entry and exit into the warehouse, this information can be interfaced into WFM as a clock file. The clock file can also have break information assuming that users walk out the facility for breaks. Data in the clock file is interfaced into WFM *Stage Track Record.*

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Details about the clock file and the interface that processes this file is described in the section - *Input Interfaces*.

# Track Record

If users are clocked using *WFM Browser Clock View* or WFM RF Options, the clock information is captured and can be viewed directly in the Track Record view in WFM.

Track Records - WFM

| User | Clocker | Clock in/out | Action Code | Facility | Shift | Work Area | Activities | Team | Break | Date |
|------|---------|--------------|-------------|----------|-------|-----------|------------|------|-------|------|
| test_user2 | KKALL01 | OUT | 0 | QATST01 | MORNING | | | | | 08/30/2020 12:16:04 PM |
| test_user52 | KKALL01 | IN | 2 | QATST01 | MORNING | Cutting Work Area | Sleeves WAA | Sleeves Team | | 08/30/2020 11:54:23 AM |
| test_user51 | KKALL01 | IN | 2 | QATST01 | MORNING | Cutting Work Area | Sleeves WAA | Sleeves Team | | 08/30/2020 11:54:23 AM |
| test_user2 | KKALL01 | OUT | 1 | QATST01 | MORNING | Cutting Work Area | | | | 08/30/2020 11:45:50 AM |
| test_user2 | KKALL01 | OUT | 3 | QATST01 | MORNING | | | | Tea/Coffee | 08/30/2020 11:30:12 AM |
| test_user2 | KKALL01 | IN | 3 | QATST01 | MORNING | | | | Tea/Coffee | 08/30/2020 11:15:32 AM |
| test_user2 | KKALL01 | OUT | 2 | QATST01 | MORNING | Cutting Work Area | Sleeves WAA | | | 08/30/2020 11:10:02 AM |
| test_user52 | KKALL01 | IN | 1 | QATST01 | MORNING | Cutting Work Area | | | | 08/30/2020 8:51:16 AM |
| test_user51 | KKALL01 | IN | 1 | QATST01 | MORNING | Cutting Work Area | | | | 08/30/2020 8:51:07 AM |
| test_user52 | KKALL01 | IN | 0 | QATST01 | MORNING | | | | | 08/30/2020 8:47:29 AM |
| test_user51 | KKALL01 | IN | 0 | QATST01 | MORNING | | | | | 08/30/2020 8:46:50 AM |
| test_user2 | test_user2 | IN | 2 | QATST01 | MORNING | Cutting Work Area | Sleeves WAA | | | 08/30/2020 8:34:45 AM |
| test_user2 | test_user2 | IN | 1 | QATST01 | MORNING | Cutting Work Area | | | | 08/30/2020 8:33:58 AM |
| test_user2 | test_user2 | IN | 0 | QATST01 | MORNING | | | | | 08/30/2020 8:31:44 AM |

The fields that appear in this view are described below:

**User**: User that has been clocked.

**Clocker**: Personnel that has clocked the user. If the user has clocked himself, this field has same information as the **User** field.

**Clock in/out**: A value of **IN** indicates that the user has been clocked into the entity. A value of **OUT** indicates that the user has been clocked out of the entity.

**Action Code**: Indicates the entity in which the user has been clocked. This field supports values 1 through 4.

- 0 – Indicates Facility
- 1 – Indicates Work Area.
- 2 – Indicates Work Area Activity. This could be either a VAS activity or a manual activity.
- 3 – Indicates Break.

**Shift**: Indicates the shift that corresponds to the time at which user clocks into the facility. The *Shift* section describes how the shift of a user is determined.

**Work Area**: Indicates the Work Area in which user is clocked. This field is populated when Action Code is 1.

**Activities**: Indicates the Work Area Activities in which user is clocked. The activity could be either a VAS activity or a manual activity. This field is populated when Action Code is 2.

**Team**: Indicates the team that has been clocked for VAS activity. This field is populated when Action Code is 2 and a team has been clocked into a VAS activity.

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**Break**: Indicates the Break in which user is clocked. This field is populated when Action Code is 3.

**Date**: Date and time at which the user is clocked.

This view does not provide a create option, and new clock records cannot be created manually. However, the view provides update and delete options. In order to update or delete a record, you need to login as the clocker of that record. For example, in the picture above, in order to update or delete any record that has clocker as "KKALL01", you need to login as "KKALL01".

## How WFM Tracks Shifts

Although a user could be assigned with a default "shift", it is not mandatory that the user clocks-in into the same shift. Having said that, WFM determines the shift based on the time that the user clocks into the facility. For example, if there are three shifts configured in WFM:

| Shift Name | Start Time (*Ascending*) |
|---|---|
| Morning | 7:00:00 AM |
| Afternoon | 2:00:00 PM |
| Night | 11:00:00 PM |

Depending on the time at which the user clocks into the facility, WFM determines the closest "Start Time" from Shifts and clocks the user against that shift. For example, if a user clocks-in at 6:00 AM, the shift is determined as "Morning". If a user clocks-in at 8:00 AM, the shift is determined as "Morning". If a user clocks into the facility at 7 PM, the shift is determined as "Night", because 7 PM is closest to the "Start Time" of 11:00 PM" in the table above (In other words, 5 hours have already passed since shift "Afternoon" started)

This helps provide a true picture of the shift in which the user worked as well as use shift filters appropriately in all the productivity reports.

# Stage Track Record

If users are clocked using the WMS RF Option or user clock file interfaced from *external systems*, the clock information is first written to Stage Track Record. A background process picks up this data, validates and then moves data to Track Record. Only records in "Ready" status are picked up for processing. This process is either triggered manually by using the **run_process** button on Stage Track Record view OR scheduled using the Scheduled Jobs view

**Stage Track Record - WFM**

| Facility | Employee ID | CICO Type | CICO Timestamp | Status | Processing System | Error Message | Work Area |
|----------|-------------|-----------|----------------|--------|-------------------|---------------|-----------|
| QATST01 | 8918918101 | F6 | 08/31/2020 1:28:19 PM | Ready | W | | INBOUND |
| QATST01 | 2 | F4 | 08/31/2020 4:16:18 PM | Cancelled | M | Msg 101007 | |
| QATST01 | 2 | F3 | 08/31/2020 10:45:05 AM | Ignored | M | Msg 101007 | |
| QATST01 | 2 | F2 | 08/31/2020 10:32:02 AM | Failed | M | Msg 101007 | |
| QATST01 | 2 | F1 | 08/31/2020 8:27:12 AM | Failed | S | Msg 101007 | |
| QATST01 | 8918918101 | F5 | 08/30/2020 10:13:47 PM | Processed | W | | INBOUND |
| QATST01 | 8918918101 | F1 | 08/30/2020 10:04:28 PM | Processed | W | | |

The fields that appear in this view are described below:

**Employee ID**: Unique ID of the user. This corresponds to the ID in the User view.

**CICO Type**: Indicates the entity in which the user has been clocked. This field supports the following:

- F1 – Indicates clock-in to a Facility
- F2 – Indicates clock-in to a Break
- F3 – Indicates clock-out of a Break
- F4 – Indicates clock-out of a Facility
- F5 – Indicates clock-in to a Work Area
- F6 – Indicates clock-out of a Work Area

**CICO Timestamp**: Date and time at which the user is clocked.

**Status**: The following values are supported:

- Not Ready – Indicates that the record is not ready to be picked up yet by the background process.
- Ready – Indicates that the record is ready to be picked up by the background process.
- Processing – Indicates that the record is currently being processed by the background process.
- Processed – Indicates that the record has been processed sucessfully and moved to Track Record.
- Ignored – Duplicate records are marked as "Ignored"
- Cancelled – A record can be marked as cancelled. Cancelled records are not picked up by the background process
- Failed – Indicates that the record failed validations during processing. Such records have the **Error Message** field populated with the relevant text indicating the reason for failure .

**Processing System**: The following values are supported:

- M – Indicates that the data is interfaced by an external system. M is used when new clock data is interfaced to WFM.
- S – Indicates that the data is interfaced by an external system. S is used when existing clock data in WFM needs to be updated.
- W – Indicates that the user has been clocked using WMS RF option.

**Error Message**: This field is populated with the appropriate error message when the record fails data validations. After the required configurations are put in place (example, missing User OR Work Area), an administrator can reset the record by using the edit icon and change status to "Ready". During the next process run, if the record processes successfully, this field is cleared.

**Work Area**: This field is populated with the Work Area when **CICO Type** is F5 or F6

**run_purge**: This button is used to manually trigger the *purge process* which purges old data from Stage Track Record.

# Shifts

Users are typically assigned default shifts in the User Master. However it is not mandatory that the user clocks-in to the default shift. Depending on the time at which the user clocks into the facility, WFM matches the user's clock-in time with the start-time of all the shifts configured in the system. The user is then assigned to the shift that has the closest "start time" compared to the facility clock-in time.

For example, let's say that the following three shifts have been configured in WFM. User1 has a default shift defined as "Afternoon" configured in the User Master.

| Shift Name | Start Time (*Ascending*) | End Time |
|---|---|---|
| Morning | 7:00:00 AM | 4:00:00 PM |
| Afternoon | 2:00:00 PM | 11:00:00 PM |
| Night | 11:00:00 PM | 8:00:00 AM |

On day 1, if User1 clocks-in to the facility at 6:00 AM, the shift is determined as "Morning". On day 2, if this user clocks-in to the facility at 8:00 AM, the shift is again determined as "Morning". On day 3, if this user clocks into the facility at 7 PM, the shift is determined as "Night", because 7 PM is closest to the "Start Time" of 11:00 PM."

In the table above (5 hours have already passed since shift "Afternoon" has started).

In other words, although User1's default shift is defined as "Afternoon", the actual shift is determined based on the time at which User 1 clocks into the facility.

Also, once a user's shift has been determined, the same shift is applicable to all other clocks for the user until the user clocks out of the facility. This helps provide a true picture of the shift the user worked on that day and it also uses shift filters appropriately in all the productivity reports.

# User Activity Data

Since system and VAS activities are productive, the time taken to perform these activities and the measure of the activity performed (in relevant UOM) is required in WFM.

## WMS Data

User activities performed using WMS RF options are called System Activities. The facility parameter WRITE_WMS_ACTIVITY_RECORDS controls the recording of these activities in WMS. If the facility parameter is to set to "Yes", all user activities performed using WMS RF options are recorded in WMS. These records contain both the time taken as well as the measure of the activity performed. This data is extracted from WMS at regular intervals by the "WMS WFM Interface" scheduled via the Scheduled Jobs view. Data is consolidated and moved to WMS Activity Track view in WFM.

## WMS Activity Track

As a first step "WMS WFM interface" validates the *SKU line*, *User* and *WMS Transaction* of each record that is moved from WMS to WFM. If all three values are configured in WFM, the status on the record is marked as "SUCCESS". However, if any of the three values are not configured, the record fails and the appropriate "Unknown" field is populated. For example, if the SKU Line is not configured, the status on the record is marked as "ERROR" and the "Unknown SKU Line" field is populated with the SKU Line that was on the record. The begin and end time stamp capture the total time taken for the user to perform the activity. Nbr Pallets, Nbr LPNs and Nbr Units show the total quantity of Pallets, LPNs or units handled during the activity.

**WMS Activity Track - wfm**

Process WMS Activities

| Facility | Unknown Sku Line | SKU Line Group | Unknown User | User | Unknown Transaction | WMS Transaction | Stat Code | Nbr Pallets | Nbr LPNs | Nbr Units | Module Name | Begin time stamp |
|----------|------------------|----------------|--------------|------|---------------------|-----------------|-----------|-------------|----------|-----------|-------------|------------------|
| AUTOFAC | | APPARELS | | wfmqa1 | | WFM RECEIVING | SUCCESS | 0 | 1 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 11:01:4 |
| AUTOFAC | | SPORTS | | wfmqa1 | | WFM RECEIVING | SUCCESS | 0 | 2 | 5 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 11:03:2 |
| AUTOFAC | | APPARELS | | wfmqa1 | | WFM RECEIVING | SUCCESS | 0 | 1 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 1:10:35 |
| AUTOFAC | | APPARELS | | wfmqa1 | | WFM RECEIVING | SUCCESS | 0 | 1 | 3 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 11:02:4 |
| AUTOFAC | | APPARELS | | wfmqa1 | | WFM RECEIVING | SUCCESS | 0 | 2 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 11:06:3 |
| AUTOFAC | | SPORTS | | wfmqa1 | | WFM RECEIVING | SUCCESS | 0 | 2 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 11:08:4 |
| AUTOFAC | | APPARELS | | wfmqa1 | | WFM MANUAL REC… | SUCCESS | 0 | 1 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 5:27:31 |
| AUTOFAC | | SPORTS | | wfmqa1 | | WFM MANUAL REC… | SUCCESS | 0 | 1 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/19/2020 5:28:20 |
| AUTOFAC | | APPARELS | | wfmqa1 | | WFM RECEIVING VAS | SUCCESS | 0 | 1 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/20/2020 11:36:4 |
| AUTOFAC | | SPORTS | | wfmqa1 | | WFM RECEIVING VAS | SUCCESS | 0 | 1 | 2 | rf.inbound.cwrfrecvlpnshpmt | 08/20/2020 11:37:3 |

## Daily Activity Track

As a second step "WMS WFM Interface", consolidates all the successful records in WMS Activity Track and moves to Daily Activity Track view in WFM. Similar transactions (for example, same user, same SKU Line Group and same Transaction) over a day are consolidated and written at a Daily level in this view.

**Daily Activity Track - wfm**

| User | SKU Line Group | WMS Transaction | Date | Nbr Units | Nbr LPNs | Nbr Pallets | Duration | Create Timestamp |
|------|----------------|-----------------|------|-----------|----------|-------------|----------|------------------|
| wfmqa1 | SPORTS | WFM RECEIVING VAS | 08/20/2020 | 2 | 1 | 0 | 101 | 08/20/2020 11:44:26 AM |
| wfmqa1 | APPARELS | WFM RECEIVING VAS | 08/20/2020 | 2 | 1 | 0 | 34 | 08/20/2020 11:44:25 AM |
| wfmqa1 | SPORTS | WFM MANUAL RECE… | 08/19/2020 | 2 | 1 | 0 | 16 | 08/19/2020 5:30:38 PM |
| wfmqa1 | APPARELS | WFM MANUAL RECE… | 08/19/2020 | 2 | 1 | 0 | 32 | 08/19/2020 5:30:38 PM |
| wfmqa1 | APPARELS | WFM RECEIVING | 08/19/2020 | 2 | 1 | 0 | 55 | 08/19/2020 1:13:02 PM |
| wfmqa1 | SPORTS | WFM RECEIVING | 08/18/2020 | 7 | 4 | 0 | 92 | 08/19/2020 11:04:20 AM |
| wfmqa1 | APPARELS | WFM RECEIVING | 08/18/2020 | 7 | 4 | 0 | 179 | 08/19/2020 11:02:20 AM |
| wfmqa1 | SPORTS | WFM PUTAWAY | 08/17/2020 | 2 | 1 | 0 | 42 | 08/17/2020 6:49:40 PM |
| BNWFM | SPORTS | WFM RECEIVING | 07/15/2020 | 14 | 2 | 0 | 73 | 07/16/2020 12:45:55 PM |
| wfmqa1 | APPARELS | WFM RECEIVING | 07/15/2020 | 10 | 1 | 0 | 28 | 07/16/2020 12:31:56 PM |
| wfmqa1 | APPARELS | WFM RECEIVING | 07/12/2020 | 5 | 1 | 0 | 142 | 07/13/2020 2:56:37 PM |

# VAS Data

VAS activities are captured as a two-step process in WFM. The first step is to clock the user in the relevant VAS activity. This records the time taken for the activity. Clocking into VAS activities is explained in *Clock Data*.

The second step is to capture the units (or relevant UOM) worked on during this time period. This is captured using the Daily VAS Track Browser view.

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**Daily VAS Track - WFM**

| Activity | Cal Date | Team | Qty | SKU Line Group |
|---|---|---|---|---|
| Knit Chest WAA | 09/02/2020 | Knit Chest Team | 106 | Apparel |
| Sleeves WAA | 09/03/2020 | Sleeves Team | 50 | Apparel |

After the user or VAS team clocks into a VAS activity, the total quantity is captured by using the create button on Daily VAS Track view.

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# 4  WFM Configuration

## Configuration

The following topics provide more details about configuring different parts of WFM:

## User

In the past, in order to interface any data from WMS successfully into WFM, it was necessary to ensure that users that are created in WMS are also created in WFM (or interfaced into WFM). However with the merge of WMS WFM DB, there is single user view which is common to both WMS and WFM. Any user created in a WMS application is applicable to WFM as well.

For user creation, roles and permissions, refer to the *WMS Online Help*.

## Team

A group of users performing same activities are categorized under a team. Teams are mainly created for VAS activities. Although users can clock individually or a as team to perform VAS activities, the measure of VAS activity performed is captured only at a team level using the Daily VAS Track view.

### Teams View

Teams are created using the Teams view and each team is assigned to a Work Area which corresponds to a VAS activity. The same team could be assigned to multiple Work Areas. Also, multiple teams could be assigned to a Work Area.

**VAS Teams - WFM**

| Name | Work Area |
| --- | --- |
| Knit Chest Team | Embroidery Work Area |
| Sleeves Team | Cutting Work Area |

### Assigning Users to a Team

To assign users to a Team, select the Team, example "Sleeves Team" and hit the Users button. This takes you to the next view with two frames that displays a list of all users configured in the application in the lower frame.

Select the users that need to be assigned to this Team. Checking the box moves the selected Team to the frame above. Hit save button.

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← **VAS Teams - WFM** ▶ **Users**

☑ test_user51
☑ test_user52

☐ test_user1
☐ test_user2
☐ test_user31
☐ test_user32

# SKU Line and SKU Line Group

Items in a warehouse are assigned to SKU Lines. Multiple SKU Lines are further grouped into SKU Line Groups. The groups could be determined based on the physical characteristics of the items and the effort required to handle the items. Placing items in different groups helps set the appropriate goal for each SKU Line Group.

For example, appliances and electronic items in a warehouse could be categorized into SKU Lines and SKU Line Groups as shown below:

| Item | SKU Line | SKU Line Group |
|------|----------|----------------|
| Watch | Light Weight Electronics | Light Weight Products |
| iPhone | | |
| Hand Mixer | Light Weight Appliances | |
| Egg Beater | | |
| Laptop | Medium Weight Electronics | Medium Weight Products |
| Microwave | | |
| Scanner | | |
| Printer | | |
| TV | | |
| Stove | Medium Weight Appliances | |
| Oven | | |
| Microwave | | |
| 84" Inch TV | Heavy Weight Electronics | Heavy Weight Products |
| Office Printer | | |
| Refrigerator | Heavy Weight Appliances | |
| Washer | | |
| Dryer | | |

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In the above example, different goals can be set for each SKU Line Group. For example, it's possible to handle 100 units of Light Weight Products in an hour. However it would probably take about 1 hour to move just 1 unit of a Heavy Weight Product.

# SKU Line

SKU Lines are assigned to the items in WMS in the items view. In WMS items view, the **_Item Line_** field contains the SKU Line of an item. The same SKU Lines need to be defined in WFM using the SKU Line view.

**Sku Lines**

| Name | Description |
|---|---|
| Heavy Weight Appliances | Large appliances such as Refrigerator, Washer |
| Heavy Weight Electronics | Large electronics such as Office Printers, TV Sets larger than 75 inch |
| Light Weight Appliances | Small appliances such as Hand mixer, Egg beater |
| Light Weight Electronics | Small electronics such as Watch, iPhone |
| Medium Weight Appliances | Medium sized appliances such as Oven, Microwave |
| Medium Weight Electronics | Medium sized electronics such as Laptop, Printer |

| **Note:** WFM is now aware of Items.

# SKU Line Group

Each SKU Line is assigned to a SKU Line Group using the SKU Line Group view.

**SKU Line Group - WFM**

SKU Lines        Material Handling

| Name | Description |
|---|---|
| Heavy Weight Products | Large products that need extra effort for handling |
| Light Weight Products | Small products that can be easily handled in multiples of 10 |
| Medium Weight Products | Medium sized products that can be handled with a little effort |

To assign SKU Lines to a SKU Line group, select the SKU Line group, example "Heavy Weight Products" and hit the SKU Line button. This takes you to the next view with two frames that displays a list of all SKU Lines configured in WFM in the lower frame.

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Select the SKU Lines that need to be assigned to this SKU Line group. Checking the box moves the selected SKU Line to the frame above. Click **Save**.

# Cost Center

A single cost center or multiple cost centers can be created in a facility using the Cost Center view.



# Work Group

A single work group or multiple work groups can be created within a cost center using the Work Group view.

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# Work Area

A single work area or multiple work areas can be created within a work group using the Work Area view. A supervisor could also be assigned to each Work Area.

**Work Areas**

| Facility | Work Area Code | Name | Color | Supervisor ▲ |
|----------|---------------|------|-------|--------------|
| QATST01 | Inbd WA | Inbound Work Area | | test_user31 |
| QATST01 | Outbd WA | Outbound Work Area | | test_user32 |
| QATST01 | Cut WA | Cutting Work Area | | test_user33 |
| QATST01 | Embd WA | Embroidery Work Area | | test_user34 |
| QATST01 | Maint WA | Maintenance Work Area | | test_user35 |

Every user that performs activities on the warehouse floor needs to be assigned to a Work Area. A user can be assigned to multiple Work Areas. Personnel that clock other users using WFM RF option should be assigned to at least one Work Area that is marked as a default. The Work Area button on Users view is used to assign a user to Work Areas.

To mark the Work Area as a default for the user, enable the Default checkbox in the create pane.

← **LGF users** ➡ **Work Areas**

| User | Work Area | Default | Default work area activity | Create Timestamp |
|------|-----------|---------|----------------------------|------------------|
| test_user32 | QATST01/Inbd WA | Yes | | 09/08/2020 8:17:48 PM |

# Process and Process Type

A set of related activities are grouped under a Process and multiple Processes are grouped into a Process Type. For example, the RF receiving options in WMS could be grouped under one Process. All Inbound activities such as Receiving and Putaway could be grouped under one Process Type.

**Process - WFM**

| Name ▲ | Description | Process Type |
|--------|-------------|--------------|
| Hats Prcs | Hats Process | Embd PT |
| Jackets Prcs | Jackets Process | Embd PT |
| Pack Prcs | Packing Process | Outbd PT |
| Putwy Prcs | Putaway Process | Inbd PT |
| Recv Prcs | Receiving Process | Inbd PT |
| Serv Prcs | Servicing Process | Maint PT |
| Shirts Prcs | Shirts Process | Cutting PT |

**Note:** The Process Type has to be configured first before configuring the Process.

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# Group Activity

Group Activities are associated with the activities in a Work Area.

# Work Area Activities

The three different activities that users could perform in a Work Area are System Activities, VAS Activities and Manual Activities. These are configured in WFM using the Work Area Activity view.

**Work Area Activity - WFM**

| Activity Code | Name | Work Area Activity Type | Work Area | UOM | Group Activity | Priority Type | process |
|---|---|---|---|---|---|---|---|
| Rcv By SKU-WAA | Receive By SKU WAA | System | Inbound Work Area | Units | Inbd Grp Act | Primary | Recv Prcs |
| Pallet PA-WAA | Pallet Putaway WAA | System | Inbound Work Area | Units | Inbd Grp Act | Primary | Putwy Prcs |
| Dir PA-WAA | Directed Putaway WAA | System | Inbound Work Area | Units | Inbd Grp Act | Primary | Putwy Prcs |
| Rcv By LPN-WAA | Receive By LPN WAA | System | Inbound Work Area | Units | Inbd Grp Act | Primary | Recv Prcs |
| Put To Str-WAA | Put To Store WAA | System | Outbound Work Area | Units | Outbd Grp Act | Primary | Pack Prcs |
| SL-WAA | Sleeves WAA | VAS | Cutting Work Area | Units | Cutting Grp Act | Primary | Shirts Prcs |
| DH-WAA | Digi Hats WAA | VAS | Embroidery Work Area | Units | Embd Grp Act | Primary | Hats Prcs |
| CN-WAA | Comp Name Hats WAA | VAS | Embroidery Work Area | Units | Embd Grp Act | Primary | Hats Prcs |
| APP-WAA | Emblem APP3 WAA | VAS | Embroidery Work Area | Units | Embd Grp Act | Primary | Jackets Prcs |
| KC-WAA | Knit Chest WAA | VAS | Embroidery Work Area | Units | Embd Grp Act | Primary | Jackets Prcs |
| BRD-WAA | Border WAA | VAS | Cutting Work Area | Units | Cutting Grp Act | Primary | Shirts Prcs |
| CN-WAA | Cutting Machine WAA | Manual | Maintenance Work Ar… | Units | Maint Grp Act | Primary | Serv Prcs |
| EM-WAA | Embroidery Machine WAA | Manual | Maintenance Work Ar… | Units | Maint Grp Act | Primary | Serv Prcs |

# WMS Transaction

Since activities performed using WMS RF screens are considered as system activities, all such RF screens need to be associated with the System Work Area Activity in WFM. This association is made in the WMS Transaction view in WFM.

For example, assume that user needs to perform receiving by SKU. In WMS screens view, an RF screen "RF Receive by SKU" is configured.

**Screens**

Generate Screens      Add to Current Group Menu

| Products | Screen Type | Module | Screen Name | Nbr of Parameters |
|---|---|---|---|---|
| wms | RF-Text | RF-Text: Recv {lpn} Shipment | RF Receive By SKU | 37 |

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In WFM, this screen is associated with a Work Area Activity using the WMS Transaction view. The name field in WMS Transaction view should exactly match with the screen name in WMS. If not, when data for such screens is extracted by WMS WFM Interface, it fails with the error "Unknown Transaction"

**WMS Transaction - WFM**

| Facility | Name | Activities | UOM | Pre Pack |
|---|---|---|---|---|
| QATST01 | RF Receive by SKU | Receive By SKU WAA | Units | No |
| QATST01 | RF Receive by LPN | Receive By LPN WAA | Units | No |
| QATST01 | RF Directed Putaway | Directed Putaway WAA | Units | No |
| QATST01 | RF Pallet Putaway | Pallet Putaway WAA | Units | No |
| QATST01 | RF Put To Store | Put To Store WAA | Units | No |

# Goals

Since System and VAS Activities are productive, goals must be defined for each System and VAS Activity.

## Goals for System Activities

Goals for system activities are configured using the Prod Goal Line Group view.

**Prod Goal Line Group - WFM**

| Activity | SKU Line Group | Calender Month | Calender Year | UOM | UOM/hr | Pre Pack |
|---|---|---|---|---|---|---|
| Receive By SKU WAA | Heavy Weight Products | SEP | 2020 | Units | 2 | No |
| Receive By LPN WAA | Light Weight Products | SEP | 2020 | LPNs | 30 | No |
| Receive By SKU WAA | Medium Weight Products | SEP | 2020 | Units | 20 | No |

Every system activity needs to have atleast one goal defined for each month of a year. The same activity could have different goals defined based on the SKU Line Group. For example, a user could receive 10 units of light weight products such as microwave or laptop in an hour. However, it could take about 1 hour for the user to receive just 1 unit of a heavy weight item such as a refrigerator. Therefore goals for each activity needs to be defined based on the SKU Line Group.

## Goals for VAS Activities

Goals for VAS activities are configured using the Prod Goal Line Group view.

**Prod Goal VAS - WFM**

| Activity | Calender Month | Calender Year | UOM | UOM/hr | SKU Line Group |
|---|---|---|---|---|---|
| Knit Chest WAA | SEP | 2020 | Units | 25 | Apparel |
| Sleeves WAA | SEP | 2020 | Units | 50 | Apparel |

Similar to system activity, every VAS activity needs to have atleast one goal defined for each month of a year. The same activity could have different goals defined based on the SKU Line Group.

# Breaks

Predetermined breaks are configured in WFM using the breaks view. A certain duration (in minutes) is allocated for each break. Users need to clock into the relevant break when they take time off from their activities for a break. This helps WFM calculate the actual time taken for a break versus the time allotted for the break.

**Breaks - WFM**

| Name | Duration | Color |
|------|----------|-------|
| Dinner | 60 | |
| Snack | 30 | |
| Tea/Coffee | 15 | |
| Breakfast | 30 | |
| Lunch | 60 | |

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# 5 Input Interfaces

## Input Interfaces

SKU Lines, user clock information, goals for system and VAS activities can also be interfaced in bulk using the input interfaces view in WFM.



The drop-down in input interfaces view supports the following options:

**SKU Lines**: To upload SKU Lines

**Line Group Goal**: To upload goals for system activities

**VAS Goal**: To upload goals for VAS activities

**Clock**: To upload user clock information generated from an external system

## Interface Files

The following points need to be kept in mind while creating the input file for any interface:

1. The filename must start with the prefix specified in the Interface File Formats document. For example, for sku_line files, the filename must begin with "SKU".
2. The fields specified as "required" in the Interface File Formats document, must be provided in the input file.
3. The fields have to appear in the same sequence as specified in the Interface File Formats document.

WFM supports XLS, CSV, and flat file formats. For more details about the fields and data types in each interface, refer to the *WFM Interface File Formats* document.

## Example of a sku_line File in all Three Formats

**XLS/CSV format**

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| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | name | description | action_code | facility_code | company_code |
| 2 | Light Weight Appliances | Small appliances such as Hand mixer, Egg beater | create | QATST01 | QATSTPC |
| 3 | Light Weight Electronics | Small electronics such as Watch, iPhone | create | QATST01 | QATSTPC |
| 4 | Medium Weight Appliances | Medium sized appliances such as Oven, Microwave | create | QATST01 | QATSTPC |
| 5 | Medium Weight Electronics | Medium sized electronics such as Laptop, Printer | create | QATST01 | QATSTPC |
| 6 | Heavy Weight Appliances | Large appliances such as Refrigerator, Washer | create | QATST01 | QATSTPC |
| 7 | Heavy Weight Electronics | Large electronics such as Office Printers, TV Sets larger than 75 inch | create | QATST01 | QATSTPC |

**Flat File format (pipe delimited)**

```
File  Edit  Format  View  Help
Light Weight Appliances|Small appliances such as Hand mixer, Egg beater|create|QATST01|QATSTPC
Light Weight Electronics|Small electronics such as Watch, iPhone|create|QATST01|QATSTPC
Medium Weight Appliances|Medium sized appliances such as Oven, Microwave|create|QATST01|QATSTPC
Medium Weight Electronics|Medium sized electronics such as Laptop, Printer|create|QATST01|QATSTPC
Heavy Weight Appliances|Large appliances such as Refrigerator, Washer|create|QATST01|QATSTPC
Heavy Weight Electronics|Large electronics such as Office Printers, TV Sets larger than 75 inch|create|QATST01|QATSTPC
```

**Note:** *WFM does not support XML format. Also there is no Web Service support in WFM*

# Uploading Files

In order to upload a file, say sku_line file, select "SKU Lines" from the dropdown in the Input Interfaces view. Next, hit the "Upload Files" button. This will bring up a pop-up window. Hit on "Choose Files", select the file from your file explorer and then hit the "Upload" button. Your selected file will now show up under the "Files" tab with the filename suffixed with username and current timestamp. The Message column shows the status of the file as "Unprocessed". In order to process this file or all other files that have been uploaded, hit the "Run Interface" button. This triggers the interface that processes all the files under the Files tab marked as "Unprocessed".

# Interface Errors

As a first step, the interface checks for the format of the data in the file. If there are errors in the file structure, the filename is prefixed with error and the relevant error message appears in the "Message" field.

**WFM Input Interfaces**

| SKU Lines ▼ | ↻ | **Upload Files** | ↻ **Run Interface** |

**Files**  Stage Record

↻                                                                    ☒  ⚏

| Filename | File Size | Nbr Lines | Mod Timestamp | Sample | Message |
|---|---|---|---|---|---|
| error/SKU_5_Reorder_KKALL01_20200917121814808189.psv | 144 | 2 | Thu Sep 17 17:... | action_code\|facility_code\|company_... | load_stage data failed with error code: 2 Error loading data |

However if data format is fine, data in the file goes through next step of validations. At this point, data is moved from Files tab to Stage Record tab. Individual fields are now checked to see if they are valid. For example, in a sku_line record if action_code is something other than create or delete, the record is marked as "Failed" and remains in Stage Record tab. The **Err Str** column displays relevant error message.

**WFM Input Interfaces**

| SKU Lines ▼ | ↺ | **Upload Files** | ↺ **Run Interface** |

| Files | **Stage Record** |

↺  🔍        Reprocess selected records        **Reprocess ALL failed**

| Name ▲ | Description | Action Code | Status | Err Str |
|---|---|---|---|---|
| Heavy Weight Appliances | Large appliances such as Refrigerator, Washer | createe | Failed | Invalid action co |
| Heavy Weight Electronics | Large electronics such as Office Printers, TV Sets large… | createe | Failed | Invalid action co |
| Light Weight Appliances | Small appliances such as Hand mixer, Egg beater | createe | Failed | Invalid action co |

# Reprocessing Failed Records

If the error is configuration related, for example, if a clock record fails because of invalid work area, then such a work area can be configured in WFM. After configuring the work area, the failed record is selected in Stage Record tab and "Reprocess selected records" button is selected. If configurations related to all failed records are taken care of, then you could select the button "Reprocess ALL failed" without selecting any record.

# Processed Data

Data that is interfaced from SKU Line files and processed successfully can be viewed in SKU Lines view. Data interfaced from Line Group Goal files can be viewed in Prod Goal Line Group view. Data interfaced from VAS Goal files can be viewed in Prod Goal VAS view. However, data from clock files is first written to Stage Track Record. A background process validates and moves clock data to Track Record view.

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# 6 Scheduled Jobs

## Scheduled Jobs

WFM shares Scheduled Jobs view with WMS. The Job Type drop-down in this view offers multiple job types. Following are the four job types that are used in WFM.

## Process Stage Track Record

This job type is used to schedule the process that picks up clock records from Stage Track Record, validate and move data to Track Record.

> **Note:** The username provided in Process Track Record scheduled jobs should be eligible for the facility /facilities where the records will be picked up for clock in/out in RF or WMS transactions. If a username that is in one of these scheduled jobs is eligible in more than one facility, then in the other facilities where this user is eligible, the scheduled jobs should not be enabled, otherwise this will create errors that can only be fixed via a datafix. It is recommended that you use a generic WFM user that is eligible in all of the facilities that you want to transfer the record to WFM. You should create a single scheduled job for each of these two scheduled jobs in a single facility.

### Stage Process

This process moves clock data from Stage Track Record to Track Record. The Employee ID corresponds to the ID in the WMS/WFM Users view. If a user with such an ID is not found in the Users view, the status of the record is updated as failed and appropriate error is written in the Error Message field.

The process also validates if the clock in or the clock out requests for a user are recorded in the correct order. For example, If the CICO Timestamp of a F2 (Break clock-in) is earlier than F1 (Facility clock-in) record for a user, the record is marked as failed.

If the CICO Type is F5 or F6 (Work Area clock-in/clock-out), the process validates if the Work Area on the record is valid.

Since facility clock-in is the first clock-in of the user for the day, if the CICO Type is F1 (facility clock-in), the shift is determined based on the CICO Timestamp of F1 record of the user. All other clock-in records for this user inherit shift from the F1 record.

## Run WMS WFM Interface

This job type is used to schedule the process that picks up system activities from WMS and move data to WMS Activity Track in WFM. As a second step, the process moves data from WMS Activity Track to Daily Activity Track in WFM. This job accepts two parameters, "Username" and "Number of Days".

The "Username" parameter needs to be a valid WMS user and should be eligible for the company/facility where the schedule job has been configured.

The "Number of Days" parameter only accepts values between 0 and 60. If no value is provided, it is defaulted to 7.

> **Note:** The **Run WMS WFM Interface** should be enabled for **only one** facility (which will pick up all of the records from all facilities.)

> **Note:** The username provided in Run WMS WFM Interface scheduled jobs should be eligible for the facility /facilities where the records will be picked up for clock in/out in RF or WMS transactions. If a username that is in one of these scheduled jobs is eligible in more than one facility, then in the other facilities where this user is eligible, the scheduled jobs should not be enabled, otherwise this will create errors that can only be fixed via a datafix. It is recommended that you use a generic WFM user that is eligible in all of the facilities that you want to transfer the record to WFM. You should create a single scheduled job for each of these two scheduled jobs in a single facility.

# Interface Process

This interface moves data from WMS Activity (WMS) tables to WMS Activity Track (WFM tables). The next step in the process validates the User, SKU Line and WMS Transaction on each record before consolidating and moving the records to Daily Activity Track (WFM tables). With the WMS-WFM DB merge, since user table is now common between WMS and WFM, User validation is redundant. However, if either the SKU Line or WMS Transaction is not configured in WFM, the record is marked as ERROR and remains in WMS Activity Track.

## Reprocessing Records

Records in WMS Activity Track with errors can be reprocessed by ensuring that missing data is first configured in WFM. For example, if a record fails due to missing SKU Line, the corresponding Unknown SKU Line column is populated with the Sku Line that is not configured in WFM. This Sku Line needs to be configured in WFM.

After configuring missing data, there are two ways in which error records can be reprocessed. The first option is to use the "Process WMS Activities" button on WMS Activity Track view. The other option is to just wait for the next scheduled run of the interface. The second step of the interface always tries to re-process error records first before processing new records.

If the reprocessing is triggered due to scheduled interface run, the "Number of Days" parameter is used to determine how many records should be reprocessed. Only records that fall in the range between current date and past "Number of Days" days are picked up for reprocessing. An extra day is added to "Number of Days" to take into account any user transaction that could have occurred over midnight traversing between two days.

For example, if current date is September 21 and "Number of Days" has been set as 10, the interface reprocesses records that have "Begin time stamp" later than or equal to September 10th (September 21 – (10+1) days).

*Note : "Number of Days" parameter is only used for reprocessing error records. Also this parameter is only used when the reprocessing is triggered by scheduled job. It is not used when reprocessing is triggered using "Process WMS Activities" button on WMS Activity Track view.*

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# Purge Stage Track Record

This job type is used to schedule the process that purges old data from Stage Track Record. The job accepts a single job parameter "nbr_of_days".

## Purge Process

This process purges data from Stage Track Record that are older than a specified number of days and are either in PROCESSED, FAILED, IGNORED or CANCELLED status. The "nbr_of_days" parameter is used to determine how days worth data needs to be retained in Stage Track Record

For example, if the nbr_of_days parameter is set to 45 on the job, all records older than 45 days from current day will be purged (as long as they are in one of status mentioned above).

If the nbr_of_days parameter is not provided, the value is defaulted to 30

> **Note:** the date comparison is made with the mod_ts field which is not visible in Stage Track Record view.

# Purge WMS Activity Track

This job type is used to schedule the process that purges old data from WMS Activity Track. This job accepts two parameters, "Username" and "Facility".

The "Username" parameter needs to be a valid WMS user and should be eligible for the company/facility where the schedule job has been configured.

"Facility" parameter is used to identify the facility for which purge is requested. If no value is provided or if the value provided is invalid (No such facility), then current facility is used.

## Purge Process

This process purges data from WMS Activity Track that are older than a specified number of days and are either in SUCCESS or ERROR status.

There are 3 parts to this purge process. The first part mainly focuses on purging records with errors. The following four facility parameters are used for this purge: PURGE_NUMBER_OF_DAYS, PURGE_UNKNOWN_SKU, PURGE_UNKNOWN_TRANSACTION and PURGE_UNKNOWN_USER.

PURGE_NUMBER_OF_DAYS is used to determine how many days worth data needs to be retained in WMS Activity Track Record. PURGE_UNKNOWN_SKU, PURGE_UNKNOWN_TRANSACTION and PURGE_UNKNOWN_USER can accept values Y or N.

- If PURGE_UNKNOWN_SKU is set to Y, then records older than PURGE_NUMBER_OF_DAYS from current date, in ERROR status and a value populated in "Unknown SKU Line" field are purged

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- If PURGE_UNKNOWN_TRANSACTION is set to Y, then records older than PURGE_NUMBER_OF_DAYS from current date, in ERROR status and a value populated in "Unknown Transaction" field are purged

- If PURGE_UNKNOWN_USER is set to Y, then records older than PURGE_NUMBER_OF_DAYS from current date, in ERROR status and a value populated in "Unknown User" field are purged.

> **Note:** After the WMS WFM DB merge, it is unlikely that there would error-ed records due to unknown user)

The second part of the purge process focuses on records that moved successfully to Track Record. For this purge, only the PURGE_NUMBER_OF_DAYS facility parameter is used. Records older than PURGE_NUMBER_OF_DAYS from current date and in SUCCESS status are purged.

The third part of purge process focuses on invalid data. Records should either have values in Unknown fields or their counterparts. If a record does not have value in both, it is considered to be invalid data. For example, in the table below, rows 1, 2 and 3 represent valid data. Rows 4, 5 and 6 represent invalid data.

| No. | Unknown SKU Line | SKU Line Group | Unknown User | User | Unknown Transaction | WMS Transaction |
|-----|------------------|----------------|--------------|------|---------------------|-----------------|
| 1 | | SKG1 | BCF | | | Recv LPN |
| 2 | ABC | | | User1 | | Create LPN |
| 3 | | SKG2 | | User2 | XYZ | |
| 4 | | | | User3 | | Move LPN |
| 5 | | SKG3 | | | | Repack OBLPN |
| 6 | | SKG4 | | User4 | | |

Such invalid records are purged regardless of their status as long as they are older than PURGE_NUMBER_OF_DAYS from current date.

> **Note:** It's possible such data may never land into WFM, but this step ensures clearing out any bad data in case it somehow lands in WFM)

> **Note:** If the PURGE_NUMBER_OF_DAYS parameter is not provided, the value is defaulted to 30.

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