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Please note: Terms defined in the glossary are displayed in bold font throughout the document.

Common Screen Components

The Factory Client application has some components that appear on each screen. These components are:

- **Filter Area**
- **Display Status**
- Time •
- Help •
- **Information Display Pane** •
- Most Recent Message •
- Line Run / Stop Timer .
- Navigation Area. .



Edit Configuration Change Password

(right click)

Time

Filter Area

The Line Area Filter and the Shift Filter values are used to scope the information displayed in the Information Display Pane.

When changes are made to the filters only relevant options are presented. For example, if there is only one Line Route, then that Line Route will automatically be selected and the **User** will not be presented with a choice. This approach minimises the actions required by the **User**.

Display Status

The Display Status indicates whether the information displayed in the **Information Display Pane** reflects a **Recorded**, **Live** or **Scheduled** state.

If the Display Status is not **Live**, then selecting the Display Status will return the selection to the Current Shift.

Time

The time is synchronised with the **Server** each time the Factory Client application is started. The date will be displayed under the time if this is this option is configured. Right-clicking on the Time will display options for Change Password and Configuration to adjust local application settings. These options are password protected.

Help

Selecting the Help button will display information related to the currently selected screen.

New Message Alert

The most recent message for the **Line** is displayed at the bottom left of each screen. Selecting the New Message Alert will display the **Message Board** screen. The New Message Alert will only be displayed for the period configured.

Line Run / Stop Timer

The Line Run / Stop Timer displays the current status of the **Line** and the **Duration** of that status. If the **Duration** is displayed within red brackets, the **Line** is currently stopped. If the **Duration** is displayed within green brackets, the **Line** is currently running. If there are dashes displayed within the brackets, the Factory Client application is currently not receiving data from the esCollate Server. If you see dashes please report this as soon as possible.

Navigation Area

The [<--] and [-->] buttons can be used to cycle through the screens. Alternately selecting the Menu button will display a list of screens as well as options to Minimise the application or Exit the application.

Non-Default Line Area Display

The orange highlight indicates that a **Line Area** other than the default **Line Area** is currently selected. This highlight colour is only displayed if the application has been configured to do so and is intended to flag to the **User** that this is not the default **Line Area** for this PC.

		∎ Message Board		
Highlight of Non Default Line Area	Line 1 — Route XY Area ML0	11 Line Shift Day	LIVE	16:13 Help
	Recent Messages 1 / 1 RE Power Outage Power Outage	Original Message John Murphy 17 Jan 2014	Message Details Subject Power Outage To ML01 Line	Date 17 Jan 2014 Time 10:33
	RE Extruder Electrical RE Extruder Electrical Wall for Midas 45's RE Extruder Electrical Extruder Electrical	Reply Messages1 / 1Peter Smith17 Jan 2014Murray Mexted17 Jan 2014Jacob Hurley17 Jan 2014	From John Murphy Content There is a scheduled power o at 10:00 that will affect the opt Schurnag production lines. This outage is expected to las	utage on Monday 12 Feb 14 eration of Midas and t for 35 minutes. Any
			questions please advise. Cheers Aaron Marshall Production Supervisor	
			New Message	Reply Message

Current Summary

The **Current Summary Screen** displays information for the **Current Activity** if the **Current Activity** is **Production Activity**, otherwise it displays information for the most recent **Production Activity**. Information is not displayed for **Non Production Activities**. **OEE** icons are used to show the **OEE Category** as follows:

- Production
- Planned Shutdown
- 🕨 🛛 Down Time



The left side of the screen shows the schedule, the current Activity is always central with the previous two and next two Activities above and below respectively.

The Current Shift boundaries are marked by two arrows on the right hand side of the schedule list. And the **Summary Activity** related to the displayed production statistics is highlighted by an orange selection bar. It is not possible for the user to modify this selection, it will always the the current or most recent production Activity.

About the Finish Now Button

The **Current Activity** can be finished using the **Finish Now** button. It will set the finish time of the **Current Activity** to the current time. Effectively this means the finish time of the the current Activity will be set to the current time, as this button is not available for completed Activities. The next scheduled Unanchored Activity Start will be set to Now and so become the new **Current Activity**.

How to access Current Trend and Recorded Trend screens

The Production Performance Current Trend and Recorded Trend screens are accessed from this Screen via the Current Trend button.

Production Performance

The Production Performance screen has two states:

- 1 Current Trend, and
- 2 Recorded Trend.

Current Trend State



The **Current Trend** state displays **Production** output in 30 minute increments for the **Current Shift** and earlier if there is room to do so. It also displays a Production Target Chart for the current 30 minute increment. If the **Current Shift** is displayed, and the **Current** time passes the end of this **Shift**, the **Current Trend** state will automatically move to the subsequent **Shift**.

Production Trend Chart

The **Production** output values shown in the **Production Trend Chart** are displayed for **Auto Counts** only. **Reject Counts** are not included. **Shift** boundaries are highlighted within the chart by way of a vertical black line.

Production Target Chart

The **Production** output displayed may be for a different **Line Area** than that selected in the **Filter Area**. When Display Line Route Performance is set in the local Configuration, the **Production** output displayed will be for the **Line Area** that has been configured to be the **Count Line Area** for the selected **Line Route**.

The **Production Target** can only be changed manually when the Auto Performance Target is not configured for the **Line Area**.

The **Production Target** set for each 30 minute increment is recorded and displayed as an orange highlight line within the **Production Trend Chart.** This orange line displays the average **Production Target** value for each 30 minute period.

For example, if a **Production Target** is set manually to 300 at the beginning of the increment and this is retained through the increment, a value of 300 would be recorded. If however, the **Production Target** was changed after 15 minutes to 100, the average value of 200 would be recorded.

Entering an Appropriate Production Target

Where the Production Target is set manually, this can be done by perform the following:

Select the existing Production Target at the base of the Production Target
 Chart to display the following screen.



- Select the [Bump Down] or [Bump Up] button to make small adjustments to the target, or tap the value to display the numerical keypad and enter a specific value.
- Select [OK] to set the new **Production Target**.

Recorded Trend State

The **Recorded Trend** state can be entered by displaying the **Current Trend** and then either selecting an earlier **Shift** in the **Shift Filter** or selecting [Previous Shift] directly.



The Production Schedule

Production Schedule Screen

The Production Schedule screen displays the schedule of **Activities**. **Users** can change this schedule to reflect actual events, as well as view detailed information on the performance of **Production Activities**.

Changes made within the **Production Schedule** screen are automatically and immediately synchronised with the Production Scheduler application. If a change to an Activity is attempted by more than one **User** at the same time, the changes initiated by the first **User** will take affect and other **Users** will receive an 'Activity Schedule Lock' notification. This lock is automatically removed after 5 seconds.

🖉 esCollate Fac	tary Client Produc	tion Schedule	
Line 1 Route XY	ML01 Line Shift	Day RECORDED	16:13 нер
Shift Options 🔻	Shift Period: 06:00, 16 Jan 2014 to	14:30, 16 Jan 2014 Previous	Shift Next Shift
		_	I
	■ ↓ 1/3 ●		
03:00 04:00 05:00	06:00 07:00 08:00 09:00	10:00 11:00 12:00 13:00 14	15:00 15:00 16:00 17:00
Move Activity	Adjust Finish	6	•••••••••••••••••••••••••••••••••••••••
Activity Production	Line Route Line 1	Code T76889E	Progress 6,312 / 8,000
Anchored Yes	Batch T6787E	Product Toffee Fruit Confect	ionary - (SE) Strawberry Tart 115gX12
Selection 1/3	Num of Batches 36	No Data 00:01:34	Run 🔵 OEE 💽
Start 06:30, 16 Jan 2014	Status Signed off (JanF)	Up Time 00:57:35	OEE 🚽 45.20%
Duration 2:00	Number of Stops 4	Down Time 00:13:00	Availability 25.20%
Finish 08:30, 16 Jan 2014	Prod Count M 2,932.00	Average Rate 112.06	Performance 32.80%
Tames way 0,00070,000	Keject count in 33.00		Guarry 04.10%
Activity Parte	Information		Manual Entry A
	Insert		
	00.02.53		
lease be aware	00.02.33		

Unassigned and Unavailable Periods

A period for which a **Shift** is configured is referred to as an **Available Period**. Activities can be inserted into or moved to an **Available Period**. An **Available Period** that does not have **Activities** assigned is displayed as a **Unassigned Period**. **Unassigned Periods** are shown in black.

A period for which a **Shift** is not configured, or the **Shift** is turned off, is displayed as an **Unavailable Period**. **Unavailable Periods** are shown in grey. An **Activity** cannot be inserted into or moved to an **Unavailable Period**.

Production Schedule Chart

The Activity Bar displays all **Activities** as well as **Unassigned Periods** and **Unavailable Periods** as coloured blocks. The colour of each **Activity** is determined when configuring esCollate.

The Status Bar sits above the Activity Bar, with a green block reflecting when the **Line** was running, a red block for when the **Line** was stopped, and a black block for any time that esCollate was not collecting information. If a **Down Time Event** has been assigned a **Down Time Reason** with **OEE Category** of **Planned Shutdown**, the colour of the Planned Shutdown is displayed.

The selection indicator (orange bar) sits beneath the Activity Bar and indicates the period for which information and **Activity** statistics are displayed within the Activity Details Pane below.

Activities and Unassigned Periods can be selected using [<---] and [-->] or by selecting the Activity directly.

When an **Activity** or **Unassigned Period** spans a **Shift** boundary, the portion in each **Shift** can be selected independently. Use the [< >] toggle to select the whole **Activity** or **Unassigned Period** spanning both **Shifts**.

Selecting either [-->] from the **Current Shift's** finish boundary or [Next Shift] will put the Factory Client application into a **Scheduled** state. The **User** can continue to view future **Activities** and **Shifts** by moving forward in time using either [-->] or [Next Shift].

If a change is made from the Production Scheduler application to a **Shift** that affects the current display of the Factory Client application, the display will automatically move to display the **Current Shift**.

Activity Details Pane

The Activity Details Pane is located at the base of the Production Schedule Chart. The Activity Details Pane displays information for the period selected by the selection indicator.

The following information is displayed according to the Activity selected by the selection indicator:

- Activity
- Anchored
- Progress
- **Batch** (or as configured within the Administration application)
- Product Name
- Product Code
- Product Description.

The following information is displayed according to the period established by the selection indicator:

- Start
- Duration
- Finish
- Planned Quantity
- Activity Status
- Number of Stops
- Production Count
- Reject Count
- Up Time
- Down Time

Please note, if a Down Time Event has been assigned to a Down Time Reason with an **OEE Category** of **Planned Shutdown**, the **Down Time** value will be

00:00:00

- Average Rate
- Target Rate
- No Data

If at some stage during the selected period the Factory Client application has not received data from the esCollate Server then **No Data** will be displayed. This will effect the calculation of the **Activity** statistics.

There is an option to display either Run or OEE performance statistics as follows:

For Run

- Longest Run
- Up Time Percentage
- Rate Percentage.

For OEE:

- OEE Category Icon
 Either Planned Shutdown or Down Time.
- OEE
- Availability
- Performance
- Quality.

There is an optional **Custom Field**. In the example above, this **Custom Field** field is called 'Num of Batches'.

Activity statistics are updated when an Activity is selected and each minute after that for a Current Activity. For completed Activities, statistics are recalculated each time the Start or Finish of an Activity is changed. If there is a period where the system does not collect data for the Activity Statistics the text "No Data" is shown in red, under the OEE calculations.

Activities

Activities are assigned to a Line Area and can be synchronised with Activities on other Line

Areas within the same Line. Automatically collected data such as **Production Count** and **Reject Count** however remains specific to each Line Area.

Activities can be one of the following types:

- Production
- Non-Production.

Both **Production** and **Non-Production Activities** have a **Start**, **Duration** and **Finish**, as well as an **Activity Status** and optional custom value. The name for the custom value is configured within the Administration application. **Production Activities** have additional information such as a **Product** and a **Planned Quantity**.

The **Start** of an **Activity** can be **Anchored**. **Anchored Activities** will not be automatically moved when changes are made to the schedule. **Anchored Activities** will only move as a result of direct **User** intervention.

Activities that are not Anchored are known as Unanchored Activities and move automatically in accordance with changes made to the Production Schedule. An Activity can be inserted or moved to a period where an Unanchored Activity exists and affected Unanchored Activities will be moved automatically to accommodate this change.

Anchored Activities can also perform a Blocking function. In this case all future Unanchored Activities will only move back to the Blocking Activity and no further.

Activity Status

The **Activity Status** of an **Activity** defines how that **Activity** behaves, and the options available when inserting or changing an **Activity**.

An Activity can have a status of either:

- Scheduled
 The Activity Start is in the future.
- **Current** The **Activity Start** is in the past, and the **Activity Finish** is in the future.
- Completed
 The Activity Finish is in the past and the Activity does not have an Activity

Status of Closed or Signed Off. The number of Activities that are marked as Completed before being automatically marked as Closed is configurable.

- Closed All Activities where the Activity Finish is in the past and the Activity does not have an Activity Status of Completed or Signed Off.
- Signed Off
 All Activities where the Activity Finish is in the past and the Activity has been
 Signed Off. Signing off an Activity requires User Authentication.

Activities with an Activity Status of Scheduled, Current or Completed behave differently to those with an Activity Status of Closed and Signed Off.

Behaviour of Unanchored, Anchored and Blocking Activities



Please note: The behaviour described in this section refers to Activities with an Activity Status of Scheduled, Current or Completed only.

Unanchored Activities will be moved automatically if a change is made that affects the period where the **Unanchored Activity** is placed. This **Activity** will move in accordance with the following rules:

- An Unanchored Activity moves forward in time automatically as an Activity is inserted or an Activity or Unavailable Period has been extended prior to the Unanchored Activity
- An Unanchored Activity moves backwards in time automatically as an Activity is removed or an Activity or Unavailable Period has been shortened prior to the Unanchored Activity.
- How far the **Unanchored Activity** can move backwards depends on whether the **Activity** is ahead or prior to the current date and time.
- If the Unanchored Activity is ahead of the current date and time this Activity will move backward automatically to any Unassigned Periods prior to its current placement but no further than an Unassigned Period that is part of the current date and time.
- If the **Unanchored Activity** is prior to the current date and time this **Activity** will move backward automatically to the start of any adjacent **Unassigned Periods**.

Anchored and Blocking Activities are not moved automatically. Unanchored Activities are able to be moved freely past Anchored Activities. Blocking Activities however prevent any Unanchored Activities scheduled after hem from being moved to before them, even when there is Unassigned periods available.

For **Anchored** and **Blocking Activities** that are divided into a series of parts, only the **Start** of the whole **Activity** (that is, the **Start** of the first part) is locked. All other **Activity** parts behave as if they are **Unanchored**.

Available Range



Please note: The behaviour described in this section refers to Activities with an Activity Status of Scheduled, Current or Completed only.

When inserting or moving an **Activity** the earliest possible **Start** is the **Finish** of the latest **Activity** with a status of **Closed**. The latest possible **Finish** is the end of the last created **Shift**. The period between the earliest possible **Start** and the latest possible **Finish** is referred to as the **Available Range** for the **Activity**.

Part Activities



Please note: The behaviour described in this section refers to Activities with an Activity Status of Scheduled, Current or Completed only.

In situations where there is not enough space to accommodate an **Activity** in a single period, the **Activity** is divided into a series of **Part Activities**.

Each **Part Activity** is displayed as a portion of the whole **Activity**, for example 3/5 being the third part of the five parts that make up the **Activity**.

Where a series of **Part Activities** are created only the **Start** (of the first part) and **Duration** of the whole **Activity** can be changed. The **Start** and **Duration** of other parts are automatically calculated in accordance with the available space when the change is made.

It is not possible to insert an **Activity** into a period occupied by a **Part Activity** by selecting the **Activity** part. It is however possible to insert an **Activity** in front of the whole **Activity** by selecting the first part of the whole **Activity**.

If an **Activity** is required to be inserted at the **Start** of a **Part Activity**, the **Activity** parts must first be separated into individual **Activities**.

Viewing Part Activities

If an **Activity** has been divided into parts, all parts can be viewed by selecting one part and then selecting [View Parts]. It is possible to move to any part by selecting that part and then [Move To].

Separating Parts

If an **Activity** has been divided into parts, it is possible to separate parts and therefore divide the one **Activity** into a number **Activities** (equal to the number of **Part Activities**). To do this, select the part where the separation should occur and the select [Activity Parts] and [Separate Parts]. This will make the **Start** of the selected part the **Start** of the new **Activity**.

Closed and Signed Off Activities



Please note: Activities cannot be inserted, changed or removed in the Production Scheduler application within the bounds of a Shift that has been Signed Off.

Activities with an Activity Status of Closed or Signed Off behave different from the behaviour described above in that:

- Unanchored Activities are not moved automatically.
- The Start of Unanchored Activities can be manually selected.
- An **Activity** can only be inserted into an **Unassigned Period**.
- The Available Range for an Activity is the Start and Finish of the Unassigned Period selected.

The **Available Range** when changing an **Activity** is calculated by:

- The **Start** of the **Activity** if the **Activity** does not have an **Unassigned Period** immediately before it, or the **Start** of this **Unassigned Period** if it does, and
- The **Finish** of the **Activity** if the **Activity** does not have an **Unassigned Period** immediately after it, or the **Finish** of this **Unassigned Period** if it does.

Inserting an Activity

An Activity can be inserted within an Unassigned Period and over the top of an Unanchored Activity moving this Activity to a later time. An Activity cannot be inserted within an Unavailable Period or over the top of an Protected Activity.

When inserting an **Activity** the **Start** and **Finish** will default to the currently selected range. For example, if an **Unassigned Period** is selected the new **Activity's Start** and **Finish** will default to this period's **Start** and **Finish**. This period can however be changed to a new value within the **Available Range**.

To insert a new **Activity** perform the following steps:

- Select the desired location for the **Activity** to be inserted and then select [Insert].
- Select the Activity Group and Activity and then [OK].
- Enter the appropriate Activity information. For Production Activities a
 Product must be selected. When the Product and either Duration or Planned
 Quantity are entered, the [Calc Planned Qty] or [Calculate Duration] buttons
 can be used. This calculation is driven by the selected Product's Target OEE,
 where this is not available Target Rate, where this is not available Design
 Rate.
- Select [Save] to record the new Activity.



Please note: The very first Activity inserted into a Line Area is always Anchored. Removing this first Activity will mark the next Activity as Anchored if it is not already.

Changing an Activity

To change an **Activity** select the **Activity** to be changed and then select [Activity Options] and [Change Activity]. Make the changes as appropriate and select [Save] to record the changes.

Removing an Activity

To remove an **Activity** select the **Activity** or one of its parts and then select [Remove]. If an **Activity** part is selected and then [Remove], all parts will be removed. Answer [Yes] to the confirmation "Are you sure you want to remove (all parts of) the Activity?"

Adjust Finish

[Adjust Finish] is located on the Production Schedule screen, selecting [Adjust Finish] brings up the Adjust Finish screen and Run/Stop boundary marker. [Adjust Finish] is used to set the **Finish** of the selected **Activity** to either the current time 'Now' or a Run/Stop boundary. Use the < and > navigation buttons to traverse the Run/Stop boundaries.

[Adjust Finish] can move the start time of the following **Protected Activity** (Anchored or Blocking) if this option is enabled on the Adjust Finish dialog. Please note that this behaviour is different to using Now, or setting the Finish to Now, on the Change Activity Screen.

When changing an **Activity** using [Adjust Finish] the **Start** will be preserved and the **Duration** of the **Activity** shortened or lengthen to set the **Finish** to the selected time.

[Adjust Finish] is available if the following conditions are true:

- The Start of the selected **Activity** is before the current date and time.
- The selected **Activity** is either **Current** or the one preceding **Current**.
- 'Now' will only be available for selection if current date and time is not within an **Unavailable Period.**



Please note: If [Now] is selected for an Activity that is divided into parts, this will finish the whole Activity, not just the portion that is selected.

Move Activity Left and Right

The [< Move Left] and [Move Right >] buttons can be used to quickly move an Activity forward or back one place in accordance with the following rules:

- The Activity must have an Activity Status of either Current or Scheduled
- Anchored Activities will be bypassed and the Activity will move to the next Unanchored Activity or Unassigned Period.
- Where an **Activity** is divided into parts, the first part must be selected. If the second or later part needs to be moved, the **Activity** must first be separated at the appropriate point and then this **Activity** can be moved.

Auto-Extending Activities

An Activity with a status of Current will extend automatically in 5 minute increments if the Line Area that the Activity is on is configured to do so. An arrow icon is displayed beside the Line Area value in the Filter Area if it is configured to Auto Extend.

Auto Extend will occur when there is less than two minutes remaining before it is scheduled to **Finish**. Selecting [Finish Now] or changing the **Finish** to the current date and time will mark the **Activity** as **Complete**.

When an Activity that precedes an Anchored Activity is extended an Activity part will be created after the Anchored Activity. Only the last part of a multi-part Activity will Auto Extend. Break Activities may or may not Auto Extend depending on whether configured to do so.

Viewing Information

There are three types of information:

- Production Notes
 Notes related to the Product being produced.
- Scheduler Notes Notes specific to the selected Activity and entered by the Scheduler.
- Documents
 Documents related to the Product being produced, for example safety information or product specific information.



Please note: Production Notes and Documents available for viewing are configured in the Administration application and can be specific to Line, Activity and Product.

If there is information relating to the selected **Activity** one of the following icons will be displayed:

- Scheduler Notes **(**)
- Documents or Production Notes but no Scheduler Notes

To view Information select the **Activity** and then [Information] or tap the icon directly to display the Information screen. To view a specific Document select the document and then [View Document].

Production Counts and Reject Counts

Production Counts and **Reject Counts** can entered for an **Activity**. A count that is collected from the machine automatically is known as an **Auto Count**. **Auto Counts** can be overridden by entering a **Manual Count**.

Both the **Production Count** and **Reject Count** operate in the same way and the descriptions in the following sections relate to both types.

Display of Auto Counts and Manual Counts

Production Counts and Reject Counts are displayed for the selected Activity. If a Manual Count has been entered an M icon will be displayed beside the Production Count or Reject Count value.

Where the selection spans a **Shift** boundary the **Production Count** and the **Reject Count** will be displayed as the sum of both portions. If a **Manual Count** has been entered in one portion but not the other an **M** icon will be displayed beside the **Production Count** or **Reject Count** value.

Entering a Manual Count

A **Manual Count** can only be entered for any portion of an **Activity** that is within the selected **Shift.** A **Manual Count** cannot be entered for a whole **Activity** if the **Activity** spans more than one **Shift.** To enter a **Manual Count** perform the following:

- Select an Activity or Part Activity that does not span a Shift boundary.
- Select [Manual Entry] and then [Manual Counts].
- Enter the appropriate **Manual Count** values.
- Select [Save] to record the values.

Changing and Removing a Manual Count

To change or remove a **Manual Count** select the **Activity** or the **Part Activity** that does not span a **Shift** boundary, then [Manual Entry] and [Manual Counts]. Change or remove the **Manual Count** as appropriate and select [Save] to record the changes.

About Manual Data Entry

Manual Data entry allows the **User** to enter custom information for an **Activity**. **Manual Data** entry is configured within the Administration application.

Entering Manual Data

To enter Manual Data perform the following:

- Select any part of the Activity.
- Select [Manual Entry] and then [Manual Data].
- If there is a Data Group configured then select the appropriate group.
- Enter the Manual Data as appropriate, selecting [Save] to record the data.
- Select [Close] when all data is entered.

Changing and Removing Manual Data

To change or remove **Manual Data** select any part of the **Activity**, then [Manual Entry] and then [Manual Data]. Locate the appropriate Data Group and change or remove the values as required. Select [Close] when finished.



Please note: Manual Data entered relates to All Parts of an Activity. All Parts share the same value. Manual Data is entered/edited by selecting any Part of an Activity.



Please note: Manual Data can be configured to be shared by all Counterpart Activities on Line Areas belonging to the same Line Route.

Signing Off an Activity



Please note: The Sign Off of an Activity requires User Authentication.

Completed Activities can be Signed Off individually. An Activity can be Signed Off before the Shift is Signed Off. To Sign Off an Activity perform the following:

- Select the Activity to be Signed Off
- Select [Change Activity] and then [Sign Off Activity]
- Enter your User Name and Password and select [OK].

A lock icon is displayed next to the Activity when the Activity has been Signed Off.

Once an **Activity** is signed off **User Authentication** is required to make further changes and all changes are logged.

Signing Off a Shift



Please note: The Sign Off of a Shift requires User Authentication.

A Shift can only be Signed Off when it is completed or for a configurable period before the Shift is completed.

When a Shift is Signed Off all Activities, Down Time Events and Custom Events within the Shift which are Completed are Signed Off.

When a **Shift** is **Signed Off, Activities** and **Unassigned Periods** within the **Shift** cannot be changed in the Production Scheduler application.

To Sign Off a **Shift** perform the following:

- Select the Shift to be Signed Off
- Select [Shift Options] and then [Sign Off Shift]
- Enter your User Name and Password and select [OK].

A lock icon is displayed next to the Shift when the Shift has been Signed Off.

Once an **Shift** is signed off **User Authentication** is required to make further changes and all changes are logged.

Sign Off History

The Sign Off History feature displays all changes to Activities, Down Time Events and Custom Events within the Shift that occurred after the Shift was Signed Off. Activities that were Signed Off before the Shift was Signed Off are also recorded in Sign Off History.

To view Sign Off History perform the following:

- Select the **Shift** that **Sign Off History** is to be displayed for
- Select [Shift Options] and then [Sign Off History]

Adjusting a Standard Shift



Please note: The Adjust Shift function requires User Authentication.

A **Standard Shift** can be adjusted to reflect the actual **Start** or **Finish** date and time. This function is designed to make small adjustments to an existing Shift. The **Custom Shift** function within the Production Scheduler application should be used to create an entirely different Shift.

Adjusting a **Standard Shift** is possible in accordance with the following rules:

- No shift can be adjusted to be less than 30 minutes in duration.
- An adjustment is only possible when the Shift is adjacent to an Unavailable Period.
- An adjustment is not possible where an **Unavailable Period** has been created due to a **Shift** that exists but has been turned off.
- No **Unavailable Period** can be reduced to less than 30 minutes in duration.
- The Start and Finish times of the Shift cannot overlap an Anchored Activity.

To adjust a **Standard Shift** perform the following:

- Display the **Shift** to be adjusted.
- Select [Shift Options].

- Establish the appropriate **Start** and **Finish** values within the **Available Range** specified.
- Select [Save] and enter your **User Name** and **Password** to record the adjustment.

Down Time Event (with Auto Collection)

The Down Time Event screen receives status events for the Production Line via sensors. The events record the status of the **Line** (Run or Stop) as well as the time and date that the event took place.

The Down Time Event screen displays **Down Time Event** information and allows for the assignment of a **Down Time Reason**, splitting of a **Down Time Event**, and the attachment of a **Down Time Note**. The **Down Time Event** screen also records any period of time where **No Data** was available for collection (e.g. due to network failure).



Please note: If configured to do so, only those Down Time Events that occurred during a Production Activity will be displayed in the Down Time Event screen and Down Time Events that span a Shift boundary will be divided into two separate events. When the line stops a new **Down Time Event** is created and appears at the top of the event list. When the machine returns to a running state, a **Duration** for the **Down Time Event** is automatically inserted.

esCollate F	Factory Clie	nt	Down Time Event		
Line 1 Route XY	ML	01 Line S	hift Day	RECORDED 16:1	3 Help
Assign	Split	Note	Shift: 14:30, 17 Jan 2014	to 23:30, 17 Jan 2014 Filter	All Stops
Date	Time	Duration OE	E 📕 Event Reason	Event Path	1/1
17 Jan 2014	16:13:38	00:00:28			
17 Jan 2014	16:05:45	00:00:56 🔒			Û
17 Jan 2014	15:46:39	00:02:01 🔒	😑 Tooling	2B Station / External Production	
17 Jan 2014	15:11:00	00:00:14 🔒	External Production	2B Station	
17 Jan 2014	14:58:00	00:10:56 🔒	Mechanical - Genera	al Delivery Unit / Mechanical	
17 Jan 2014	14:42:16	00:06:05 🔒	Tooling	2B Station / External Production	Ţ
17 Jan 2014	14:32:59	00:01:26 🔒	Tooling	2B Station / External Production	Ù
RE Shut Down, 17 Jan 2014 Please be aware that the pla	int will be	. 00:02:	53 -	Menu 🔺	

If the esCollate system receives no data for a period (during to network failure or other technical reasons), this also appears as a Down Time event highlighted in red text.

Down Time Filter

The Down Time Event screen has a **Down Time Filter.** Selection options are [All Stops], [Unassigned Stops], [Stops Over 1 Minute], [Stops Over 2 Minutes], [Stops Over 5 Minutes] and [Stops Over 10 Minutes]. Selection options other than All Stops are displayed in orange.

Assigning a Down Time Reason

Once a Down Time Reason is assigned this reason is displayed along with the appropriate

OEE icon against the Event Start. The **OEE** icon reflects the **OEE** Category as follows:

- Production
- Planned Shutdown
 P
- Down Time

Multiple Down Time Events can be assigned with the same Down Time Reason at one time.

To assign a **Down Time Reason** perform the following:

- Select [] corresponding to each **Down Time Event**, and then select [Assign] to display the Assign Event Reason screen.
- A multi-level structure of **Down Time Reasons** is available. Drill down to the desired level by selecting the appropriate **Down Time Reasons**. Once the appropriate value is displayed as Selected, select [OK] to assign the **Down Time Reason**.

When assigned with a root cause (i.e. the reason thread has been followed through to a point where no further selection is possible), then the Event Reason is displayed in bold font. If a reason is assigned that is not a root cause, the Event Activity is displayed in normal font.

The **Down Time Reason** can be changed by performing the same operation and selecting the new value. Double-tap on the **Current Event Reason** or Event Path to access directly the Assign **Event Reason** screen.

Splitting a Down Time Event

Split a **Down Time Event** by performing the following:

• Select the [] corresponding to the **Down Time Event** and then select [Split] to display the Split Down Time Event screen.

CALO:	Split Down Time Event	
Down Time Event One		Down Time Event Two
Start 09:30, 15 Jan 2014		Finish 09:40, 15 Jan 2014
Duration	Split	Duration
00:05:00	09:35, 15 Jan 2014	00:05:00
Down Time Event Reason	n One Down Ti	ime Event Reason Two
		Save Cancel

Change either the **Duration** of Down Time Event One, the Split Time or the **Duration** of Down Time Event Two. When the screen is first entered, the Split Time defaults to the middle of the **Down Time Event** if the event does not overlap a **Shift** boundary, or to the Shift boundary if the event does overlap a **Shift** boundary.

It is also possible to assign a different Down Time Reason for each part of the split event . To do this, select Down Time Event Reason One and/or Down Time Event Reason Two and change as appropriate.

Select [Save] to save the changes.

Adding a Down Time Note

A **Down Time Note** can be added to many **Down Time Events** at the same time only if there are no notes already attached to any of the events selected, or the same note exists for each. Predefined text may appear when a new note is created if the esCollate system has been configured to do so.

Add a **Down Time Note** by performing the following:

- Select [] corresponding to the **Down Time Event(s)**, and then select [Note] to display the Event Note screen.
- Enter the **Down Time Note** and select [Save] to record this entry. A note icon is displayed against the **Down Time Event** to show that a note has been attached. Display the note by double-tapping the icon directly.

Changing and Removing a Down Time Note

Change a **Down Time Note** by performing the following:

- Double-tap the **Down Time Note** icon to display the Event Note screen.
- Change the note as appropriate or delete all text to remove the note, and then select [Save] to record the changes.

Signed Off Events

If the **Shift** displayed has been signed off, all completed **Down Time Events** within the **Shift** will require **User Authentication** to be changed or removed. A log of changes made after the **Shift** has been signed off is recorded in the Shift's **Sign Off History**. For more information about signing off a **Shift** and **Shift Sign Off History** please refer to the Production Schedule section below.

Down Time Event (with Manual Collection)

The Down Time Event screen allows for the inserting, changing and removing of **Down Time Events** as well as the ability to assign a **Down Time Reason** to a **Down Time Event** and to attach a **Down Time Note** to this entry.



Please note: If configured to do so, only those Down Time Events that occurred during a Production run will be displayed in the Down Time Event screen and Down Time Events that span a Shift boundary will be divided into two separate events.

escole	ite Factory Client	Down Time Event	
Line 1 Route XY	rea ML01 Line	Shift Day	RECORDED 16:13 Help
Assign Change	More Option:	s ▼ Shift: 14:30, 17 Jan 2014 to	23:30, 17 Jan 2014 Filter All Stops
Date	Time Duratio	on OEE 📕 Event Reason	Event Path 1/1
17 Jan 20	14 16:13:38 00:00:2	8	Ū.
17 Jan 20	14 16:05:45 00:00:5	6 🔒	Ĺ
17 Jan 20	14 15:46:39 00:02:0	1 🖨 😑 Tooling	2B Station / External Production
17 Jan 20	14 15:11:00 00:00:1	4 External Production	2B Station
17 Jan 20	14 14:58:00 00:10:5	6 🤷 Mechanical - General	Delivery Unit / Mechanical
17 Jan 20	14 14:42:16 00:06:0	5 🖨 Tooling	2B Station / External Production
	Manual Entry	The Line Area is currently running	Start Event
E Shut Down, 17 Jan 201 lease be aware that the	4 plant will be	00:02:53	Menu 🔺 🕒

Using Start Event and Finish Event

At the base of the **Information Display Pane** is a single button that displays either Start Event or Finish Event. If there is a **Current Down Time Event** then Finish Event is displayed, otherwise Start Event is displayed.

The Start / Finish Event button allows for simple creation of **Down Time Event** data. For example when Finish Event is selected the following screen will be displayed:



The Finish time and date will default to the current time. This time can be changed by tapping on the value directly to display the Date and Time picker. Select [Save] to record the entry.

Using the Down Time Filter

The Down Time Event screen has a **Down Time Filter** that further defines the information displayed within the **Information Display Pane**. Selection options are [All Stops], [Unassigned Stops], [Stops Over 1 Minute], [Stops Over 2 Minutes], [Stops Over 5 Minutes] and [Stops Over 10 Minutes].

Assigning a Down Time Reason

Once a **Down Time Reason** is assigned this reason is displayed along with the appropriate **OEE** icon against the Event Start. The **OEE** icon reflects the **OEE Category** as follows:

- Production
- Planned Shutdown
 P
- Down Time D

Multiple Down Time Events can be assigned with the same Down Time Reason at one time.

To assign a **Down Time Reason** perform the following:

- Select [] corresponding to each **Down Time Event**, and then select [Assign] to display the Assign Event Reason screen.
- A multi-level structure of Down Time Reasons is available. Drill down to the desired level by selecting the appropriate Down Time Reasons. Once the appropriate value is displayed as Selected, select [OK] to assign the Down Time Reason.

When assigned with a root cause (ie. the reason thread has been followed through to a point where no further selection is possible), then the Event Reason is displayed in bold font. If a reason is assigned that is not a root cause, the Event Reason is displayed in normal font.

The **Down Time Reason** can be changed by performing the same operation and selecting the new value. Double-tap on the **Current Event Reason** or Event Path to access directly the Assign **Event Reason** screen.

Inserting a Down Time Event

This feature allows for the retrospective entry of a **Down Time Event** record.

To insert a **Down Time Event** perform the following:

- Move to the Shift to which the **Down Time Event** is to be inserted.
- Select [More Options] and then [Insert] to display the Insert Event screen.
- Enter the appropriate [Start], [Finish] and [Event Reason] values.
- Select [Save] to insert the **Down Time Event** record.

Changing a Down Time Event

To change a **Down Time Event** perform the following:

Select [] corresponding to the **Down Time Event** and then [Change] to display the Change Event screen.

Colt Not		Change Event			
Start	Duration	Finish	Event Reason		
02:30:00, 14 Apr 2014	00:20:30	02:50:30, 14 Apr 2014	Axle Stabiliser		
			Save Cancel		

- Make the appropriate **Down Time Event** changes.
- Select [Save] to record the changes.

Removing a Down Time Event

To remove a **Down Time Event** perform the following:

- Select [] corresponding to the **Down Time Event** to be removed and then select [More Options], and then [Remove].
- Answer [Yes] to the confirmation message "Are you sure you want to remove this event?"

Adding a Down Time Note

A **Down Time Note** can be added to many **Down Time Events** at the same time only if there are no existing notes attached to any of the events selected, or the same note exists for each. Predefined text may appear when a new note is created if the esCollate system has been configured to do so.

Add a **Down Time Note** by performing the following:

Select [] corresponding to the **Down Time Event(s)**, and then select [Note]

to display the Event Note screen.

Enter the Down Time Note and select [Save] to record this entry. A note icon is displayed against the Down Time Event to show that a note has been attached. Display the note by double-tapping the icon directly.

Change a **Down Time Note** by performing the following:

- Double-tap the **Down Time Note** icon to display the Event Note screen.
- Change the note as appropriate or delete all text to remove the note, and then select [Save] to record the changes.

Signed Off Events

If the **Shift** displayed has been signed off, all completed **Down Time Events** within the **Shift** will require **User Authentication** to be changed or removed. A log of changes made after the **Shift** has been signed off is recorded in the Shift's **Sign Off History**. For more information about signing off a **Shift** and **Shift Sign Off History** please refer to the Production Schedule section below.

Custom Event

The Custom Event screen facilitates the inserting and editing of **Custom Events**. Each **Custom Event** can be linked to an **Activity** and this is indicated by one of two icons:

- Sum Link and Activity Match Where the start of the Custom Event is currently within the Start and Finish range of the Activity.
- Link and Activity Mismatch Where the start of the Custom Event is currently not within the Start and Finish range of the Activity.

Route XY	Area ML01 ange Remove Time	Line Note	Shift Shift:	Day 14:30, 17 Jan 2014 to 2:	RECORDED	16:13	Help 1ste V
Insert Cha	ange Remove	Note	Shift:	14:30, 17 Jan 2014 to 2:	3:30, 17 Jan 2014	Type Line 1 Wa	aste 🔻
Date	Time	. %	Duration				
— — 17 Jac			Buration	Event Reason	Weight (grams)	Temp (celsius)	1/1
Produ	n 2014 - 16:13:38 🖿 uction - NZ Chocolate (6 x 12 x 115g	00:00:28				Ū
17 Jar Produ	n 2014 16:05:45 🔎 uction - NZ Chocolate	6 x 8 x 150g	00:00:56				Û
Produ	n 2014 15:46:39 🔒 uction - NZ Chocolate	6 x 8 x 150g	00:02:01	Tooling	300	180	
Produ	n 2014 15:11:00 🔒 uction - NZ Chocolate	6 x 8 x 150g	00:00:14	External Production		183	
Produ	n 2014 14:58:00 action - NZ Chocolate (6 x 12 x 115g	00:10:56	Mechanical - General	297	176	
							V
							,
E Shut Down, 17 Jar	n 2014	00.0	2.53		Мери		

Information that is collected for each event is specific to the **Line Area** and the type of **Custom Event**. Where no **Custom Events** have been specified for the selected **Line Area** this screen will not be available.

Custom Events require a **Start** time and an indication whether the event is to be linked to an **Activity**. Further information, such as a **Duration**, Event Reason and other numeric fields may also be available depending on the configuration of the **Custom Event**. When all fields have been entered the **Custom Event** record is displayed in bold text.

Using the Type Filter

Custom Event records displayed are specific to the Event Type value selected in the Type filter. To adjust this value tap the **Current Event Type** value and then the new type to be displayed.

Linking an Event to an Activity

If a **Custom Event** is linked to an **Activity** a link icon appears in the **Custom Event** record. This link can be removed in one of two ways:

- The Activity is deleted, or
- The **Custom Event** is changed and the link is set to [No].

In either case the link icon will be removed and the **Custom Event** record will display the **Activity** that overlaps the start time of the event.

Inserting a Custom Event

To insert a **Custom Event** perform the following:

- Select the Line Area and Shift where the Custom Event is to be inserted.
- Ensure that the appropriate Event Type is selected.
- Ensure that there are no currently selected **Custom Events** in the list.
- Select [Insert] to display the Insert Custom Event screen.
- Enter the correct **Start** of the event. This must be within the currently selected **Shift**.
- Select whether this event is to be linked to an **Activity** and if so ensure the correct **Activity** is selected.
- Enter any further values that are available for this **Custom Event**.
- Select [Save] to record the event.

Changing and Removing a Custom Event

To change a **Custom Event** select the [] corresponding to the event, then select [Change] and make the appropriate adjustments. Select [Save] to record the change.

To remove a **Custom Event** select the [] corresponding to the event, then select [Remove]. Answer [Yes] to the confirmation message "Are you sure you want to remove this event?"

Adding a Custom Event Note

A Custom Event Note can only be added to one Custom Event at a time.

Add a **Custom Event Note** by performing the following:

- Select [] corresponding to the **Custom Event**, and then select [Note] to display the Event Note screen.
- Enter the **Custom Event Note** and select [Save] to record this entry. A note icon is displayed against the **Custom Event** to show that a note has been attached. Display the note by double-tapping the icon directly.

Changing and Removing a Custom Event Note

Change or remove a **Custom Event Note** by double-tapping the **Down Time Note** icon to display the Event Note screen. Change the note or remove all text as appropriate, and select [Save] to record the changes.

Signed Off Events

If the **Shift** displayed has been signed off, all completed **Custom Events** within the **Shift** will require **User Authentication** to be changed or removed. A log of changes made after the **Shift** has been signed off is recorded in the Shift's **Sign Off History**. For more information about signing off a **Shift** and **Shift Sign Off History** please refer to the Production Schedule section below.

Down Time Analysis

About the Down Time Analysis Screen

The Down Time Analysis screen displays a summary of **Down Time Events**, with each **Down Time Reason** charted using bars for **Duration** and **Count**. Totals are calculated at the base of the chart for:

Total Stop Time

The total time of all Down Time Events within the selected Shift.

Average Time per Reason
 Total Stop Time / Total Number of Stops.

Total Number of Stops

The total number of Down Time Events within the Shift.

Average Stops Per Reason

Total Number of Stops / total number of Down Time Reasons.

esCollate Factory Client	Down Time Analysis		
Line 1 — Route XY Area ML01 Line	e Shift Day	LIVE	16:13 Help
Shi	ft Period: 14:30, 17 Jan 2014 to 23:30	0, 17 Jan 2014	
Duration	Reason	Cou	nt 1/1
00:12:09	Tooling 2B Station / External Production	5	N
00:10:56	Mechanical - General Delivery Unit / Mechanical	1	A .
00:04:31	External Production 2B Station	10	
00:02:19	Unassigned	4	
			' v '
Total Stop Time 00:27:55 Average Time Per Reason 00:06:59		20 Total Numbe 4.00 Average Sto	r of Stops ps Per Reason
RE Shut Down, 17 Jan 2014 Please be aware that the plant will be	00:02:53		



Please note: If configured to do so, only those Down Time Events that occurred during a Production run will be included within the Down Time Analysis calculations.

When a **Down Time Reason** is assigned within the Down Time Event screens, it is displayed in the Down Time Analysis chart along with the appropriate **OEE** icon. Each **OEE** icon is used to reflect the **OEE Category** as follows:

- Production
- Planned Shutdown
 P
- Down Time D

Sorting Down Time Analysis Information

The Down Time Analysis chart can be sorted by [Duration], [Reason] or [Count] in both ascending and descending order. The column that is currently sorting the information displayed in the chart is displayed in orange brackets. Selecting the same column title again will reverse the sort order of that column. To sorted chart information by another column tap the title of that column.

The Message Board

About Messages

Messages can be sent by all **Users** and are a key mechanism for communicating and sharing information and ideas related to production. The message facility also allows for issues to be raised as they occur, rather than waiting for meetings or an opportunity to talk to the right person.

A message can either be an **Original Message** or a **Reply Message**. The **Original Message** is the first message sent on a particular **Subject**. This message can then be responded to as a **Reply Message**. Neither the **To** or **Subject** fields within a **Reply Message** can be changed.

The Message Board screen displays messages entered into the esCollate system for up to two years. Messages are presented for the **Line** that has been selected in the **Filter Area** and are

displayed in order of the most recent message at the top.

scollate Fac	tory Client	N	lessage Board					
Line 1 Route XY	ML01 Line	Shift	Day		live 1	6:13	} Help	
Recent Messages	1 / 1 Origi	nal Message		Message D	etails			
RE Power Outage	John	Murphy	17 Jan 2014	Subject	Power Outage	Date	17 Jan 2014	
Power Outage				То	ML01 Line	Time	10:33	
RE Extruder Electrical	Repl	y Messages	1 / 1	From	John Murphy			
RE Extruder Electrical	Peter	Smith	17 Jan 2014	Content				
Wall for Midas 45's	Murra	ay Mexted	17 Jan 2014	There is a s	There is a scheduled power outage on Monday 12 Feb 14			
RE Extruder Electrical	Jacob) Hurley	17 Jan 2014	Schumag production lines.				
				Cheers Aaron Marst Production S	nall Supervisor			
	Тор	_			New Message	Rep	y Message	
Shut Down, 17 Jan 2014 ase be aware that the plant	will be	00:02:53		<	Menu 🔺		O.	

As each message is selected, the message details and content are displayed on the right hand side of the **Information Display Pane**. If the message selected is a **Reply Message**, the thread of dialogue will be displayed in the middle section of the **Information Display Pane**.



Please note: The Message Board screen will always display the most recent messages entered, regardless of the Shift selected within the Shift Filter.

Displaying Messages

When a Message is selected the message details and content will be displayed. Use the [Up] and [Down] arrow keys to view new pages of messages, and if a message other than the most recent message is selected, select [Top] to return to the most recent message.

Post a New Message

To create a **New Message** perform the following:

Select [New Message] to display the New Message screen.

N. 10 11.	New Message
To Line All Lines	Content
Subject	
From	
	Post Cancel

• The new message can be sent to the **Line** displayed or to All Lines by tapping the [To] toggle. Enter the **Subject**, **From** and **Content**, and then [Post] to post the message.



Please note: Subject and Content fields are required. The Line Area used to post the message will be part of the From information, with any text entered into the From field as supplementary information.

Post a Reply Message

To create a **Reply Message** perform the following:

- Select the message to be responded to and then [Reply Message] to display the Reply Message screen. The **Reply Message** can only be sent to the **Line** or **Lines** to which the **Original Message** was sent, and the **Subject** is not able to be changed.
- Enter the **Reply Message** content, and then [Post] to post the message.

Removing a Message



Please note: Removing a message requires User Authentication.

Remove a message by performing the following:

- Select the message to be removed within the middle section of the Information
 Display Pane, then right click (touch and hold on a touch screen) and select
 [Delete Message].
- Enter your User Name and Password and select [OK] to remove the message.