efi PrintStream

User Guide

MR Extended
V21.1.0200

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Introduction

Overview

The MR Extended guide contains information about Cost Centers and Job Scheduling, as well as other PrintStream Scheduler components.

Contact Information

EFI Support

US Phone:	855.334.4457 (first select option 3, then press option 8, then press option 1)
US Fax:	415.233.4157
US E-mail:	printstream-support@efi.com

Regular Service Desk hours are 8:00 AM to 7:00 PM Central Time, Monday – Friday. Outside of these hours, you may leave a voice mail message and an on-call support representative will be paged. Response time is based on the severity of the issue.

Note	For problems involving infrastructure (i.e., computers, networks, operating systems, backup software, printers, third-party software, etc.), contact the appropriate vendor. EFI cannot support these types of issues.

EFI Professional Services

US Phone:	651.365.5321
US Fax:	651.365.5334
E-Mail:	ProfessionalServicesOperations@efi.com
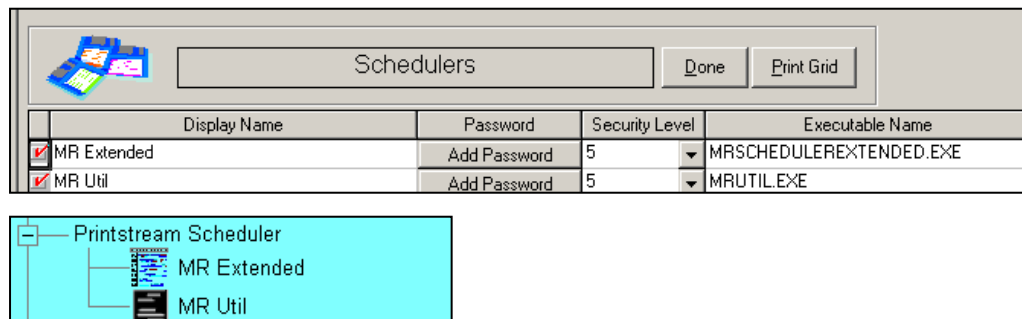
Setup

Setup Scheduler Program Group

To setup a Scheduler Program Group

1. Select the **Menus and Users** icon under the **Administration** bar.

2. Right-click **Program Groups** to open **Add a new Group**.

3. Enter a group name, e.g., Scheduling, and click **Save**.

4. Find your new program group from the **Select a Program Group** menu.

5. Locate **MR Extended** and **MRUtil** and check the box to add these programs to your new program group.

6. Edit the display name if desired and select **Refresh Program List**.

    Be sure to add this program to the appropriate **User Groups**.
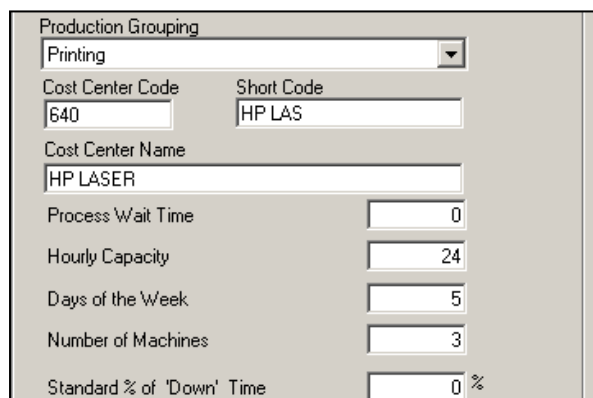
Setup Cost Centers to Schedule

Cost Centers must have capacity defined in **Master File Reports** to be visible in the **MR Extended**.

To setup Cost Centers to Schedule

1. Enter **Hourly Capacity** to describe how many hours daily the Cost Center is active, **Days of the Week** to describe how many days the Cost Center is active weekly, and **Number of Machines** to describe how many machines are available per shift.

2. If the Cost Center requires people rather than machines, e.g., Handwork, enter the number of workers in **Number of Machines**.

    This capacity definition can be further refined to specific days/shifts within the **MR Extended**.

Import Cost Centers into MR Extended

Once Cost Center(s) capacity has been defined, the **MR Extended - Reformat Masters Utility** below must be run.

To run the Scheduler, Reformat Utility

1. Select **Reformat Masters after Cost Center Change**.

   This will enter any new Cost Center(s) with defined capacity into both the **MR Extended** and the **MR Shop Supervisor** programs.

   Note that once this utility has been run, any additional Cost Center(s) capacity edits *must* be done within the **MR Extended**; capacity edits in **Master File Reports** will introduce Cost Center errors.
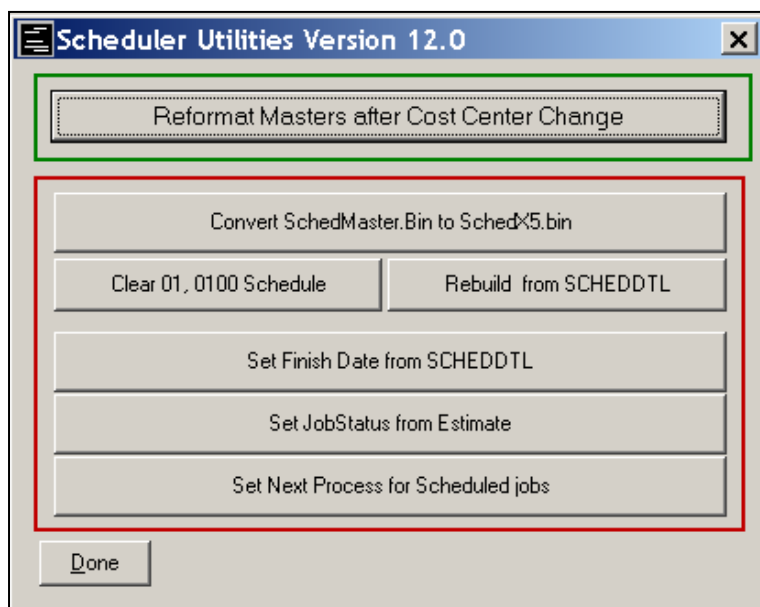

2. Do not run any of the other utilities. Contact PrintStream Support for assistance.

3. If new Cost Centers are added in **Master File Reports**, or if existing Cost Centers without capacity are given capacity, neither the **MR Extended** nor the **Shop Floor** program will function until the **Scheduler Reformat Utility** is run. Users will get the following message when opening either program:
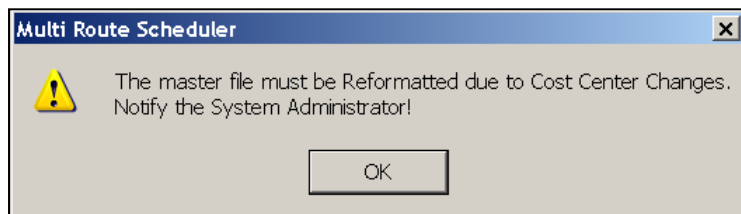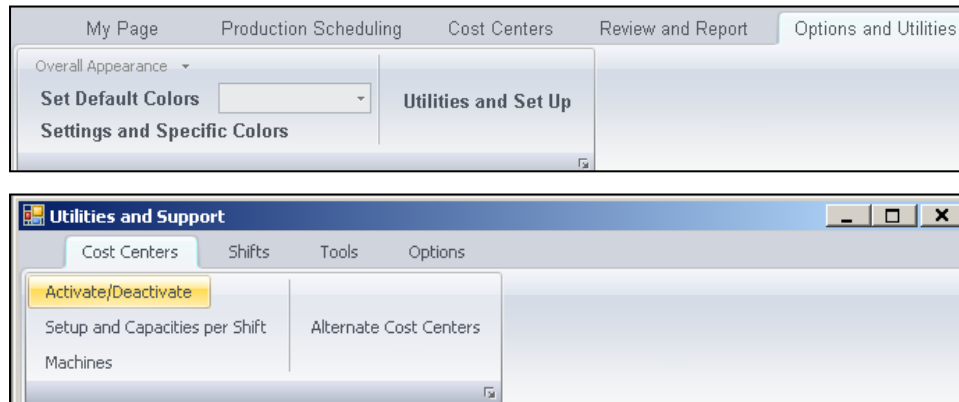
Activate / Deactivate Cost Centers

Cost Centers within the **MR Extended** can be deactivated, and this action can be reversed.

To activate / deactivate Cost Centers

1. Open **Activate/Deactivate Cost Centers** from the **Utilities and Set Up** menu option.

2. To remove a Cost Center from the MR Extended, locate the active Cost Center, clear the check box, and click **Save** to deactivate.

3. To return this Cost Center to the MR Extended, select the check box preceding the inactive Cost Center and click **Save** to activate.
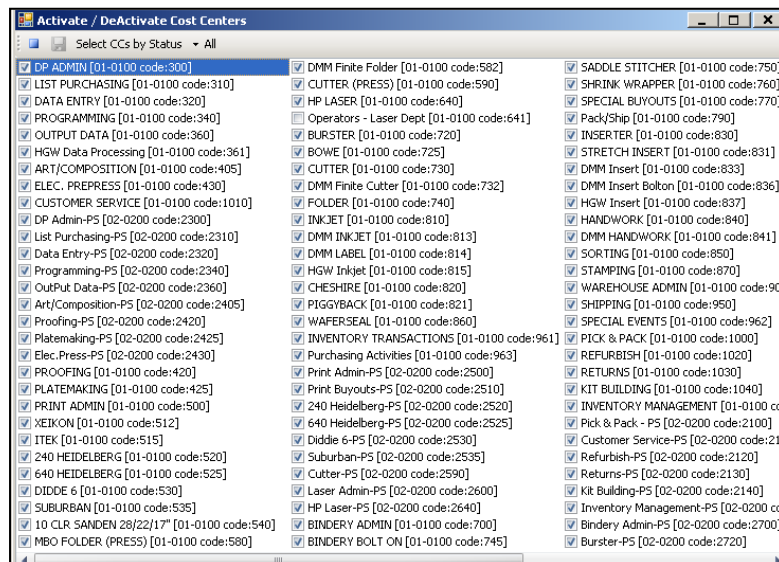
4. The MR Extended must be restarted for the changes to take effect.

Refine Cost Center Capacity

Cost Center capacity can be fine-tuned within the **MR Extended** program.

The two elements which create the total amount of resource time available to be scheduled, per Cost Center/day/shift, are the number of available resources and the duration of the shift.

To edit the available resources

1. Open **Setup and Capacities per Shift** from the **Utilities and Support** menu option.
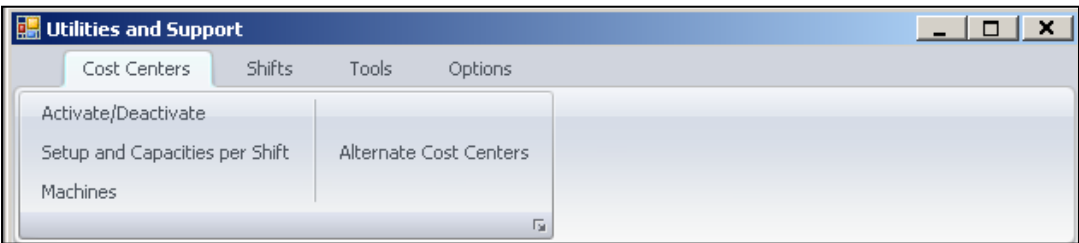
2. Select a Cost Center from the list:
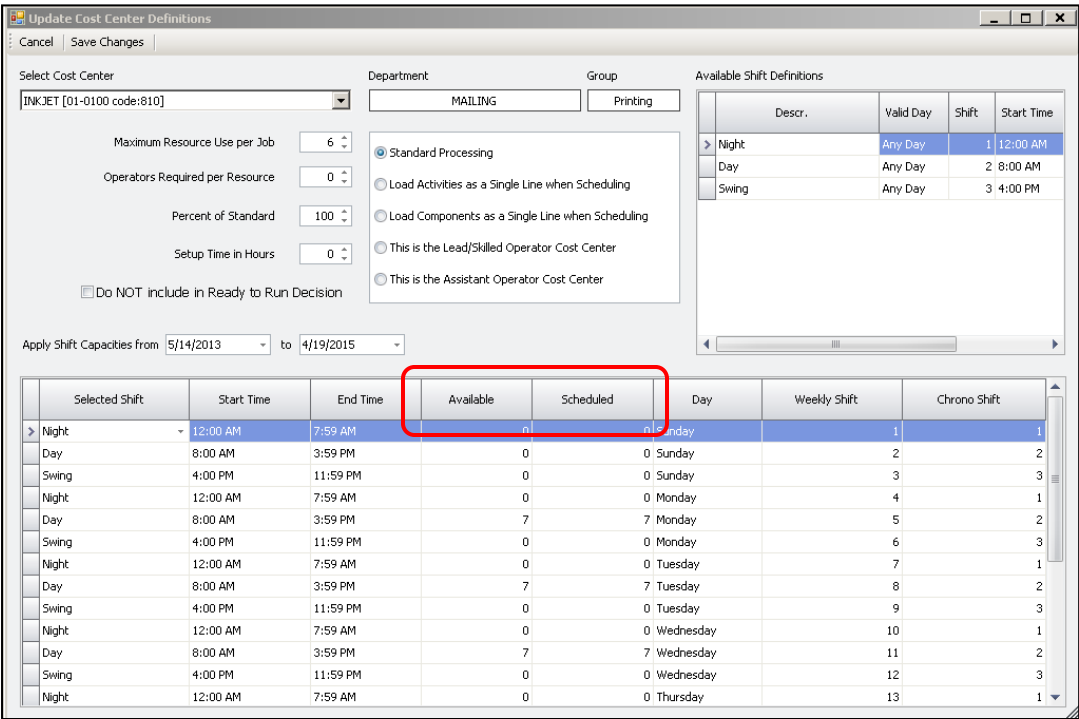
3. The Cost Center –Update Cost Center Definitions window is used to define resource capacity per shift. This amount of time is calculated using the duration of the shift **X** the number of resources which schedule. The **Available** fields represent the number of resources which exist per shift/day. The **Scheduled** fields represent the number of resources you schedule per shift/day. It should be equal to, or less than, the **Available** column. Edit these numbers to describe how many resources you schedule per shift/day. Above, the **Inkjet** runs 1 shift with 7 machines thru the week with no scheduled shifts on the weekend. Below, the **Inkjet** has been edited to include a second shift on Saturday with two machines.

Selected Shift	Start Time	End Time	Available	Scheduled	Day	Weekly Shift	Chrono Shift
Night	12:00 AM	7:59 AM	0	0	Wednesday	10	1
Day	8:00 AM	3:59 PM	7	7	Wednesday	11	2
Swing	4:00 PM	11:59 PM	0	0	Wednesday	12	3
Night	12:00 AM	7:59 AM	0	0	Thursday	13	1
Day	8:00 AM	3:59 PM	7	7	Thursday	14	2
Swing	4:00 PM	11:59 PM	0	0	Thursday	15	3
Night	12:00 AM	7:59 AM	0	0	Friday	16	1
Day	8:00 AM	3:59 PM	7	7	Friday	17	2
Swing	4:00 PM	11:59 PM	0	0	Friday	18	3
Night	12:00 AM	7:59 AM	0	0	Saturday	19	1
Day	8:00 AM	3:59 PM	7	2	Saturday	20	2
Swing	4:00 PM	11:59 PM	0	0	Saturday	21	3

4. Select **Save Changes** to save. Note that shift definitions can be set to start in the future, and they can be given an ending date. If the capacity change is permanent, leave the default ending (which displays the end of the current scheduling period).

Apply Shift Capacities from 5/14/2013 to 4/19/2015

Selected Shift	Start Time	End Time	Available	Scheduled	Day	Weekly Shift	Chrono Shift
Night	12:00 AM	7:59 AM	0	0	Wednesday	10	1
Day	8:00 AM	3:59 PM	7	7	Wednesday	11	2
Swing	4:00 PM	11:59 PM	0	0	Wednesday	12	3
Night	12:00 AM	7:59 AM	0	0	Thursday	13	1
Day	8:00 AM	3:59 PM	7	7	Thursday	14	2
Swing	4:00 PM	11:59 PM	0	0	Thursday	15	3
Night	12:00 AM	7:59 AM	0	0	Friday	16	1
Day	8:00 AM	3:59 PM	7	7	Friday	17	2
Swing	4:00 PM	11:59 PM	0	0	Friday	18	3
Night	12:00 AM	7:59 AM	0	0	Saturday	19	1
Day	8:00 AM	3:59 PM	7	2	Saturday	20	2
Swing	4:00 PM	11:59 PM	0	0	Saturday	21	3

Shift Definition

Holidays – Currently not available. This can be set-up in MR Scheduler.

Shifts are defined in the MR Extended. The shift duration X the Cost Center resource(s) creates the total amount of available resource time to be scheduled, per Cost Center/shift/day.
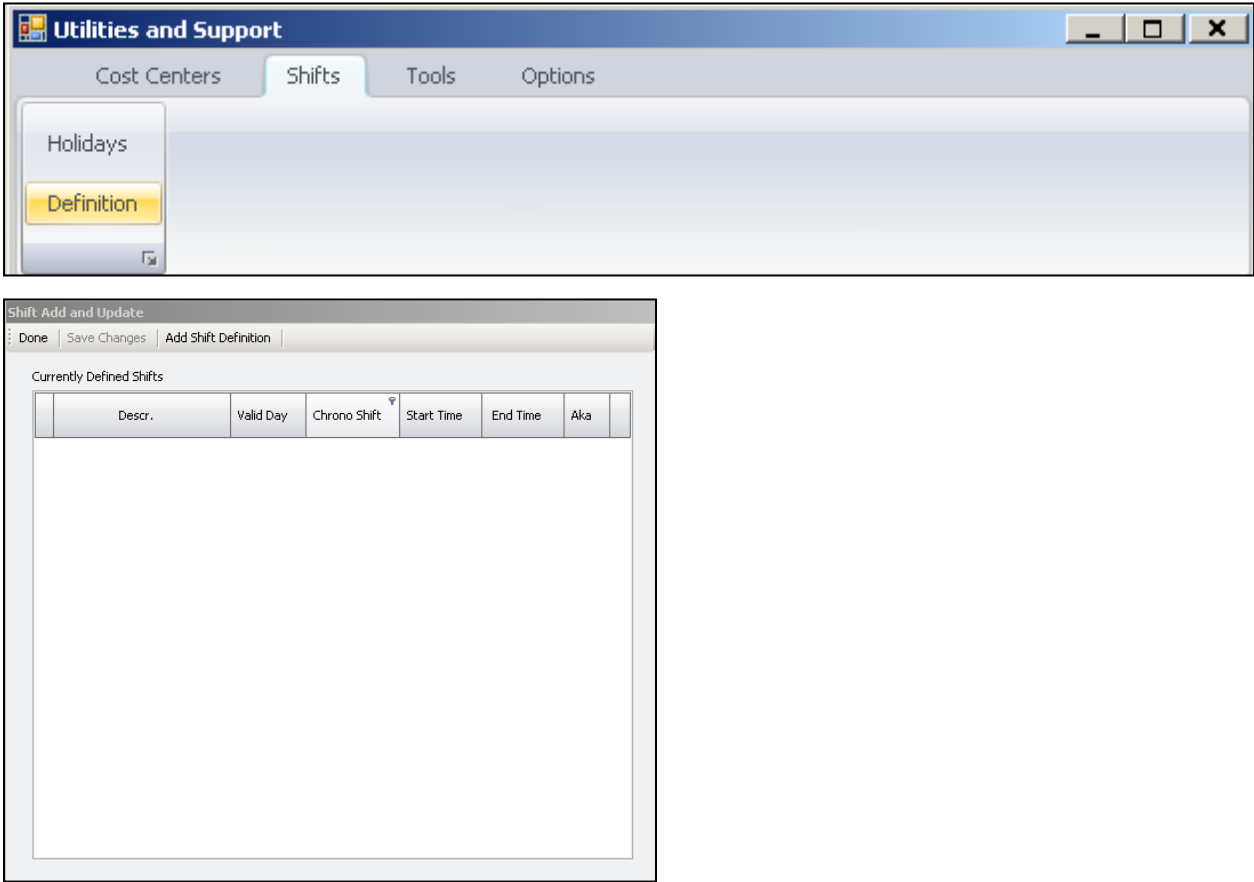
Three shifts must be defined. Added together, these *__three shifts__* **must equal 24 hours**. Times are defined using a 24-hour clock. Each shift's end time should be one minute less than the following shift's start time, so that there is no time overlap.

To enter or edit your first three shifts

1. Select the **Add Shift Definition**.

2. Enter the name of the shift (e.g., day shift or first shift), into the **Description** field.

3. Select **Any Day**, and select which shift is being defined in the **Daily Shift** field and **Valid Chrono Shift**.

4. Enter start and stop times, then select **Add and Save Changes**.

Description	Valid Week Day
Night	Any Day
Start Time **End Time**	**Valid Chrono Shift**
12:00:00 AM 7:59:00 AM	1
Cancel Update	

Shift number 1 must be the shift which occurs at 00:01 am.

You may begin this shift the preceding night. If your first shift crosses midnight, you will get the following notification:

Multi Route Scheduler

⚠ Start time > than End time. Shift Ends on next day.

OK
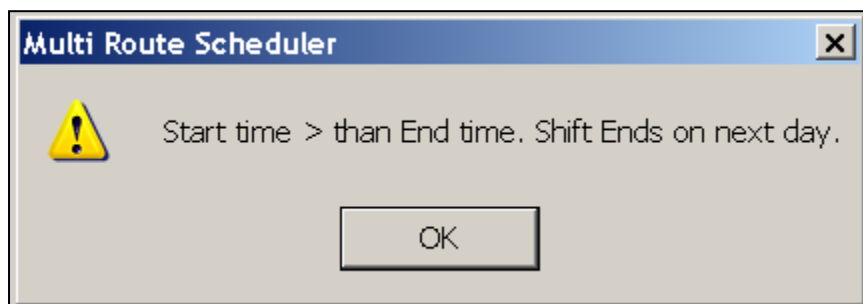
5. Affirm the above message. Define shifts number 2 and 3.

Below is one possible definition of the remaining shifts.

Description	Valid Week Day
Day	Any Day
Start Time **End Time**	**Valid Chrono Shift**
8:00:00 AM 3:59:00 PM	2
Cancel Update	

You cannot overlap shifts.

Alternative Shifts

You can define up to 42 additional shifts which operate during different time periods than any of the *first three shifts*.

Pictured below is a 10-hour mid-day Saturday shift #4.

Update Cost Center Shifts

Cost Center Shift Capacity = # of Cost Center Resources X Shift Duration.

Cost Center shift duration can also be fine-tuned within the **MR Extended**.

To edit the shift duration

1. Select **Options and Utilities** > **Utilities and Set Up**.

2. Select **Setup and Capacities per Shift**.
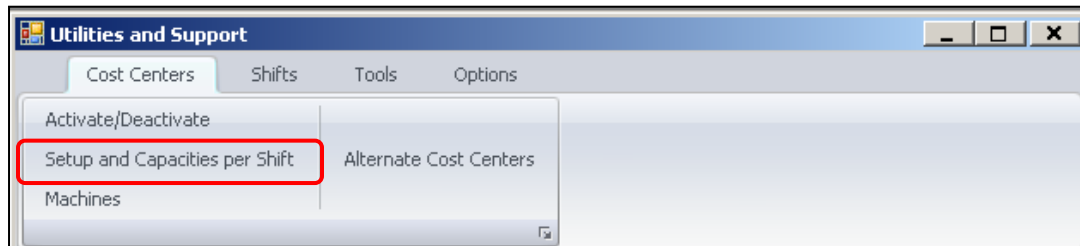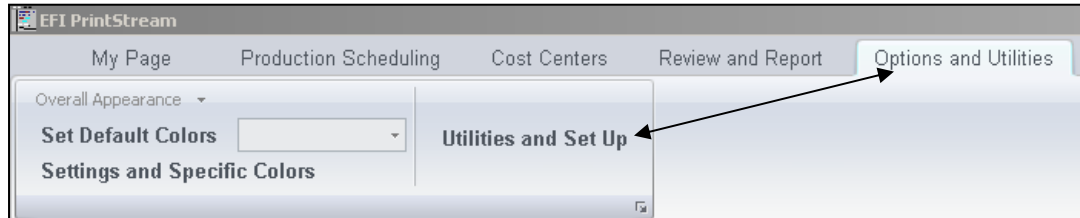
3. Select a Cost Center.

   This window is used to define the duration of each Cost Center's shifts, the number of available resources per shift, and how many of those available resources can be scheduled. This window will default to placing shifts 1, 2 and 3 in chronological order.

4. Select the alternative shift from the **Selected Shift** drop-down into the appropriate day/shift(s). In the example below, Saturday's Day Shift #2 is being replaced by AKA shifts Saturday Shift #4. Saturday Shift is two hours longer than Day shift. These two hours, multiplied by the seven available resources, will add 14 additional available hours to schedule the Inkjet on Saturdays.

5. Select Cost Center – Locate the shift, using the drop-down in **Selected Shift**, choose the Alternate Shift, define the number of **Available and Scheduled**, then select **Save Changes**.

Updating Cost Centers: Additional Resource Controls

Maximum Resource Use/Job: This option allows you to set an optional maximum resource usage when multiple resources are used on large and/or fast turn jobs.

The default resource usage is one Cost Center resource per job step.

Operators Required per Resource - MR Extended can link labor resource requirements to machine scheduling. This labor resource requirement can be set per Cost Center or activity code for all price lists (mail) activity codes. It can be set per Cost Center for all cost-plus markup (print) activity codes. To set per Cost Center, enter a figure in **Operators Required per Resource**.

Note   The field will accept numbers in units of one tenth.

This will create a restriction on scheduling, i.e., resources must be available in both the machine Cost Center and the operator Cost Center in order to schedule the job step.

Cost Centers can be created solely to define labor resources per shift/day. These labor pools are available to all activities within the same **PrintStream Production Department**. *Setup and use of labor pools is explained later in this document.*

Percent of Standard will alter the run speed for all activity codes which are scheduled in this Cost Center. Schedulers can use this to fine tune actual production time required to correctly schedule without altering estimating data.

Setup Time in Hours will add the amount entered as minutes into this field to every activity code which schedules in this Cost Center. This can be used to account for tasks such as reading the work instructions.

Do NOT include Ready to Run Decision as MR. Extended goes through deciding what steps are ready and whether all predecessor activities are complete. This option, if checked prevent, activities in that Cost Center from being considered in the decision. For Example –If MR. Extended is looking at a print step and there are five activities that must complete before it can run, if three of them were in a Cost Center with DNI set it won't care whether they are complete or not in deciding if print is ready to run. Only the other two non DNI activities will be interrogated.

Apply Shift Capacities from – Cost Center edits to be applied to a specific date range. This option is used, for example, if a machine was going to be down for maintenance.

Standard Processing – Loads jobs steps as they appear from the estimate.

Load Activities as a Single Line when Scheduling – All job steps the selected Cost Center will load as a single line with combined processing time and quantity.

In the example below, activities for the PROGRAMMING Cost Center – ADDRESS STANDARDZATION and BARCODE QUALIFY is loaded separately. Using option **Load Activities as a Single Line when Scheduling** will combine these processes together including Qty's and Processing Time.

Note Activities are loaded into a single line for the Programming Cost Center with combined processing time and quantity.

To define Task Descriptions

Users can define Task Description for each of the three groupings when using option (**Load Activities as a Single Line when Scheduling)**.

1. Select **Options and Utilities**> **Utilities and Set Up** > **Options** > **Scheduling**.
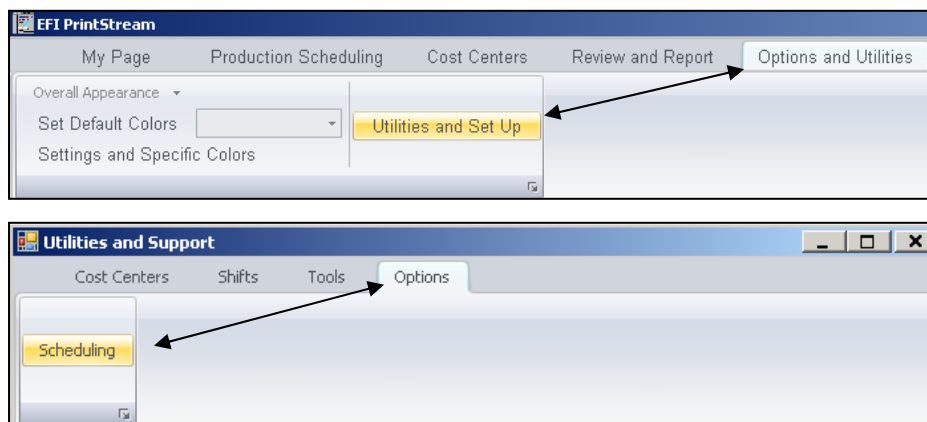
2. Enter a naming convention for each of the groups.

3. Select **Update** to save changes.

Red – Pre-Press and Data Processing activities

Green – Component specific activities

Blue – Finishing and Bindery activities

Rules behind Job Step Order Loading and Scheduling

When you create Cost Centers, you are required to give these Cost Centers a **Production Grouping**.

This grouping will load the job step in the prep (red) section if it is **Art**, **Film**, or **Plates**, in the print (green) section if it is **Print**, and in the blue (finishing) section if it is **finishing**.

The exception to the above rule is job steps linked to finishing Cost Centers that are <u>print component or section finishing processes</u>. These job steps will be loaded into the print (green) section in sequence with the printed components to which they are linked.

Within this grouping order, job steps follow the activity code sort order. (Sort order can now be added to print activities in **Master File Reports > System Maintenance > Populate Sort Order for Activities**).

All prep (red) job steps must find available Cost Center capacity before print (green) job steps can start. All print (green) job steps must find available Cost Center capacity before finishing (blue) job steps can start.

Job steps that are side by side are considered **Blocks**. These schedule sequentially, i.e., the first step must be scheduled before the second step can start. These **Blocks** and all solo job steps (i.e., blank spaces between one step and the next) can all begin simultaneously, assuming there is available Cost Center capacity.

Art – Data Processing/Pre-Press

Printing – Component Processes

Finishing - Finishing and Bindery activities

Load Components to a Single Line When Scheduling – Not available

Labor Pools – Cost Plus Markup (Print) Activity Codes

This will create a restriction on scheduling, i.e., resources must be available in both the machine Cost Center and the operator Cost Center in order to schedule the job step.

○ This is the Lead/Skilled Operator Cost Center

○ This is the Assistant Operator Cost Center

Cost Centers can be created solely to define labor resources per shift/day. These labor pools are available to all activities within the same **Printstream Production Department**.

You can create pools of operators per department which must be available to schedule along with your machine Cost Centers. Use this control when you need to schedule both operators and machines to get the work done. You can set up one labor pool for a department, or a lead and an assistant labor pool. Activity codes that require more than one operator will pull the first from the lead pool, and the rest from the assistant pool if there is one.

Labor Pool Setup and Use

1. Open **Master Files Reports**.

2. Create one or two new Cost Centers for each production department which needs labor pools for scheduling.

3. Be sure to give these Cost Centers hourly and weekly capacity and identify how many people are available each shift. This capacity detail can be edited in **MR Extended > Options and Utilities > Utilities and Set up > Setup and Capacities per Shift**.

4. After saving your new Cost Centers, open **MR Util** and run **Reformat Masters after Cost Center Change**. This will import the new Cost Centers into the **MR Extended** and **Shop Floor** databases.

5. Select the check box designating this Cost Center as a labor pool. Select **Lead/Skilled** if you are setting up only one labor pool for the department.

> **Note**   Once a **Lead** labor pool has been created, your second Cost Center (per department) can only be designated as an **Assistant** labor pool.

Operators required per Resource – In the example below, 1 operator is entered meaning this labor pool will use one lead in the pool of 5 when writing a job schedule.

Assistances Cost Center -Will use two assistance operators out of the pool of 10.

In the example below, the 640 Heidelberg has 1 resource, however, requires 3 operators.

Notice when a job gets scheduled, the system uses 1 lead and 2 assistances from the pool.

This is based on processing time; 2.5hrs from the Lead Pool and 5 hours from the Assistance Pool because Cost Center requires 3 operators. System always schedules 1 as Lead the remaining will be from the Assistance pool.

Labor Pools - Pricelist (Mail) Activity Codes - Labor requirements are set up per activity for price list (mail) activity codes.

1. Create Labor Cost Centers.

2. Enter Hourly Capacity, Days of the Week, and number of Machines. Make sure to open and run **MR Utility – Reformat Cost Center after Change**.

3. Select the check box designating this Cost Center as a labor pool. Select **Lead/Skilled** if you are setting up only one labor pool for the department.

4. Define labor requirements per activity code for mail activities in **Master Files Mail Process > Create Batch of Processes for Selected Menu Item**.

5. Operator requirements can be added or edited in estimating; select the dollar sign button to access these standards in an estimate.

6. When scheduling INKJET ONTO MAGAZINE, resources will be required from the labor pools for every 1 resource required from the Inkjet Cost Center.

Cost Center Resources – View

Cost Center Machines

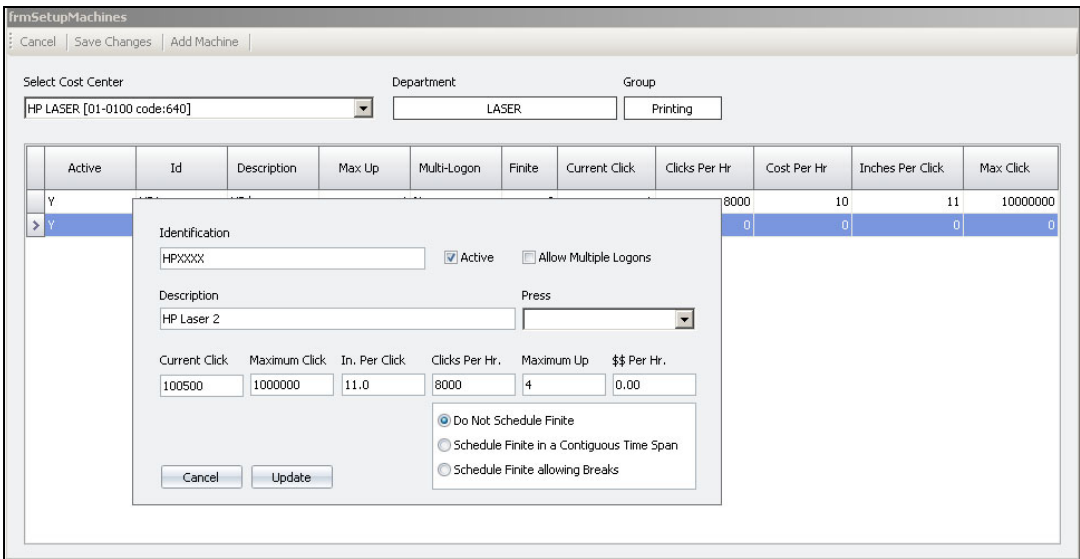Machines are entered per Cost Center. Cost Centers can have one or multiple machines. Any activity in the Cost Center that collects machine data can accept records against one of the Cost Center's machines.

A Cost Center machine must first be defined in **Options and Utilities > Utilities and Setup>Cost Centers> Machines**.
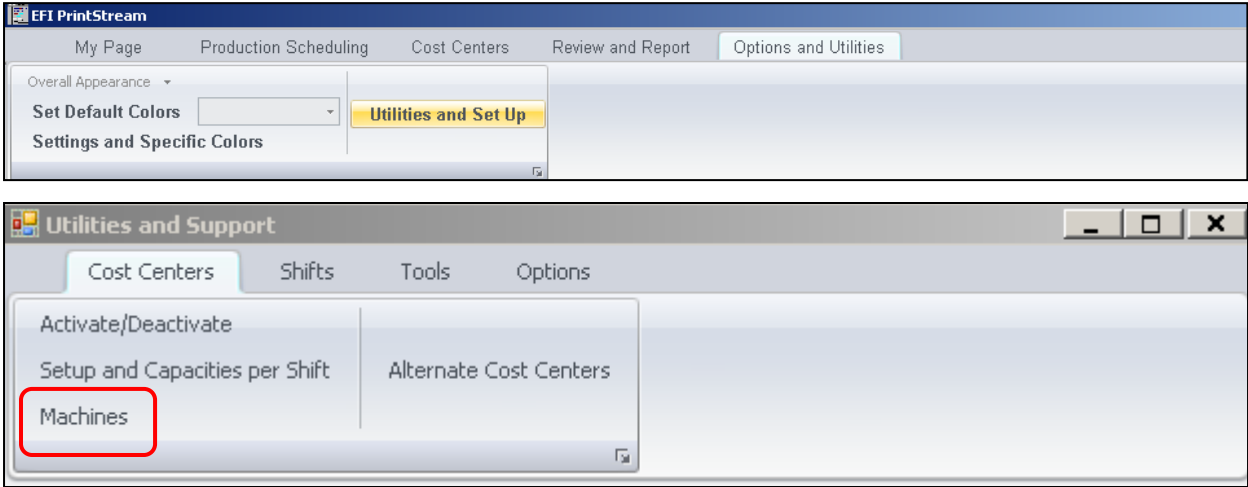
To create a machine

1. Select the Cost Center from the drop-down display.

2. Select **Add Machine**.

3. Enter machine **Identification** and **Description**. Both will display in MR Shop Floor. **Description** can be edited; **Identification** cannot.

4. Enter **Maximum Number Up**. This restricts users from entering a larger number up than the machine can process.

5. Click **Save Changes** to complete the machine setup.

Active

Once the Machines are entered, they are automatically active and display for selection. They can be deactivated by clearing the **Active** check box.

Press

When a printing Cost Center is selected to create a machine, the **Press** box displays a list of all presses set-up in master files print. **Identification** and **Description** can be associated with a specific Press.

Presses are defined in other setups with associated activities. This is to allow for a specific machine to be tied to that definition.

Allow Multiple Logons

The intent of this option is to permit multiple activities to be logged onto a single machine (without ganging). Previously, a user was not allowed to log onto a machine that was already in use. The only exception was if the employee was set up with ganging privileges. In that case, they were asked if they were ganging with the other activity. The answer **Yes** allowed them to log on as a ganged activity. If the answer was **No**, then they were again not given the ability to log on.

There are situations where an employee is working on two activities at the same time on a single machine, but without ganging. For example, they may be finishing addressing on Job #123, and start the setup of another job #456. However, the employee privilege functioning for **One at a Time** must be maintained. This new option allows the multiple logons to be controlled at a machine level on top of the employee privilege level.
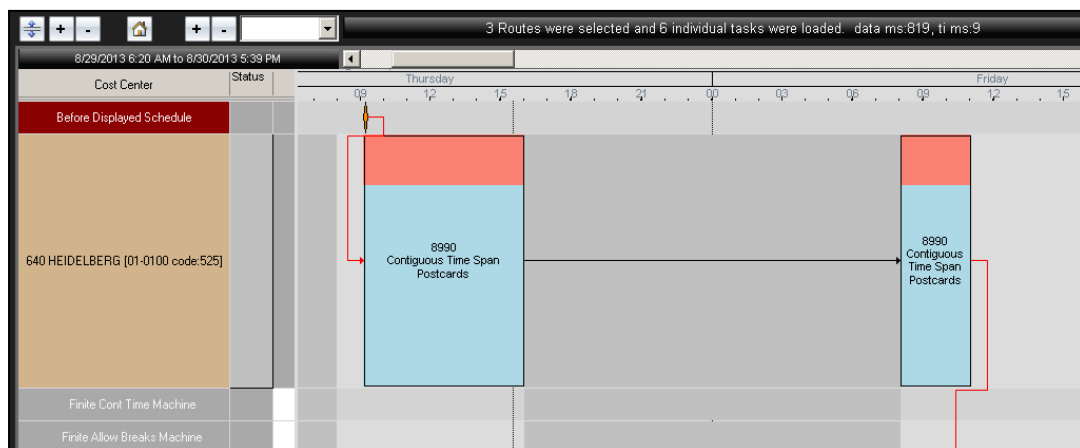
Do not Schedule Finite

Normal scheduling of jobs recognizing shifts, jobs will be scheduled based on shift set up and available capacity. If a job does not complete on one day it will be schedule for the next shift with available capacity.

Schedule Finite in a Contiguous Time Span

This option is designed for machines that will produce a job in a contiguous span. These machines could require much set-up time and to be efficient a job needs to start and complete without any breaks within the day. For example, two 8 hours shifts and a job that requires 12 hours to produce. With this option set, the job would only be scheduled where there is capacity containing 12 hours. This would span across multiple shifts but not days.
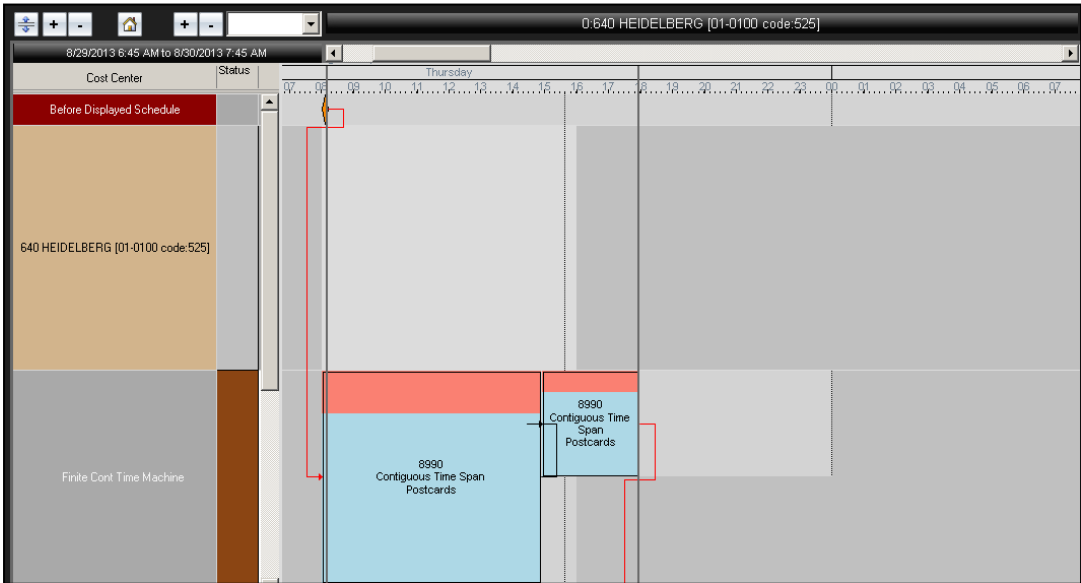
In the example below, job #8990 has been scheduled. It starts on Thursday and completes Friday. This is a job that needs to start and complete in a contiguous span.

Opened Cost Center job list> set Start Date and Time >Save.


Notice the job will now start on shift 1 and complete on shift 2 in a contiguous span.

Schedule Finite allowing Breaks

This option is designed for machines that can start a job and complete on the next day or shift. These machines do not require a lot of set-up and mainly turn off at the end of a day and turn on the next day allowing a break within a day. When scheduling a job, the system will for look for available capacity and schedule accordingly.

In the example below, job #8991 is scheduled to start at 12:00pm (12 Hours), and because it is NOT a contiguous machine, it will finish the next day - a break. *If this job was scheduled on a machine marked contiguous, the system would look for the next available 12 hours within a single day.*
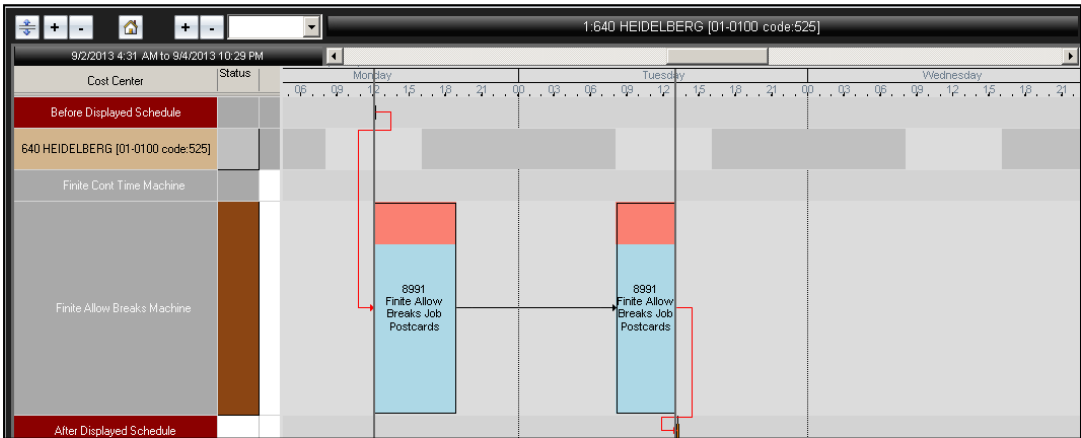
Additional entry fields listed below in the machine setup window are designed to collect data unique to laser printing. Production counts are recorded as the number of 'clicks' used. To activate this function, additional fields must be filled out when creating the machine.

Current Click

The starting click count on the machine. This will update as employees record additional clicks in MR Shop Floor.

Maximum Click

The maximum number of clicks that can be recorded against this machine. MR Shop Floor will not accept entries above the **Maximum Click**.

Inches per Click

Describes how many inches are lasered before one click is used.

Clicks per Hour

Number of clicks the machine can do in an hour.

To record production counts using click counts, employees enter the ending click count, the number up and the form length. Starting click count is subtracted from ending click count to calculate the number of clicks. The form length entered is divided by **Inches per Click** to determine what production count is created for the specific piece size by the number of clicks used. If the item was run multiple up, the production count is multiplied by the number up. If the piece was printed on both sides, the production count is divided in half.

Or the system can automatically read click information from the location specified in **Specify Auto Click Parameter**.

(Current Click – Start Click) divided by (Form Length/Inches per Click) x number up

(Divided by 2 if duplex) = production count

Maximum Number Up

Restricts users from entering a larger number up than the machine can process.

$$ Per Hour

Informational field only; no reporting available.

Cost Centers: Alternate Cost Centers

Alternate Centers – In programming process for MR Extended, can be set-up in MR Scheduler.
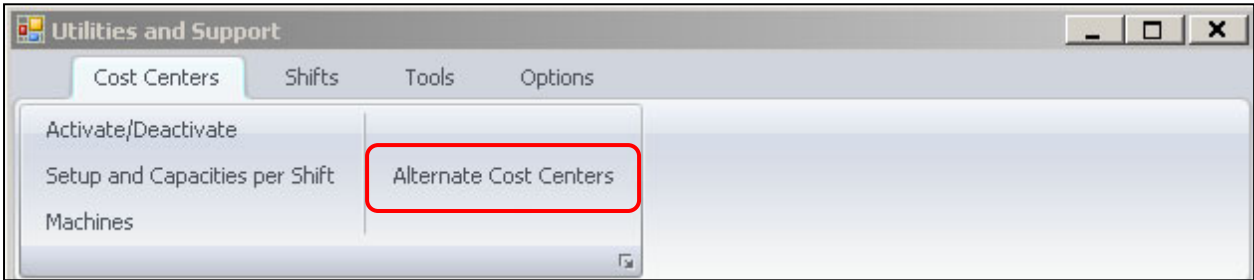
Alternate Cost Centers provides the Scheduler options that will allow a job step to be produced in different Cost Centers without editing the job. A job could be quoted on one piece of equipment, but due to conflicts in scheduling it could be produced in another Cost Center. This is a right-click option when scheduling a job and will be covered later in the document.
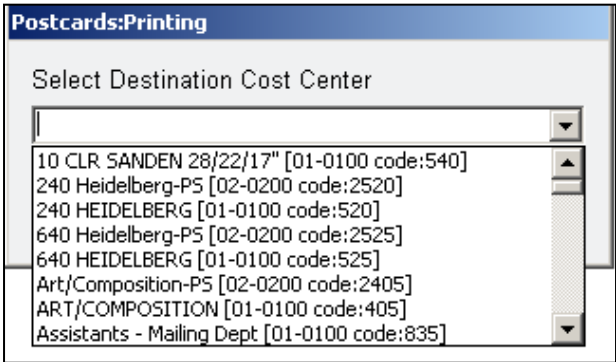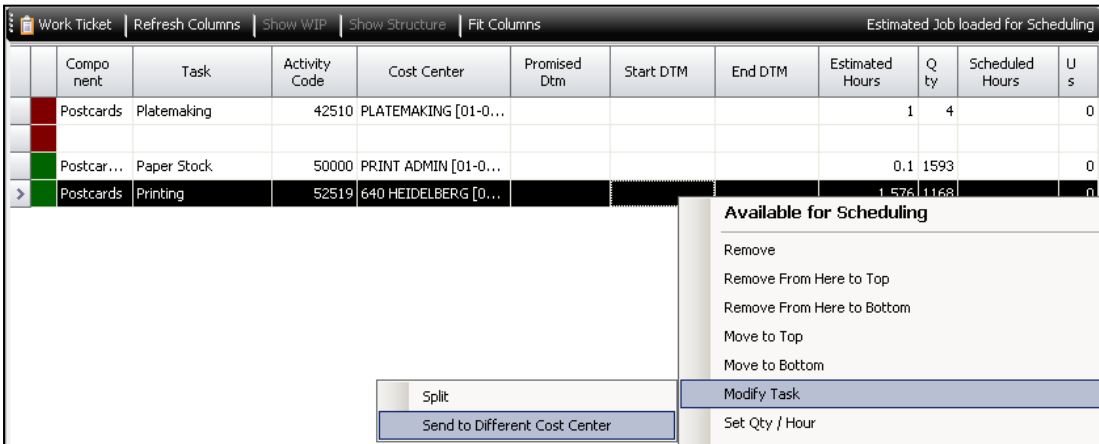
Postcards:Printing

Select Destination Activity

[▼]

240 HEIDELBERG M/R
240 HEIDELBERG RUN
240 HEIDELBERG WASHUP
240 HEIDELBERG MAINTENANCE

[Ok]   [Cancel]

Postcards:Printing

Select Destination Activity

[240 HEIDELBERG RUN   ▼]

Select a Press

[▼]

240 Heidelberg, Inks:1
240 Heidelberg, Inks:2
240 Heidelberg, Inks:3
240 Heidelberg, Inks:4
240 Heidelberg, Inks:5
240 Heidelberg, Inks:6

Postcards:Printing   [_] [□] [×]

Quantity to Send

[1168]

[Ok]   [Cancel]

Postcards:Printing

Validate your Choice

Send 1168 to 240 HEIDELBERG [01-0100 code:520]

Activity:240 HEIDELBERG RUN

Press:240 Heidelberg, Inks:4

[Ok]   [Cancel]

		Component	Task	Activity Code	Cost Center	Promised Dtm	Start DTM	End DTM	Estimated Hours	Q ty	Scheduled Hours	U s
>		Postcards	Platemaking	42510	PLATEMAKING [01-0...				1	4		0
		Postcar...	Paper Stock	50000	PRINT ADMIN [01-0...				0.1	1593		0
		Postcards	240 HEIDELBERG ...	52015	240 HEIDELBERG [0...				1.576	1168		0

Work Ticket | Refresh Columns | Show WIP | Show Structure | Fit Columns   Estimated Job loaded for Scheduling
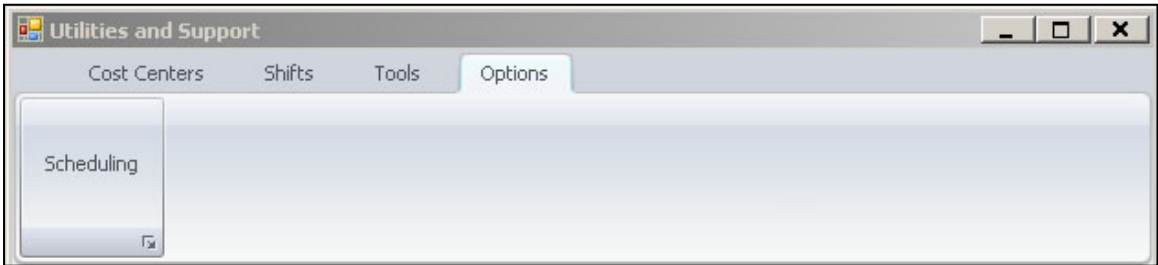
Options

Scheduling/System Wide Scheduling Options.

Allow Job Delivery Date Update

The Job Delivery date is initially set by the estimator, CSR or sales rep. If the **Allow Job Delivery Date Update** check box is selected, whenever a route is saved then the scheduler will be prompted to enter or adjust the route completion date and then the Job Delivery date.

This check box would likely *NOT* be selected if the customer tends to hold to their promised delivery dates (or wants to analyze if they are doing so). The Job Delivery date would usually not change, although the schedules might end up completing after it. This check box might be selected if delivery dates tend to change. It is common for mail jobs to get delayed due to delays in delivery of data, materials, or postage from the customer. In this case, the initial delivery date does not matter. The delivery date is potentially constantly changing. The scheduler would want to update this date so it can be compared to the schedule completion dates.

In the example below, the job has a **Last Mail Date** of 9/13/2013 that was entered at the time of job creation.

The job was scheduled for 9/16/2013, but it exceeded the job delivery date.

Notice **Last Mail Date** now reflects scheduling changes.

Send Email when Route Completion Date Conflicts with Route Delivery Date

There are a few basic setups required for automatic e-mail notifications. The first is that the MR Extended must have the e-mail notifications activated. This is simply done by the Scheduler option **Send Email when Route Completion Date Conflicts with Route Delivery Date**. If this check box is selected, the MR Extended sends out automatic e-mail notifications.

These e-mails currently come from schedulingerrors@efi.com.

So, who do the e-mails go to?

The PrintStream User and Menus setup creates a user login that can also be linked to a Sales Rep. In the screen shot below, user Claude is assigned to sales rep "Claude". Claude is what appears in the estimates and jobs. This person also has an e-mail address defined.

MR Extended sends the e-mails to the sales rep defined for the job. The e-mail address is defined in the Menus and Users screen.

Menus and Users – Find User, link user to Sales Rep.

Notice the job below in the quote header Sales Rep = Claude.

The **Delivery Date** in the example job was 9/13/2013. The job was scheduled to happen on 9/17/2013. Select **Yes** to update 9/13/2013 as the delivery date.

From: schedulingerrors@efi.com [mailto:schedulingerrors@efi.com]
Sent: Friday, September 13, 2013 2:08 PM
To: Claude Hosch
Subject: 9045.99 Message

Route 1, Mail Job Route drop date, 9/17/2013, exceeds final delivery date 9/13/2013

Job Scheduling
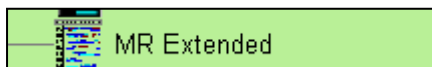
There are two options to open job scheduling, but in order to schedule jobs, the user must be identified as a Master Scheduler or have Administration rights.

Option 1 for Opening Job Scheduling

Master Scheduler is set-up in **Menus and Users>Security>Security Events>Scheduler> SchedulerAdmin** – Please refer to the Security help doc for creating Roles and Sub Roles.
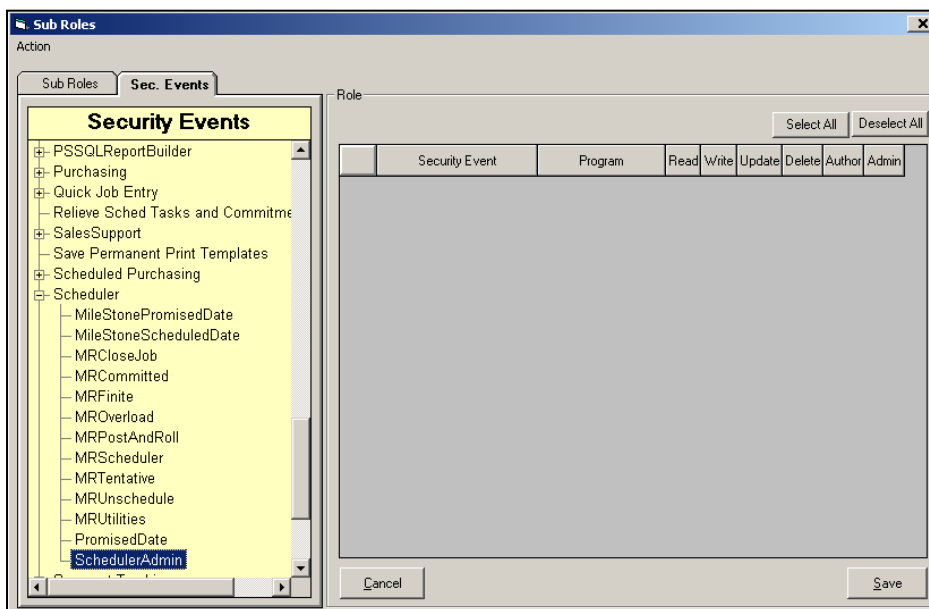
1. After opening MR Extended, select **OK** in the calendar view. Dates will be discussed later in the document. There are options for opening job scheduling. The below option is the default.
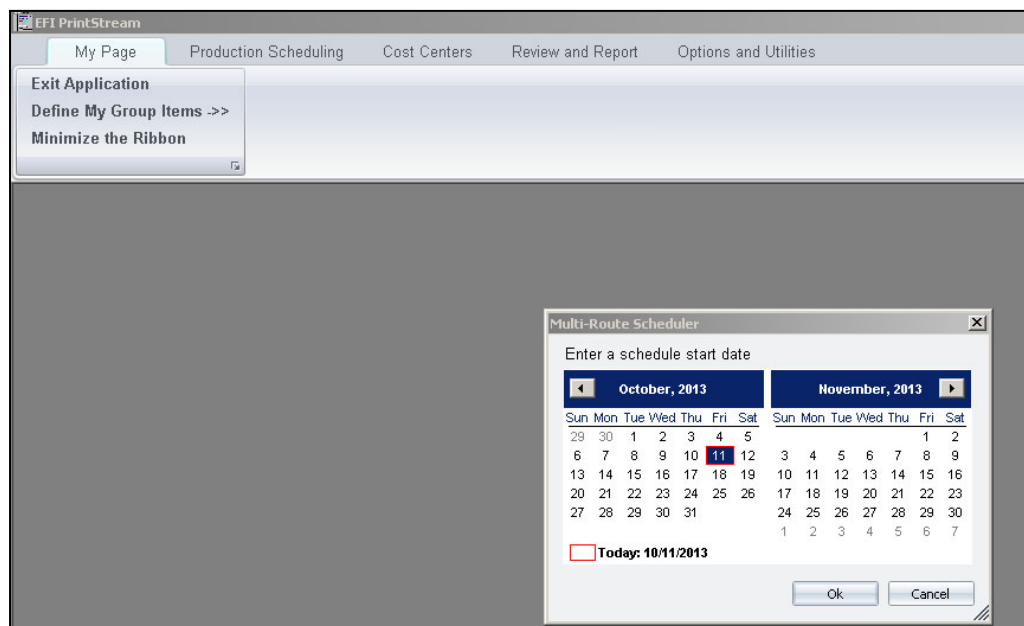
2. Select **Production Scheduling** if the user is set-up as Master Scheduler. **Schedule Reschedule** will be displayed.

Option 2 for Opening Job Scheduling

Options and Utilities > Settings and Specific Colors
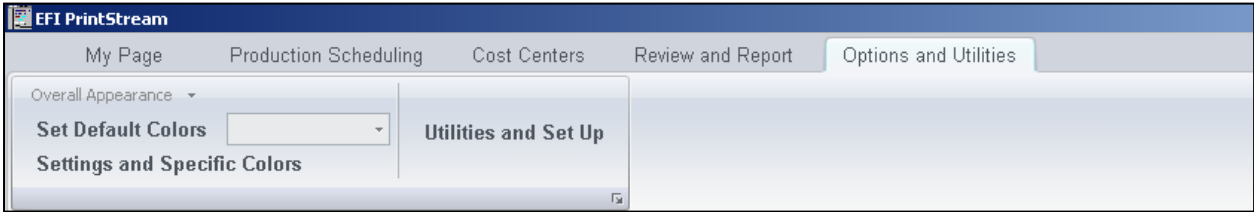
Start with Individual Job Scheduling = True > OK
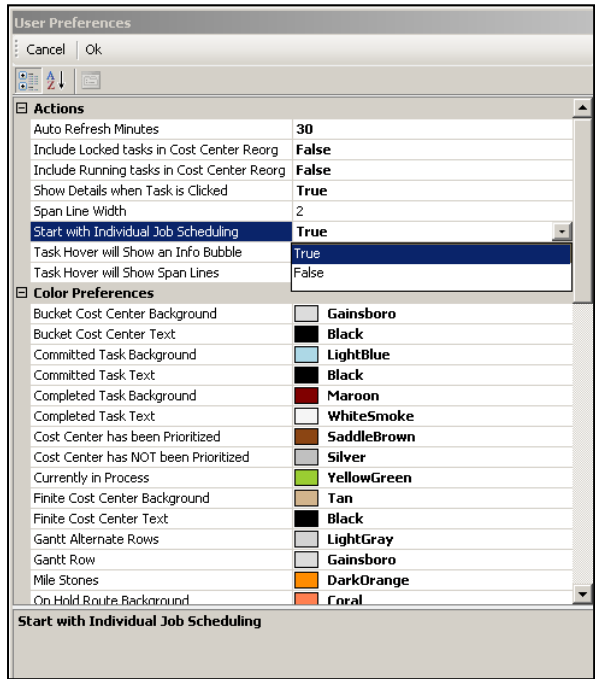
Re-Start MR Extended –Opens in Job Search screen.

- **Committed** – Scheduled Jobs

- **Rescheduled Required** – Scheduled Jobs where a change has occurred within the job after it was scheduled. The job remains in committed status but may or may not need to be rescheduled, depending on the changes.

- **Tentative** – Jobs that have been scheduled tentatively, taking resources so other jobs cannot be scheduled in place of them. These jobs will not appear in Shop Floor for processing.

- **Unscheduled**- Quotes that have been converted to jobs but not scheduled.

Select the drop-down (+) to view job list. The background colors can be edited to identify jobs within each branch.

Options and Utilities/Settings and Specific Colors/Color Preferences –These are specific colors based on PrintStream user login.

Job Actions - A job must be selected prior to using any of the job actions.

Schedule – Opens a job for scheduling.

Close – Removes a job from scheduling.

Un-Schedule – Un-Schedules a job including all routes.

Committed<->Tentative – Moves a scheduled job that has been (Committed to Tentative) or (Tentative to Committed).

Work Order – Produces work order for the selected job.

Status – Displays all process assigned to a job, steps that have not started, completed steps and steps in process.

Select Job – Allows the user to input a job number that will open job scheduling. Select (Enter) keyboard after choosing the job.

Multiple Jobs – This option allows more than one job to be scheduled. These are jobs that contain one drop, one package and are quick turn projects.

Using Ctrl or Shift, select the jobs to be scheduled from the *(Unscheduled)* branch and choose **Schedule Jobs**.

Enter Start Date and Start Time

Last Priority Start Date and Start Time

Observe Promised Dates – If promise dates have been entered, then scheduling will not schedule a process to begin before the designated promise date.

Continue Scheduling – Produces a schedule for the selected jobs.

Multi Jobs – After the jobs have been scheduled, they are available to be prioritized and published to Shop Floor. This process will be discussed later in the document.

Un-Schedule Jobs- Allows the user to select a single or multiple jobs from the Committed branch and unscheduled them. This will remove all Routes and place the job or jobs back in the Unscheduled branch.

MRSchedulerExtended [×]

Un-Schedule Multiple Jobs results, Un-Scheduled:3, Errors:0

OK

Refresh Jobs

Refresh Jobs – This will update quotes that have been converted to job and places them in the Un-Scheduled branch. The system automatically refreshes jobs once the scheduling module is launch.

Expands or Collapses all scheduling branches.

Open

Open – If a job was closed out, this option will re-open the job the job for Scheduling. Once the job has been reopened, the steps need to be restored from within the job schedule. Opening a closed job does not place it back into the previous schedule.

Open Closed Job [_] [□] [×]

Enter Job Number to Open

11382

Ok   Cancel

MRSchedulerExtended [×]

Open Job:11382:Daily Cards C

OK   Cancel

MRSchedulerExtended [×]

11382 was opened

OK

Job Actions ▾ | Select Job: 11382 | Schedule Jobs | Refresh Jobs | ↓ | ↑

MRSchedulerExtended [×]

The job could not be loaded due to:There are no tasks available for scheduling

OK
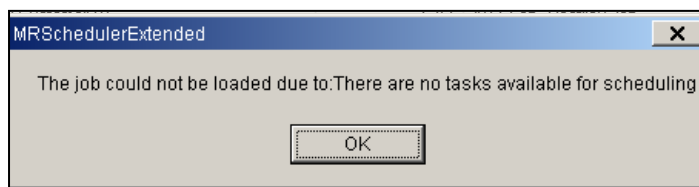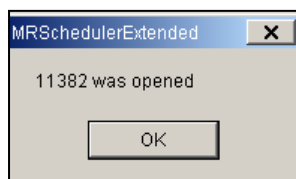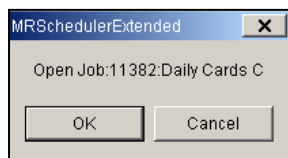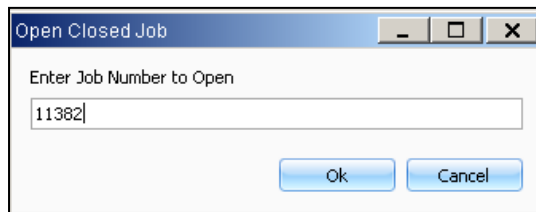
Select Options and Restore Steps – Using the drop-down (Closed Tasks), select the task you wish to reopen. Select Open. These will re-appear back onto the shop floor workstation for processing.

Print – Prints the list of jobs within the branches.

Refresh – Restores all columns back to the default. If a user has added, removed or moved column headers around, this option will restore all back to the default setting.

Details – Select a job from any branch to view job details.

Number – Job Number

Description – Job Description

Delivery Date – First Mail Date on the job

Scheduled Date – Date the last process on the job is scheduled to be completed

Status – Committed, Un-Scheduled, Reschedule Required or Tentative

Quote No – Quote Number

Final Delivery Date – Last Mail Date on the job

Notes – N/A

Rescheduled Reason – Reason job was moved from Committed to Reschedule Required, may require job to be opened in scheduling to see reason.

CSR – Customer Service Rep assigned to the job

Estimator – Estimator assigned to the job

Sales Rep – Sales Representative assigned to the job

Name – Customer Name

Account No – Account Number

Company Code- Company the job was opened in

Each of the column headers can be arranged, removed and sorts created. The display will save based on PrintStream user login.

Move Columns – Select column and while holding left mouse click, drag column to desired placement.

Remove Columns – Select the column and while holding, left mouse click and drag the column out of header until (X) appears. Then release.
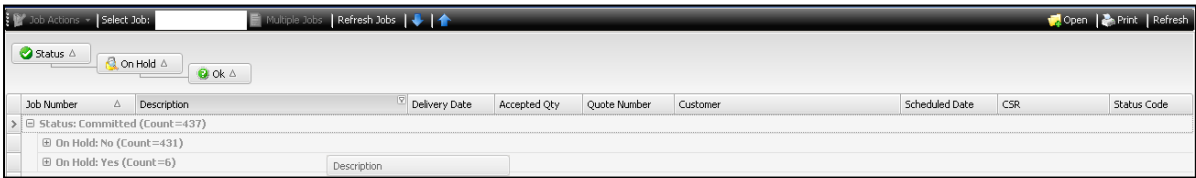
Add Columns – Right-click any column header and select **Column Chooser**. A list of available column headers will appear. While holding the left mouse click, select the desired column header, drag and drop into the column header.
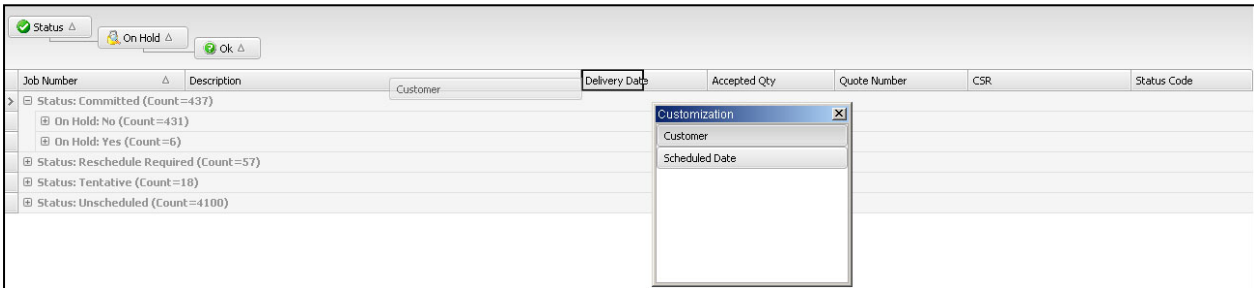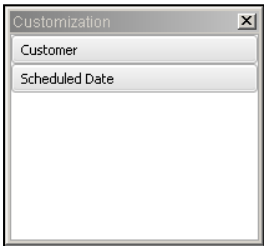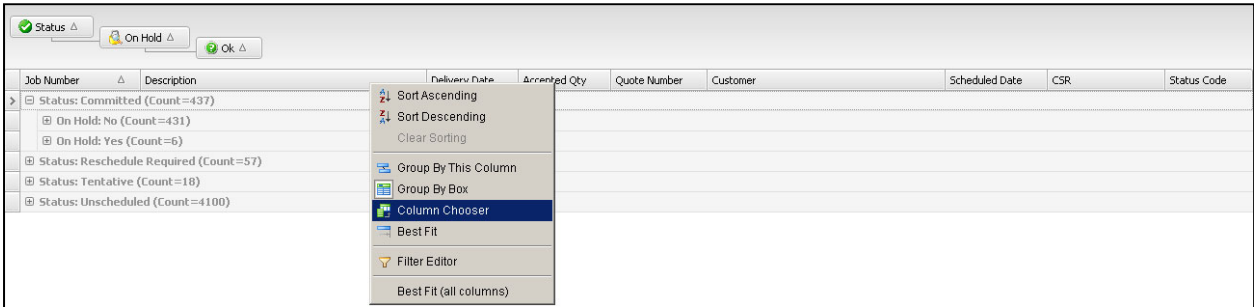
Create Sorts- Select the column header and while holding the left mouse click down, drag and drop the column to the top.

Right-click options are available for additional sort and will save based on user login. Sorts can be removed using the right-click option (Clear Sorting).

Filters can be added by using the icon below. Hovering over the column header will display filter icon.

Remember to uncheck or delete the filter after use.

Status – Committed, Reschedule Required, Tentative or Un-Scheduled

Ok – This option is located in the General branch of Mail Estimating. If Ok to Schedule has been selected, the job will appear in scheduling as OK: Yes. This option is sometimes used to prevent the scheduler from writing a job schedule several times on a project that has not been approved.

On Hold – Jobs are placed on hold using Job Status and cannot be worked on in Shop Floor.

Select **Code**, **Source/Cause code**, **Comments**, **Cost Center**, and **ADD**.

Remove Hold – Job Status, Open Status Codes, select Close and Save Changes.

Job Scheduling – Select Production Scheduling and Schedule- Un-Schedule.

If Schedule-UnSchedule is not displayed, contact the System Administrator. Only Master Schedulers will be allowed to access job schedules. Master Scheduler is set-up in security events Menus and Users/Security/Scheduling Admin.

Open a Job to Schedule

The job can be opened by double-clicking or using the **Select Job** option and pressing the **Enter** key on the keyboard.

All jobs created in any Printstream order entry program will list under <u>**Unscheduled**</u> until they are scheduled or until they are invoiced, and their invoice batch is posted.

<u>**Tentative**</u> schedules can be overwritten by committed schedules and will appear in this list.

<u>**Scheduled**</u> jobs have been given a committed schedule.

<u>**Reschedule Required**</u> jobs have had changes posted since they were scheduled and *might need rescheduling*.

To schedule a job, select the job number and then double-click the desired job number. Or using the **Select Job** option, enter the job number and press the **Enter** key on the keyboard.

Settings and Controls

Unscheduled
9/18/2014->9/18/2014, Qty:30000

Provides Status (Un-Scheduled, Committed, Tentative or Reschedule Required) First and Last Mail Date and quoted Quantity on the job.

Load

Select an Existing or New Route
(new)

Select an Existing or New Route - Select to create a New Route or view and Existing Route on the job.

☑ Combine Identical Activities

Combine Identical Activities - Select then Preview. This will combine all identical activities for the job rather than activities for each component.

◉ Promised Dates

Promise Dates - Promise dates are entered in Mail Estimating. Promise dates are used as a starting point for scheduling. These dates do not commit the schedule in any way.

◉ Scheduled Dates

Scheduled Dates – This option will maintain the last scheduled date for each job step using the promise date fields when creating an additional route.

Options and Restore Steps

Opens and restores closed job steps. This option is used when a job step is accidently closed and needs to be restored for additional processing.

Hold Route

Places route on hold - not the job - only a route within the job schedule

Schedule

Start Scheduling at:
9/24/2014   8:00:00 AM

Start Scheduling at - Select a Starting Date and Time. This will write a future schedule for the job. Time will determine shift definition.

☑ Schedule to Plan

Schedule to Plan - This option will overbook Cost Centers regardless of the number of resources and scheduled jobs. If the first job step is scheduled and Schedule to Plan is checked, the system will automatically start the next process right after the first step completes. It will ignore already taken resources on that day and shift. The option will not schedule a process on a day/shift that does not have at least one resource.

Start Scheduling at:
9/ 9/2014   7:00:00 AM
☐ Schedule to Plan
☑ Force Schedule to Complete by:
9/12/2014   11:00:00 PM

Force Schedule to Complete by - Using Start Scheduling at, enter a Date and Time, also enter a Date and Time under **Force to Complete by**. The system will automatically increase number of resources per job step to schedule the job. This option will NOT overload Cost Centers it is design to provide the best possible schedule based on available resources and capacity per shift and day.

Due Date (Reverse) Schedule - Allows for backwards scheduling. Using the Start Scheduling at option, enter a date and time. The system will start scheduling the last process on the job and backwards. This option will provide information on when the first job step begins in order to meet the due date.

Note   Using this option can result in scheduling processes in the past.

Observe Promise Dates - This option prevents any job step from being scheduled prior to the Promised Date. Note the scheduler cannot enter promise dates; these are entered in Mail Estimating.

Allow Overload - Overloads Cost Centers that contain more than one resource when capacity has been exceeded for a day/shift.

Resources - This option allows for additional resources to be set for all job steps when scheduling by default each job step has one resource allocated.

Preview Schedule - Select your method, define your dates and time, and select **Preview**. This is a look at a possible schedule for the job. Preview does not commit the job it is only a view of possibilities.

Ok As Is - This will write the schedule as it appears. If there are multiple schedulers, this could result in resource overload. If the job has already been committed and you do not wish to make any scheduling changes use this option; Only available in Rescheduled Required

Publish

Committed + Save - Schedules the job as Live taking available resources based on day, shift, and capacity.

Tentative + Save - Schedules the job as Tentative also taking available resources based on day, shift, and capacity.

Un-schedule - Select a route and Un-schedule. This option un-schedules a single route, not the job.

Examples of Job Scheduling:

Jobs can be scheduled as a whole or broken into multiple routes. All job processes will load into scheduling if the Cost Center has been activated and has capacity set-up.

One Route Job Example:

Name the Route/Ok

Select the Route Drop Date /Ok

Example Job Schedule with Multiple Routes:

Right-click Options – These options are helpful when creating multiple routes for a single job.

Available for Scheduling – Job step can be scheduled.

Remove – Allows user to remove job step. The removed step does not impact the job in estimating on the scheduling portion. This could be a step that is not going to be scheduled or will be scheduled in another route.

Remove From Here to Top – Allows multiple steps to be removed from the selected step to the top of the grid.

Remove From Here to Bottom – Allows multiple steps to remove from the selected step to the bottom of the grid.

Modify Task – Allows a step to be split and sent to on another Cost Center.

Set Qty/Hour – Allows an override of the run speed for the selected step.

Combine block into a single Task based on the selected activity – This option will allow an entire BLOCK of steps to combine together for scheduling a single line. This will display one line in scheduling for the block containing an overall total qty and total hours combined together. *Mainly used with Data Processing activities.*

Add Activity – Activity codes can be added to the job schedule. For example: the job was quoted for one process, but it will be processed in production using a different process. By adding the correct activity, this will ensure a more accurate schedule. This has no impact on the quoted job in estimating.

Close Tasks – Closes Job Steps.

Add Special Event – If special events are set-up in Master Files Reports/ Report #625. These events can be added to the job schedule. Special events are no more than milestones that provide the scheduler a starting point. In most cases these events are selected at the job level and will flow into scheduling for example (Files Due, Material Due, and Proof Due).

Review Modifiers – If a process has modifiers, this option will display the modifier on the process. Modifiers can increase and decrease run speeds depending on the answers.

This example represents a job with 2 routes - a Print route and a Mail route.

Using the right-click options, remove all mail processes either by **Remove individually** or **Remove From Here to Bottom**.

Enter the **Start Scheduling Date** and Time/Preview/ Save/ and Enter a Route Name.

Select the **Route Drop Date**. This is the date the scheduler selects for the expected completion of the route.

Press Route is now scheduled.

Schedule additional routes for the remaining processes.

Select New and Select from Unscheduled Task Quantities.

Remaining Jobs Steps not scheduled – Choose Start Scheduling Date and Time/Preview/Save/Enter New Route Description and Drop Date.

Notice the example job has two routes scheduled.

Notes

By default, each job step gets one resource (USE), and can be edited to reduce scheduled time.

Qty. can be edited and split into separate routes.

Any part of a job including qty's can be scheduled as a route. For example: inserting 20,000 can be broken into routes by editing the qty and creating routes. Each time a new route is created, the schedule will continue to load remaining unscheduled processes along with qty's.

Routes can be opened and rescheduled or unscheduled.

Routes can be placed on Hold. This will not prevent the job from being worked on in Shop Floor

Task Selector – Another option for creating a job schedule using Components, Drops or Packages.

In the example below, the job is factored for all Pre-Pres or Data, Components and Finishing steps associated with the Brochure component. Only these activities will load for scheduling.

The user has the option to choose job steps listed for Pre-Press, Press and Finishing Bindery using All, None or Factor. The job steps will load based on the selection and will allow a route to be created. Factor will only load job steps associated with the above selections meaning Component, Drop or Package.

1. Place a check on how the job route is going to be created and then choose one of the options in each of the categories of the TASK SELECTOR.

2. Choose Select from Complete Job.

3. Enter Starting Dates and Time.

4. Preview /Save.

5. Name the Route and Select the Drop Date.

Multiple routes can be scheduled using the above steps by adding a New route and choosing Select from Complete Job. Only job steps will display for scheduling based on the selections made from Task Selector.

A new feature was added when scheduling by Drops, Packages or components. When you have multiple scheduled routes when adding a new route after scheduling the first one, you can see the previous selections remain checked and must be manually unchecked to begin the new route.

A new option was added when you right click here to clear all selected options

Expand Packages for Bindery – Displays Bindery finishing steps along with Package name. This option is used only with jobs containing finishing processes.

Show WIP – At any time during previewing or saving a job schedule, the Show WIP option can be selected. This will provide an overview on the current job as well as scheduled jobs and open capacity. This will allow the scheduler to get an overview on how the job is being written into scheduling.

Yellow – Current Jobs

Blue – Scheduled Jobs

Green – Open Capacity

Grey – No Capacity

Allow Overload – This setting will allow Cost Centers to become overloaded. If a job is not meeting the expected due date, this option allows the scheduler to overload Cost Centers. When Cost Centers are overbooked, then decisions will need to be made to either reschedule other jobs or increase the number of

resources for the overloaded Cost Centers. Overloaded Cost Centers will display in RED in the Resource Loading View window in MR Extended.

1. Select **Allow Overload**.

2. Select the activity that needs to be rescheduled reschedule.

3. Select Reschedule from here.

4. Enter start scheduling date and time – Ok.

5. **Save** (Do not **Preview**).

6. Option to rename route.

7. Select **Drop Date**.
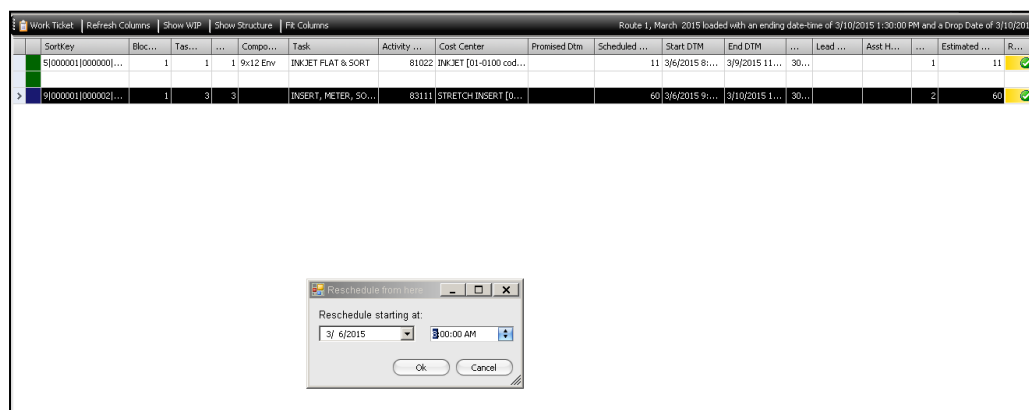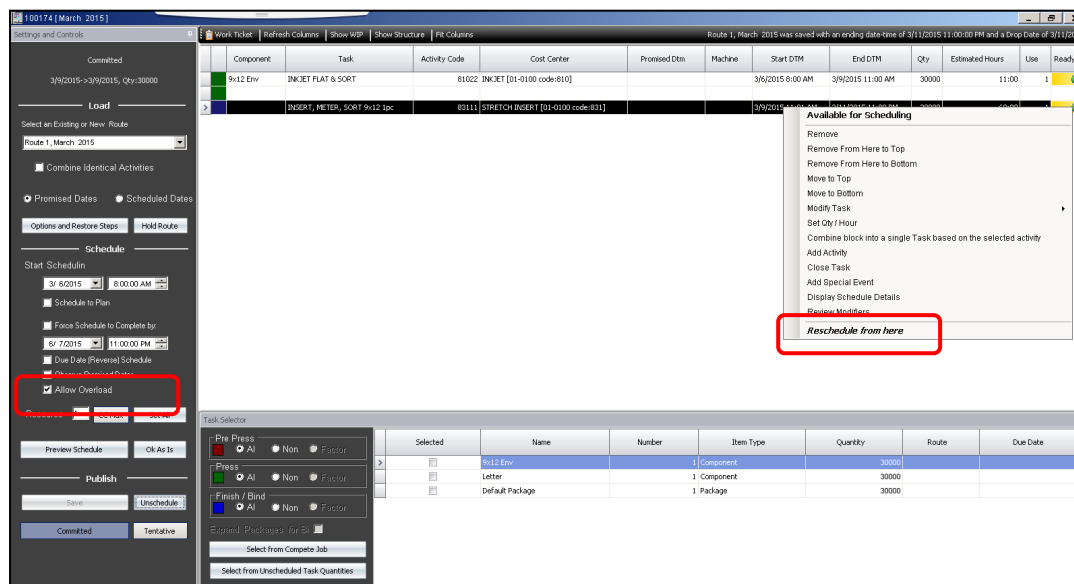
Overload Cost Center View

Production Scheduling

Start Date / End Date

WIP Only

Schedule Board

Resource Loading View