# Planning and Scheduling Workbenches Release Notes

## October 2013

These release notes include information about fixes and enhancements related to QAD's 2010.1 through 2013.1 EE maintenance release of the Planning and Scheduling Workbenches and role-based component availability check browse collections.

QAD recommends that you check the QAD Online Support Center to ensure you have the latest QAD documentation. For a list of documents, see "Finding User Documentation" on page 38. To find documentation on the QAD support site, refer to the following URL:

http://support.qad.com/

Use the following list to find a specific release:

# Release Notes for Versions 2010.1 through 2013.1EE October 2013

**Planning and Scheduling Workbenches version:** 3.3.5

**QAD Enterprise Edition:** 2010.1, 2011, 2011.1, 2012, 2012.1, 2013, and 2013.1

**Release Date:** October 2013

**Prerequisites:** 2010.1EE, 2011EE, 2011.1 EE, 2012 EE, 2013 EE, or 2013.1 EE release installed

***Important*** Because the Planning and Scheduling Workbenches are powerful tools that perform intensive processing, depending on the data volumes your planners/schedulers need to process, it may be necessary to allocate an additional processor (core). This can only be determined after you try the application in your environment.

**Supported languages:** US English, Castilian Spanish, Latin Spanish, Dutch, French, German, Italian, Japanese, Polish, Portuguese (Brazilian), Simplified Chinese, Traditional Chinese, Korean, and Czech.

**User Guide:** *Planning and Scheduling Workbenches*, item 70-3173-2013.1EE-Rev1; see “Finding User Documentation” on page 38.

**Administration Guide:** *Planning and Scheduling Workbenches*, item 70-3174-2013.1EE-Rev1; see Finding User Documentation.

**Install Guide:** *Planning and Scheduling Workbenches*, item 78-0947-3.3.5EE; see Finding User Documentation.

**Conversion Information:** Planning and Scheduling Workbenches conversion information can be found in *Administration Guide: Planning and Scheduling Workbenches.*

## Planning and Scheduling Workbenches Enhancements

### Routable Items

The system now supports routable items for discrete items.

### Personalization Architecture

Personalization architecture provides a way to easily add columns, fields, and associated processing logic to any of the workbench grids that reference the production order master and/or component detail tables.

New sections and fields are included in Workbench Control (22.20.24) as part of this enhancement.

***Note*** For restrictions and additional information, as well as instructions, code examples, and customization sample scenarios, refer to *Administration Guide: Planning and Scheduling Workbenches*, version 70-3174-2013.1EE-Rev1.

- Use the following Additional Default Display Fields section in Workbench Control:

  *Work Order.* Enter fields, separated by commas, to add to the production order grid column pull-down list. The pull-down list shows you the default columns that you can add to the grid.

  *Work Order Component.* Enter fields, separated by commas, to add to the production order component detail grid column pull-down list. The pull-down list shows you the default columns that you can add to the grid.

- Use the following Additional Default Edit Fields section in Workbench Control:

  *Work Order.* Enter fields, separated by commas, in the work order display list that are editable.

### Modify Filters for Browses

You can now modify the filters that the supporting browses use when they display records. You can modify to filter by dates, or by other specific values, such as an order status, or a specific numeric value that has meaning in your company within item numbers. For example, you can view all transactions for the last two years, only records with dates of today plus all future dates, or specify a specific date upon which to view records. You do this by modifying the `ConfigControl.xml` file.

***Note*** Chapter 4 of *Administration Guide: Planning and Scheduling Workbenches* tells you how to access and modify the `ConfigControl.xml` file and explains the file layout. It also provides a table of valid date entries in the correct format for the XML file. It also includes several code examples that show you how to make specific changes to filter records.

### Modifying Browse Record Limit

By modifying the `ConfigControl.xml` file, you can change the default number of records that display in the supporting browses in the workbenches. Chapter 4 of *Administration Guide: Planning and Scheduling Workbenches* provides code examples that show you how to change the record limit for the browses.

### New User Preference Scheduling Options

Several enhancements were made to the Scheduling tab of the User Preferences window in the workbenches. Changes were made to streamline and enhance date calculations. The following changes were made:

- When calculating production order dates using the context menu selections Calculate Due Date or Calculate Release Date, you had to select these functions multiple times before getting the correct date calculation. This has been resolved.
- The production order Duration field is now calculated correctly when the release date is in the past and the due date is either today or in the future. Before this release, the Duration field was not always calculated correctly in this situation.
- Anchor Order Date and Order Duration Calc Method were removed.
- Several new fields were added in place of the removed Anchor Order Date and Order Duration Calc Method fields. The new fields are grouped under the following three headings in the Scheduling tab of User Preferences, and each heading has several fields:
  - Date Calculation Rules By Order Status
  - Due Date Calculation Inputs
  - Release Date Calculation Inputs

  The new Date Calculation Rules by Order section has the following fields, and each field has its own rule that informs the system which date to calculate when the order is in that particular status:

  *Planned.* When the order has a P(lanned) status and the system calculates dates, the date (due versus release) assigned here is the date calculated.

  *Firmed.* When the order is in F(irm), E(xplode) or A(llocate) status, and the system calculates dates, the date (due versus release) assigned here is the date calculated. The default is the release date.

*Released.* When the order is in R(eleased) status, and the system calculates dates, the date (due versus release) assigned here is the date calculated. The default is the due date.

*Sequenced.* When the order has been sequenced and the system calculates dates, the date assigned here is the date calculated. This setting takes precedence over the Planned, Firmed, and Released user preference settings. The default is the due date.

*Production Reported.* When the order has production reported, and the system calculates dates, the date assigned here is the date calculated. This setting takes precedence over the Sequenced, Planned, Firmed, and Released settings. The default is the due date.

The new Due Date Calculation Inputs section has the following fields:

*Anchor Due Date.* When Yes, the due date stays fixed during date calculations, unless you select the due date to be calculated.

*Scheduled Duration.* When Yes, the system uses the value in the production order Scheduled Duration field to calculate order dates. This value is usually the item's manufacturing lead-time.

*Projected Duration.* When Yes, the system uses the value in the production order Projected Duration Days field to calculate order dates. Projected Duration is calculated based on required capacity and various other inputs.

*Planned Capacity.* When Yes, a date's planned capacity is used to determine whether a production order can be scheduled for that date.

The new Release Date Calculation Inputs section has the following fields:

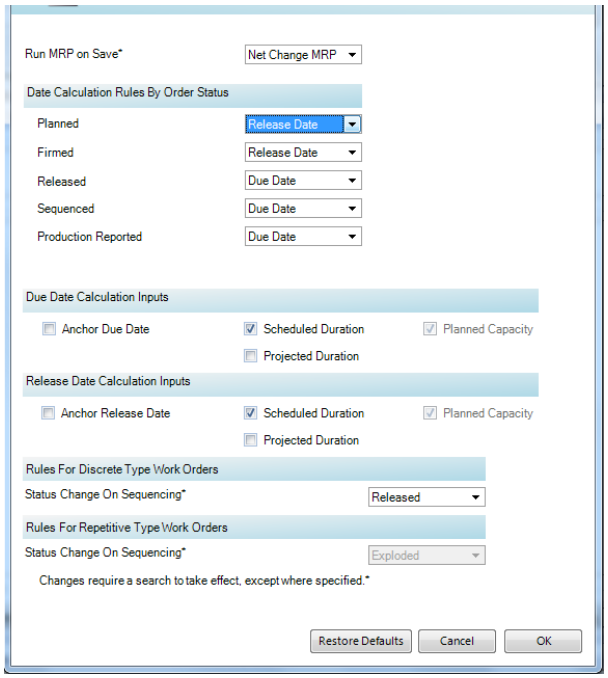
*Anchor Release Date.* When Yes, the release date stays fixed during date calculations, unless you select the release date to be calculated.

*Scheduled Duration.* When Yes, the system uses the value in the production order Scheduled Duration field to calculate order dates. This value is usually the item's manufacturing lead-time.

*Projected Duration.* When Yes, the system uses the value in the production order Projected Duration Days field to calculate order dates. Projected Duration is calculated based on required capacity and various other inputs.

*Planned Capacity.* When Yes, the system uses a date's planned capacity to determine whether a production order can be scheduled for that date.

**Fig. 1**
User Preferences




## Using Schedule Maintenance with Workbenches Enabled for a Site

When you set the Use Plan/Sched Workbenches field to Yes in Site Maintenance (1.1.13), you can now use Schedule Maintenance (18.2.1 and 18.22.2.1) to enter repetitive schedules.

Using Schedule Maintenance with the workbenches enabled helps customers who have a need to upload schedules from third-party applications or use the workbenches to enter schedules for some production lines within a site, and still enter schedules in Schedule Maintenance for other production lines within the same site.

Note the following when using Schedule Maintenance to enter repetitive schedules when you enable the workbenches in Site Maintenance.

- When more than one scheduled production order exists for the same domain, item, site, production line, and/or due date, you:
  - Can only change the order quantity from a non-zero number to 0 (zero). When you change the order quantity to 0, the system deletes the corresponding set of scheduled orders for that due date.
  - Cannot make changes to the scheduled quantity, routing, or BOM.

  When you try to make changes to the areas described, the system displays a message, indicating more than one order exists for the production order due date.
- When you modify the order quantity, the routing, or the BOM, the system updates the scheduled order.
- When you change the order quantity to 0, the system deletes the corresponding set of scheduled orders for that due date.
- When you enter a new record, the system creates a scheduled production order. The system accepts valid alternate routing and BOM codes and creates a repetitive schedule master record that matches the scheduled production order. However, the system does not store the repetitive schedule alternate routing and BOM code in the repetitive schedule master; instead, it stores that information in the scheduled production order. This is consistent with how the workbenches generate new scheduled orders.

### Delete Repetitive Orders Option

You can now delete repetitive orders with a closed status using Schedule Delete (18.22.2.7). Deleting the closed orders ensures that you do not delete orders that are not yet complete.

### New Quantity Available to Allocate Column in Shortage Report

A Quantity Available to Allocate column was added to the Workbenches Shortage Report. The system calculates quantity available to allocate as:

*Qty with Available Status - Qty Allocated where*

*Qty with Available Status = in_qty_avail*

*Qty Allocated = in_qty_all*

### Production Line BOM and Routing

When production orders are firmed and you specify a production line for the order, the system now automatically populates the BOM and Routing code from the production line item to the order. When you switch an order from one production line to an alternate, the system now populates the BOM and routing code attached to the item at the alternate production line. The system only defaults the BOM and routing for sites for which you enabled the workbenches.

The system updates production orders with a status of P(lanned) or F(irmed) with the BOM/routing code from the production line, and the system updates repetitive scheduled orders with a status of E(xploded). The defaults for the BOM/Routing codes are as follows:

- The BOM/routing codes for a production order default from the production line record only when you specify a production line on the order. When the BOM/routing codes are blank in the production line record, the codes are blank on the order.
- When you create a new record in Production Line Maintenance (18.22.1.1) for a production line/item, the system defaults the BOM/Routing code fields from Item-Site Planning (1.4.17) detail records when they exist, or from Item Planning Maintenance (1.4.7) master records when detail records do not exist. You can change the defaulted codes. The system validates BOM/routing codes.
- For existing records, Production Line Item Update (18.22.1.21) now includes the Update BOM/Routing selection field. For more information on the field, refer to MSW Setup section of *User Guide: QAD Planning and Scheduling Workbenches*, version 70-3127-2013.1EE-Rev1.

  ***Important*** After installing this enhancement for the first time, you should run Production Line Item Update to have the appropriate sites/production lines. This lets the system default existing BOM/routing codes from either Item-Site Planning detail records or Item Planning Maintenance master records to the production line record. Once the Update program completes, you can update individual records on an as-needed basis and adjust the defaults when needed. Refer to *Installation Guide: QAD Planning and Scheduling Workbenches, version* 78-0953-2013.1EE

As part of this enhancement:

- In the Production Line Maintenance (18.22.1.1.) Item frame, you can now use new look-up browses attached to the following fields:
  - BOM Code field to show all available alternate BOM codes for the item
  - Routing field to show all available alternate routing codes for the item
- The system validates the BOM Code and Routing fields in Production Line Maintenance to verify that the code you specify is for a valid alternate code for the item. If not, the system warns you that the specified BOM or routing does not exist.

### Additional Production Line Item Update Modifications

In Production Line Item Update, the Production Line field was modified so that when you specify a blank value in the field, the system updates all production lines for the specified site. You cannot leave Site blank.

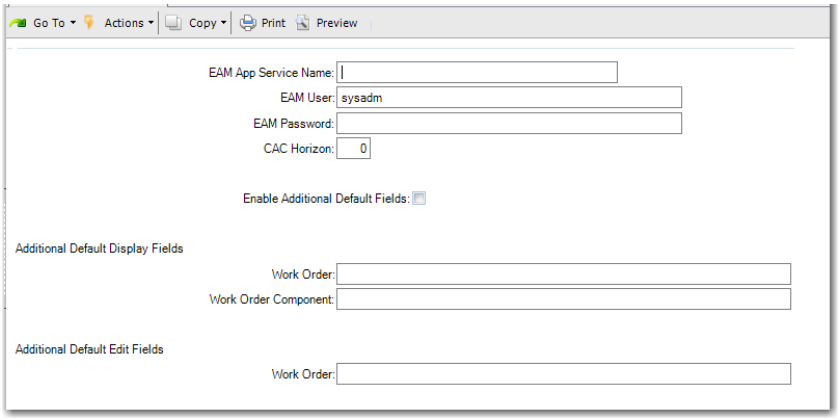
Additionally, the Make Primary Line field now works in conjunction with the Production Line field. You can now only set Make Primary Line to Yes when you specify a production line in the Production Line field. When Production Line is blank, you cannot change Make Primary Line to Yes.

### New Workbench Control Field

A new Enable Additional Default Fields was added to the Workbench Control File (22.20.24). The new field lets you control whether the personalization architecture is enabled or disabled. When set to Yes:

- You can enter a list of additional default fields to display in the Work Order or Work Order Component panels. Refer to *User Guide: Planning and Scheduling Workbenches*, 70-3173-2013.1EE-Rev1.
- The system sends the Additional Default Fields lists to the client.
- Various user exit programs are called; refer to the section on User Exit programs in *Administration Guide: Planning and Scheduling Workbenches*, 70-3174-2013.1EE-Rev1.

**Fig. 2**
Workbench Control Field




## Planning and Scheduling Workbenches Fixes

- Schedule Maintenance (18.2.1 and 18.22.2.1) now shows improved performance when you add schedules. Previously, the system obtained data without domain considerations and called the schedule program using temp tables, which caused non-indexed scans on the work order master table; both issues caused a slower system performance when you added schedules.
- The PSW column heading labels now correctly display long labels you define in Label Detail Maintenance (36.4.17.5) and Label Master Maintenance (36.4.17.1). Previously, when the column label for some database fields had a non-blank column-label property, the system incorrectly displayed the caret (^) for fields for which you did not define labels in Label Detail Maintenance or Label Master Maintenance.
- Open, over-completed discrete production orders now display in the MSW/PSW. Previously, certain over-completed, open discrete production orders did not display in the workbenches.
- The system no longer incorrectly calculates production order dates when you reschedule a past due production order. Now, when you reschedule past due production orders to the present, you can reschedule them so that they retain the original order scheduled duration. Previously, in this scenario, the system recalculated the production order dates.

- The system now correctly highlights the Supply column and PQOH cell when you select a record in the Production Order Maintenance Components tab, then view the Supply/Demand Summary panel. Previously, the Authorized Receipts column and the PQOH cell within Supply/Demand Summary were not highlighted blue to reflect the current component selection's data.
- The Schedule Grid now correctly adjusts the focus of the display after you change a quantity that causes the item line to shift. Previously, when you changed the item quantity on an order that caused the Schedule Grid's focus to shift up or down, the cursor in the Schedule Grid remained in the same place prior to the shift of the line item display.
- The system now correctly translates labels for the Chinese language.
- The workbenches and QAD repetitive functions now explode global phantom component items in a manner consistent with the core ERP when you create scheduled orders. Previously, the workbenches and QAD repetitive and advanced repetitive functions did not explode global phantom component items in a similar manner.
- The system now correctly defaults the routing and BOM codes to the workbenches-embedded Production Order Maintenance when you create a new order and routing and BOM codes exist in Production Line Maintenance (18.22.1.1). Previously, the system did not default the BOM and routing codes when you created a new order in Production Order Maintenance.
- The system no longer leaves a blank for the production order operation start and due dates. Previously, operation schedule logic did not properly process for all production orders, causing blanks for the start and due dates.

# Release Notes for Versions 2010.1 through 2012.1EE
March 2013

**Planning and Scheduling Workbenches version:** 3.3.3.22

**QAD Enterprise Edition:** 2010.1, 2011, 2011.1, 2012, and 2012.1

**Release Date:** March 2013

**Prerequisites:** 2010.1EE, 2011EE, 2011.1 EE, 2012 EE, or 2012.1 EE release installed

***Important*** Because the Planning and Scheduling Workbenches are powerful tools that perform intensive processing, depending on the data volumes your planners/schedulers need to process, it may be necessary to allocate an additional processor (core). This can only be determined after you try the application in your environment.

**Supported languages:** US English, Castilian Spanish, Latin Spanish, Dutch, French, German, Italian, Japanese, Polish, Portuguese (Brazilian), Simplified Chinese, Traditional Chinese, Korean, and Czech.

**User Guide:** *Planning and Scheduling Workbenches*, item 70-3173-2013EE; see “Finding User Documentation” on page 38.

**Administration Guide:** *Planning and Scheduling Workbenches*, for March 2013 EE, item 70-3174-2013EE; see Finding User Documentation.

**Install Guide:** *Planning and Scheduling Workbenches*, item 78-0947-3.3.3.22; see Finding User Documentation.

**Conversion Information:** Planning and Scheduling Workbenches conversion information can be found in *Administration Guide: Planning and Scheduling Workbenches.*

# Planning and Scheduling Workbenches

The following topics describe Planning and Scheduling Workbenches:

- Enhancements
- Product Fixes

## Enhancements

### Create Performance Enhancements

The software has been enhanced to provide a spreadsheet performance feel when you create new production orders from the workbenches. The new performance feel minimizes application calls to the server. When you create a new work order as the first order created for the item, the original creation process occurs—typically, within two to six seconds. However, all subsequent orders that you create should be less than one second. This performance improvement is possible because the system uses the first work order created as the master copy; then, it uses the master copy to create all subsequent orders. The system is aware of BOM or routing changes and effective dates as part of this process.

As part of this enhancement, when you enter a new scheduled quantity in the MSW Schedule Grid, the system uses the planned order instead of creating a new production order when the planned order due date equals the date or the quantity you enter in the Schedule Grid. Previously, the system created a new

production order, even when a planned order existed for the same due date. This change results in much faster performance as it eliminates the system need to create redundant supply records as well as removes MRP cleanup during the next MRP run.

***Note*** All create performance enhancements do not apply to base or co-/by-product items.

### Log File Enhancements

The log file was enhanced in several areas, as described in the following topics.

- Retrieves item count data

  During a search, the system now retrieves item count data for the log file. Previously, you had no way of knowing how many items the system actually retrieved. The log file now shows the number of items as well as the items retrieved. The system retrieves the following item counts:

  - Item count by resource

    The system now retrieves the total number of items by resource, which contributes to workbench performance.

  - Unique item counts

    The system now retrieves the number of unique items, which drives the workbenches Supply/Demand panel.

- Includes the number of unique CAC components processed

  The log file now includes the number of unique components processed by CAC. Previously, the file depicted how many CAC components were processed, but did not depict the number of unique processed components. The number of processed unique components is a primary driver to server-side CAC performance.

- Includes the number of unique MRP details processed

  The log file now includes the number of unique MRP detail records processed by CAC. This information is useful when you compare customers and environments. You can use the information to determine the average time to process each CAC component. You can put the information in context with the ratio of MRP detail records.

- Excludes some logs

  Area processing logs that took less than five seconds were removed from the log file. These entries were not useful and removing them lets you read the log file more efficiently.

## Product Fixes

- All component availability check statuses no longer display as No Status. Previously, when the system called work order detail manager components after the system accepted changes, all WO component detail records were in a modified state. Corrections were made so that only WO component detail records with a modified state are now candidates for CAC calculation. Other detail component records with unmodified row states have the correct status.
- The system no longer has overflow exceptional issues when processing production lines with large run rates. Previously, very large run rates, especially with large decimal values to the right of the decimal point, combined with issues with cumulative loads or hours the system attempted to carry forward, caused exceptions when processing.
- The system no longer has problems when you run Net Change MRP when you save in a multi-language environment. Previously, when the system executed Net Change MRP when you saved and your language was different from the language in use by the Batch Request Processor (36.14.13), the batch request failed.

- For CAC, the system now recognizes DRP intersite confirmations as scheduled receipts. The system now displays the intersite order status in the description column within the Demand Details Panel. Also, the system now processes and displays the P(lanned) order status as well as the A(llocated) and R(eleased) intersite order supply status in the Demand/Supply Details Panel Planned PQOH column and related Demand/ Supply Summary Panel.
- The MSW no longer displays an error that indicates that it cannot update the data value because the value in the editor is not valid when you leave the quantity blank for an order in the MSW Production Order Maintenance Tab. Previously, depending upon where the cursor was when you entered the blank value, the system could constantly display the error.

# Release Notes for Versions 2010.1 through 2012.1EE December 2012

**Planning and Scheduling Workbenches version:** 3.3.3.20

**QAD Enterprise Edition:** 2010.1, 2011, 2011.1, 2012, and 2012.1

**Release Date:** December 2012

**Prerequisites:** 2010.1EE, 2011EE, 2011.1 EE, 2012, or 2012.1 EE release installed

***Important*** Because the Planning and Scheduling Workbenches are powerful tools that perform intensive processing, depending on the data volumes your planners/schedulers need to process, it may be necessary to allocate an additional processor (core). This can only be determined after you try the application in your environment.

**Supported languages:** US English, Castilian Spanish, Latin Spanish, Dutch, French, German, Italian, Japanese, Polish, Portuguese (Brazilian), Simplified Chinese, Traditional Chinese, Korean, and Czech.

**User Guide:** *Planning and Scheduling Workbenches*, item 70-3173-2012.1EE-Rev 1; see “Finding User Documentation” on page 38.

**Administration Guide:** *Planning and Scheduling Workbenches*, for March 2012 EE, item 70-3174-2012.1EE-Rev 1; see Finding User Documentation.

**Install Guide:** *Planning and Scheduling Workbenches*, item 78-0947-2012.1EE; see Finding User Documentation.

**Conversion Information:** Planning and Scheduling Workbenches conversion information can be found in *Administration Guide: Planning and Scheduling Workbenches.*

# Planning and Scheduling Workbenches

The following topics describe Planning and Scheduling Workbenches:

- Enhancements
- Product Fixes

## Enhancements

Several new enhancements were added to the workbenches for this release, as discussed in the following topics.

***Note*** For Component Availability Check Browse Collection enhancements, see “Browse Collection Fixes” on page 20.

### Intersite Requests

A new Intersite Requests tab within the workbenches displays an intersite request panel with information for distribution requirements planning (DRP) intersite requests. DRP balances supply and demand for items transferred between sites. The transfer of demand from the site receiving the items (receiving or demand site) to the site supplying the items (shipping or supply site) is facilitated through the generation of intersite requests. DRP calculates distribution item requirements, generates intersite requests, and manages shipment schedules and transportation. Use the workbenches tab to review information to schedule items for the intersite requests.

### Holiday Calendar

A new Holiday Calendar tab within the workbenches displays a Holiday Panel with data for holidays and other non-work days that apply to an entire site. This helps you schedule effectively.

Holidays are days that no one works; the plant is shut down and no production is scheduled. Manufacturing orders are never due and operations are not scheduled on a holiday.

### Sales Quantity By Month

Using the fields in the Sales Quantity By Month Tab you can track sales history data by viewing the items, product lines, ship type, site, customer, ship-to, year, and year-to-date quantity. The panel displays quantities in a month-by-month grid so that you can track invoiced sales orders.

### Seasonal Build

A new Seasonal Build Tab lets you review sales quantities for items that fluctuate according to some seasonal factor, such as weather or the way a firm handles its operations. You can review sales quantities for items in the panel.

### Cumulative Capacity Row

A new Cumulative Capacity row in the Capacity Panel identifies the next available-to-promise date for an order and displays a rolling total of accumulated capacity over time. The cumulative capacity uses remaining capacity as the input:

*[N] = each day. [N "Remaining Capacity" + Prior Day Cumulative Capacity = Cumulative Capacity of [N]*

### Quick Find

Within the MSW Schedule Grid, you can quickly find production order records by using a new Quick Find feature in the toolbar.

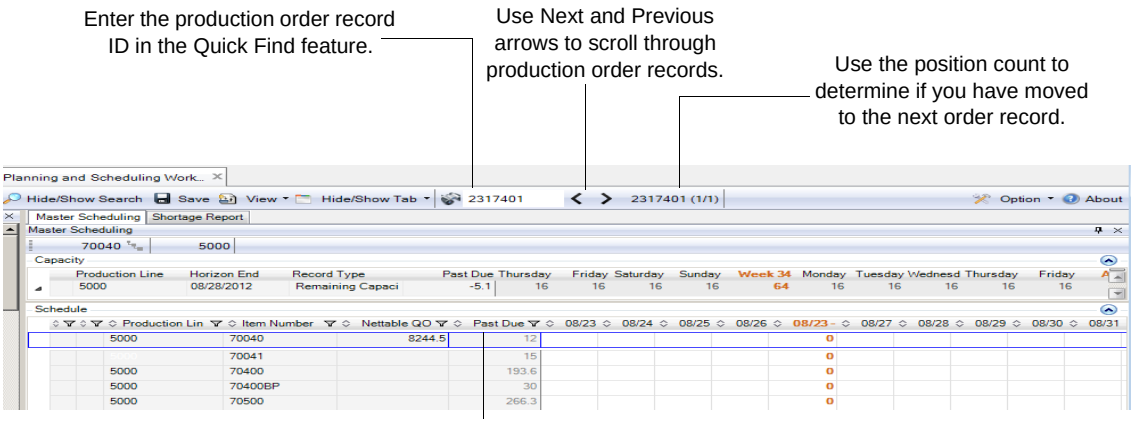
***Note*** You can use this feature in the PSW, too; however, since the PSW displays a limited number of orders, the order may or may not be visible in the PSW. If the order is not visible in the PSW, you can switch to the MSW and find the order using the next/previous buttons.

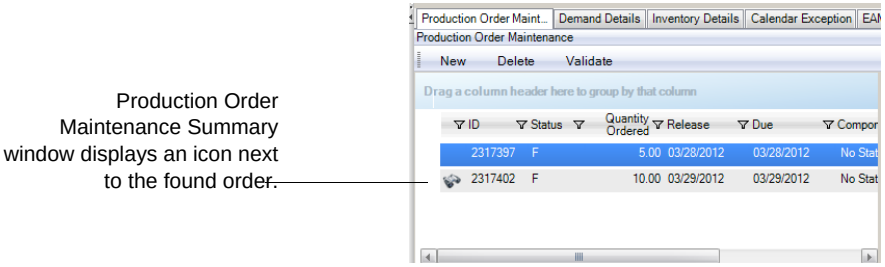
You can enter either numbers or text in the Quick Find feature. You can be at the site level, work center level, and so on. Once results display, click on the Next arrow (>) to go from find to find, one record at a time. For examples of criteria for the Quick Find search see the MSW chapter of *User Guide: Planning and Scheduling Workbenches*, version eB2.1 SP4-2012SE.

In both the Schedule Grid and the Production Order Maintenance Panel, you can easily find items by:

- Order ID
- Sales Order
- Remarks
- User field 1 and 2 within the work order master table

**Fig. 0.1**
Quick-Find Feature

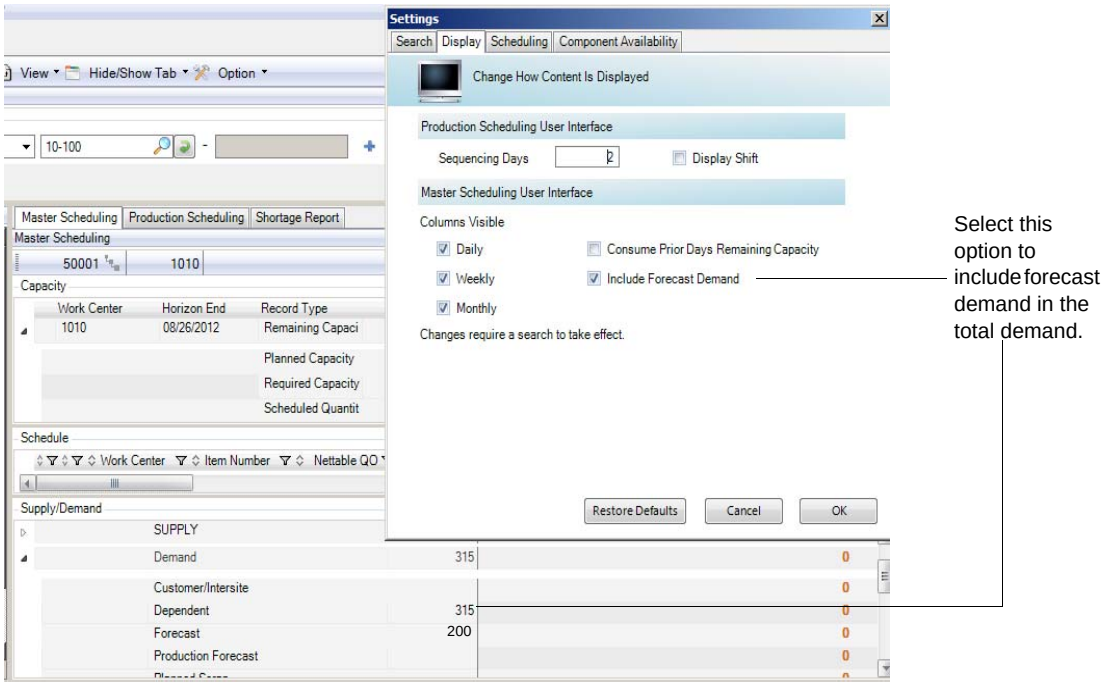



## Dynamic Forecast

The system includes the ability to forecast dynamically in the Supply/Demand Panel when you select a new Include Forecast Demand option within the Display tab of the user preferences. You do not have to refresh your search data when you enable Forecast Demand in user preferences as the system includes the forecast demand within the total demand. When you disable Include Forecast Demand, you can still view the forecast demand.

**Fig. 0.2**
Dynamic Forecast Demand




## PSW Enhancements

The following enhancements were made to the PSW:

- You can now view planned orders on PSW Production Order Browse, saving you hours of scheduling time as you can now mass-firm planned orders or directly take a planned order and schedule it on the PSW Sequence Grid. This avoids firming orders, a single order at a time on the MSW Grid.
- The right-hand grid in the PSW now lists production orders with a P(lanned) status.

## New Workbenches Fields

The workbenches now include the following fields:

- Buyer/Planner data from the item master and detail records that display in the MSW Schedule Grid and PSW Sequence Grid.
- Part Type from the item master record displays on the MSW Schedule Grid and PSW Sequence Grid.
- Work Order Remarks and Order Type from work order master records displays on the PSW Sequence Grid.
- On the PSW Sequence Grid, you can use the Order Type data to keep from changing from repetitive orders to discrete orders when you have both discrete and repetitive on the same production line.

  ***Note*** The fields are available but may not display by default. When they do not display, you can add the fields to the workbenches by right-clicking to display the context menu on the MSW or PSW grids, then selecting Columns to add the field to the display.
- The Component tab of Production Order Maintenance now includes the following fields:
  - Pur/Man code from Item-Site Planning (1.4.17) records
  - Item Type—a finished good, sub-assembly, component, or trade part —from Item Master Maintenance (1.4.1) records

- BOM Qty Per Value from Product Structure Maintenance (13.5) records

### CAC User Preference Computation Method

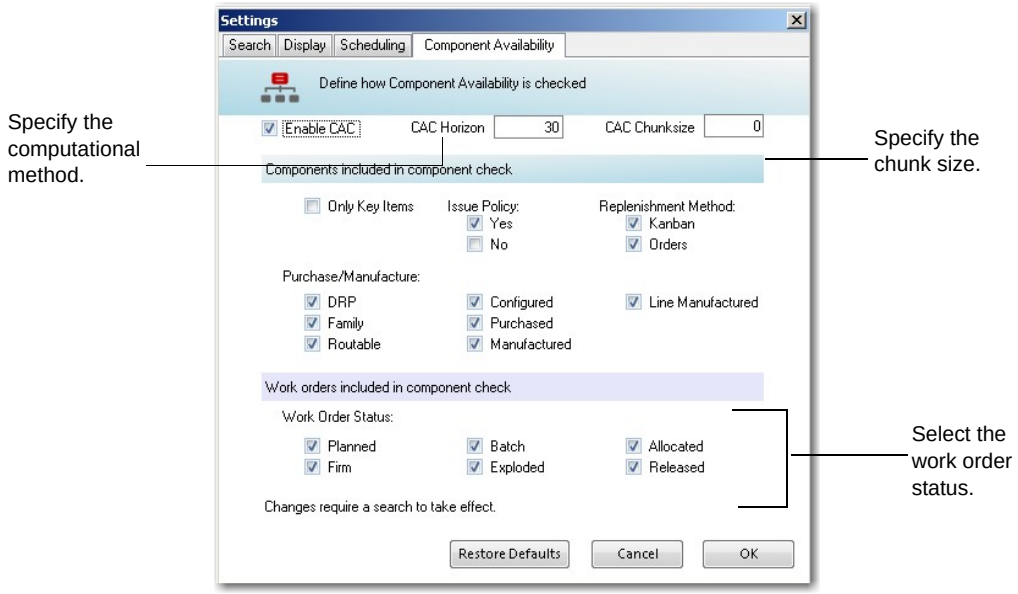
For workbenches-embedded component availability check user preferences, you can now indicate how and when CAC processes and calculates data. You can use the new Computation Method field when you select Preferences |Settings| Component Availability; see Figure 3.

You can set the field to the following:

- None: CAC calculations do not occur during data search retrieval and save. Shortage Report and Production Order Maintenance Component Supply/Demand Summary and Detail windows are blank.
- On Search Save: CAC is enabled and calculations occur during data retrieval and save. Component status information displays in the Production Order Maintenance tab, the order component list panel, the Component Supply/Demand Summary and Details Panels, and the Shortage Report
- Dynamic: CAC processes dynamically and on-demand for only the items you select on the workbenches. CAC does not process during search and save functions as background processing on all orders in the horizon.

  The Dynamic option is useful when you may only schedule a few dozen items and work orders; otherwise, when On Search Save is selected, the system can perform CAC calculations for a number of work order and components which can increase the data retrieval time. When you select a new row/item before CAC processing completes on a prior row/item, the system cancels the prior row/item CAC.

**Fig. 3**
New CAC User Preferences




## Product Fixes

The following topics discuss workbenches fixes, including embedded component availability fixes.

### Performance Improvements

Several performance improvements were made to the workbenches:

- Client-side processing for the Supply/Demand panel no longer shows a performance degradation. Recalculation methods in the Supply/Demand logic were modified, and the resulting code change improves the Supply/Demand performance by 30%.
- The system no longer has performance degradation issues when you run the client-side workbenches due to work order control events.
- For work order creation, the response time when entering values into empty cells in the schedule grid has been significantly improved.
- For work order save, the response time when saving changes has been significantly improved.

### Application Interface Fixes

- The MSW background is no longer black as long as you do not change system settings.
- The workbenches Production Order Maintenance Summary Panel now displays cumulative orders as the first orders to display and sets fields for other Production Order Maintenance panels correctly based on the cumulative order. Previously, when the workbenches initiated, the Production Order Maintenance Summary Panel displayed the top order record and set the order attributes for other Production Order Maintenance panels for the top order, resulting in some fields having errors and displaying a red X for cumulative orders.
- The system now correctly populates Run sequence 1 and 2 values in the PSW when the values for them are from Item/Site Planning Maintenance (1.4.17). Previously, the system displayed values for Run sequence 1 and 2 from Item Master Maintenance (1.4.1).
- MSW planned capacity now correctly includes Shift Maintenance (18.1.22) exceptions for a date range.
- Open scheduled exploded orders now correctly update in the workbenches once you change data in Product Structure Maintenance (13.5). Previously, MRP picked up BOM changes and modified the BOM on the open scheduled exploded orders accordingly.
- The MFG Type field, found in the SE versions of the Workbenches Production Order Maintenance Details frame, was added to the same frame in the EE versions of the Workbenches.

### Workbenches Component Availability Check (CAC) Fixes

- Code was fixed and improved for CAC Authorized Receipts and Authorized Receipts Delayed status calculations when processing unconfirmed shippers. Previously, the system displayed a performance problem when processing unconfirmed PO shippers for the item when calculating the statuses.
- The Quantity Short field was changed to Quantity Short PQOH for the Shortage Report.
- In the CAC user preferences, the Only Key Item field now correctly uses the value in Item-Site Inventory Data Maintenance (1.4.16) when a record exists, and the Issue Policy field now correctly uses the value in Item-Site Planning Maintenance (1.4.17) when records exists.

### Production Order Function Fixes

- The system now correctly filters MRP detail data in the Production Order Maintenance component Supply/Demand Detail panel for the item/site of the component you select to view.
- The system no longer produces data errors when you assign a shift, then reassign a blank shift to a production order in the PSW Sequence Grid. Also, the system no longer displays errors when you enter a zero (0) or the number 5 in the Shift field.
- The Demand Details panel within Production Order Maintenance in the workbenches now correctly displays production forecast MRP detail line data, similar to data that displays in MRP Detail Inquiry (23.16) for associated items within the Schedule Grid.

- The due date filter in the Demand Details frame and the site filter in the Inventory Detail Browse were removed in the workbenches. These filters did not effectively filter data.
- For orders of type S:
  - The system now correctly deletes repetitive orders (type S) when you change the status to Closed in the workbenches. Previously, when you closed a repetitive (S) type production order by setting the order status to Closed, then tried to delete schedule history using Schedule Delete (18.22.2.7), the system did not delete the order.
  - Also, the system no longer displays a misleading error message when you delete a repetitive production order (type S) through the workbenches once you delete the cumulative order that is related to the production order using SE programs. Previously, in this scenario, the system displayed an error message informing you that the work order accounting close must occur first.
  - WIP Material Cost Revaluation (16.22) and Work Order Accounting Close (16.21) now process type S orders correctly. Previously, the two programs included partial, closed, schedule-exploded orders, which impacted GL with very large material variances.
- When a backflush completes using Backflush Transaction (18.22.13) for a site enabled for the workbenches, the system applies the quantity completed to operations/orders that start with the earliest open operations/orders. Previously, the workbenches reapplied the entire cumulative quantity completed for a repetitive schedule across existing operations/orders.

  When you change the sequence of the orders since the last time they reported production, this cumulative reapplication can cause the system to reopen some orders and close others, confusing planners and schedulers. This change lets the system apply quantities to only open operations/orders.
- You can no longer change the order quantity to be less than the quantity completed for the order using Work Order Maintenance (16.1). When you try, the system displays an error message and does not change the order quantity.
- You can no longer access Cumulative Completed Maintenance ((18.22.2.6) for a site that is enabled for the workbenches.
- The workbenches no longer display 0s (zeros) within the PQOH column in the Supply/Demand data in the MSW/PSW Production Order Maintenance frame. Previously, the column displayed all zeros.
- You can now correctly close scheduled exploded orders in the MSW when the orders are for manufactured, production line items. Previously, the system considered the MSW-closed orders for closure by Work Order Accounting Close (16.21) and posted GL costs to the Method Change Variance account for the closed orders.
- Also, the system no longer displays messages indicating accounts are inactive without contextual information when you save production orders.
- You can now delete production orders with a status of either P(lanned) or F(irm). Previously, when you deleted the order and saved your changes, the workbenches informed you that Accounting Close must be run and restored the order.
- When you modify an order's release date in the workbenches, the system now displays the correct order due date calculation. Previously, the date remained as the date you entered on the Schedule Grid.
- In the workbenches-embedded Production Order Maintenance Detail tab, the Production rate is now correct for a newer production line records. Previously, when you created a production order with the release date prior to the production line item record change date, the production rate displayed as the new rate and not the old rate until you saved. Once saved, the system corrected the production rate.

### Save Function Fixes

- The Production Activity panel now correctly displays expected results after you save or merge changes and the Production Cum Activity panel now correctly displays the cumulative order ID you selected.

- The system no longer displays an error message when you delete a production order in the workbenches Production Order Maintenance, then save.
- The system now correctly lets you edit and saves your changes when you activate compliance in the workbenches Compliance Panel Active field. Previously, the system displayed a warning, informing you that you cannot access the field to enable compliance and your changes will be lost.
- The system now correctly displays messages when you save. This means that warnings that indicate that modifying the order quantity on a released order no longer erroneously display, even though the system accepts the change. During a save, the system no longer:
  - Treats messages that the client returns from the server as a commit rejection.
  - Displays warnings during a successful commit and warnings from a rejected commit. (The system now correctly displays an error for a rejected commit.)
  - Displays an exception when you invoke order maint subprograms without supplying contextual information.
- The system no longer displays planned orders as E(xploded) orders during a save process.
- The system now saves correctly when you have values in the Quantity Open field and other fields, such as Release Date, Due Date, and so on.

### Search Function Fixes

- When running a search, the system now correctly applies your saved view that you selected before the search. Previously, when you selected a view before running a search, the system displayed an error message.
- The system no longer has out-of-memory issues during consecutive searches. Previously, for each consecutive search you conducted using the same search criteria, the application memory usage increased until the system reached an out-of-memory limit.

### Non-Workbench Function Fixes

- When you run Production Line Item Create (18.22.1.20) to assign items to a production line per specified work center, the program now correctly populates existing production orders (P, F, B, E, R) with the production line associated to the item. Previously, the system correctly added the item to the production line; however, the production line field value remained blank on existing production orders.
- Production Line Item Create (18.22.1.20) now correctly locates all the items that are produced on a work center and then creates item records for the targeted production line. Previously, the program had problems locating items because of production order records that did not exist for many active items. The program was changed so that it interrogates every system routing, finds work centers and all item associated with work center routings, and adds items to the production line of the program selection.
- The system no longer displays errors in the Item Detail frame of Production Line Maintenance when you create a new record.
- For Work Order Maintenance (16.1):
  - The program no longer changes the order routing record’s quantity ordered to the work order’s net open quantity (quantity ordered – quantity completed) when you modify scheduled orders with production reported.
  - Work Order Maintenance no longer lets you leave the Production Line field blank. Also, you can now use the workbenches-related utilities Production Line/Order Update (18.22.1.19) to update production orders that have a blank production line as the default production line.

    - The workbenches now correctly update the Run Rate, Run Crew Size, Duration Buffer, and the number of line in Work Order Maintenance when you change the production line for a discrete work order with a P or F status or for a repetitive order. Previously, the workbenches showed only the original production line data for these fields.
- The system no longer displays buffer locking issue messages when you use Backflush Transaction (18.22.13) once you complete scheduling within the workbenches and attempt to backflush.
- Synchronize Resource Tables (16.25.14) no longer attempts to create duplicate production scheduler resource master records or set the machine field for the record to the work center. Previously, without a check to verify when the master record exists for domain, site, resource type, resource ID and machine, the utility program attempted to create duplicates under the production line and work center master tables. The utility did not check for previous machine field settings in work order records.
- The system no longer displays a lock error message and no longer generates component BOM requirements for remaining partial quantities when you use Work Order Receipt (16.11) to receive a partial quantity, then close the order. Previously, in this scenario, the system displayed an error message informing you that the work order master had a no-lock status, even though the order closed. It also indicated that requirements existed for remaining partial quantities orders even though you closed the order.
- Prod Line/Item Update Delete (18.22.1.21) now correctly validates whether production order records exist.
- Programs now function consistently and interact with the workbenches correctly across all workbenches-supported service packs. Previously, some programs in some environments did not interact consistently with the PSW so that you could not correctly pull in past due items and dates or item sites to the PSW.

## Browse Collection Fixes

- Performance improvements were made to the browse collections. For example, the browse collections were improved so that full table scans are no longer conducted for some fields and detail and master record examination is more efficient.
- The Manage Materials for Production Line browse collection no longer defaults the site to JSN.
- CAC browse collections now search more efficiently when search conditions are entered for calculated columns.

  ***Note*** This fix is implemented for 2012 EE and later releases.

# Release Notes for Versions 2010.1 through 2012 EE

**Planning and Scheduling Workbenches version:** 3.3.3.1

**QAD Enterprise Edition:** 2010.1, 2011, 2011.1 and 2012

**Release Date:** July 2012

**Prerequisites:** 2010.1EE, 2011EE, 2011.1 EE, or 2012 EE release installed

***Important*** Because the Planning and Scheduling Workbenches are powerful tools that perform intensive processing, depending on the data volumes your planners/schedulers need to process, it may be necessary to allocate an additional processor (core). This can only be determined after you try the application in your environment.

**Supported languages:** US English, Castilian Spanish, Latin Spanish, Dutch, French, German, Italian, Japanese, Polish, Portuguese (Brazilian), Simplified Chinese, Traditional Chinese, Korean, and Czech.

**User Guide:** *Planning and Scheduling Workbenches*, version 3.3.3.1, item 70-3173-3.3.3.1; see “Finding User Documentation” on page 38.

**Administration Guide:** *Planning and Scheduling Workbenches*, for March 2012 EE, item 70-3174-2012EE; see Finding User Documentation.

**Install Guide:** *Planning and Scheduling Workbenches*, version 3.3.3.1, item 78-0947-3.3.3.1; see Finding User Documentation.

**Conversion Information:** Planning and Scheduling Workbenches conversion information can be found in *Administration Guide: Planning and Scheduling Workbenches.*

## Planning and Scheduling Workbenches Enhancements

QAD’s Planning and Scheduling Workbenches—which include both a Master Scheduling Workbench (MSW) and a Production Scheduling Workbench (PSW) with integrated component checking capabilities (CAC)—provide planners and schedulers with unprecedented, simultaneous visibility to schedules and all supporting data and enable control and collaboration across the production and materials planning space.

The workbenches were first available in the QAD September 2010.1 EE release. Several new features and functions were added in subsequent releases.

The July 2012 EE 3.3.3.1 maintenance/enhancement bundle applies to versions EE 2010.1 through EE 2012. It both introduces new functionality and includes fixes and enhancements from the workbenches 2010.1 EE 3.3.1.1 bundle through the March 2012 EE release, making both the new functionality and the previous versions’ fixes and enhancements available to EE 2010.1 through March 2012 EE users.

The following table shows you where to find documentation for the new functionality available in this 3.3.3.1 version as well as enhancements from earlier releases. Fixes can be found in “Fixes” on page 36.

**Table 1**
Workbenches Version 3.3.3.1 Contents

| Workbenches Release (this release) | Date | New for this Release | Incorporated from Earlier Releases | Where Documented |
|---|---|---|---|---|
| 3.3.3.1 | July 2012 | Co-/by- product enhancements | | In these Release Notes; see “Co-/By-Product Support” on page 22. |
| | | | Enhancements and fixes for EE 2012 March release | www.qad.com \| Support \| Document Library \| QAD Enterprise Edition \| QAD 2012 \| Release Notes |
| | | | Enhancements and fixes for EE 2011.1 September release | www.qad.com \| Support \| Document Library \| QAD Enterprise Edition \| QAD 2011.1 \| Release Notes |
| | | | Enhancements and fixes for EE 2011 March release | www.qad.com \| Support \| Document Library \| QAD Enterprise Edition \| QAD 2011 \| Release Notes |
| | | | Enhancements and fixes for EE 2010.1 Workbenches enhancement bundle, version 3.3.1.1 | In these Release Notes; see “Release Notes for Version EE 2010.1” on page 30. |

## Co-/By-Product Support

The workbenches use the same co-/by-product features as those found in QAD EE. That is, you can manage joint sets through the workbenches, in addition to other QAD EA programs, such as Work Order Maintenance, Planned Production Order Approval, and others.

Within the workbenches, you can:

- Display base process items, co-/by-product items, and co-/by-product orders on production lines.

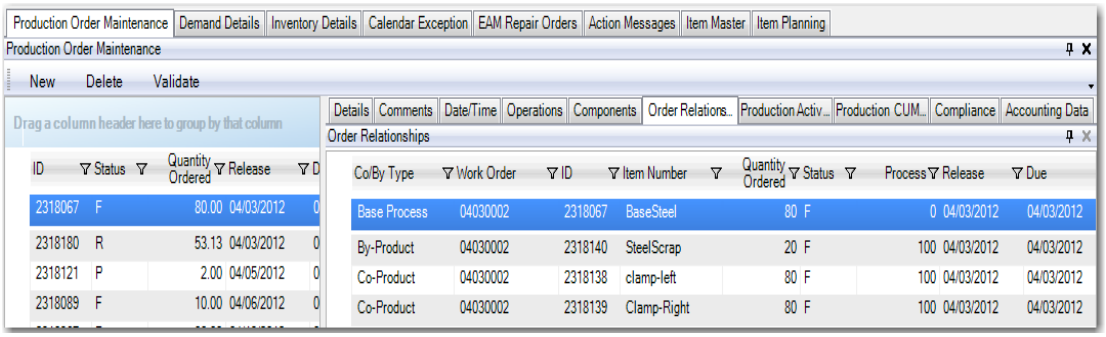
  ***Note*** The PSW only displays and sequences base process orders.
- Display co-/by-product items on work centers (MSW only).
- Display calculated CAC status for base process orders.
- Update due dates and depending on order status, optionally synchronize the updated dates across all orders in the set.
- Update quantities and depending on order status, optionally synchronize the updated quantity across all orders in the set.
- Set an option to automatically synchronize changes in order status and production line across the joint order set.

You can use the new Order Relationships Tab within the Production Order Maintenance frame at the bottom of the workbenches to view order relationships as defined in production order sets. In the MSW Schedule Grid or PSW Sequence Grid, when you select a production line or work center and an item, the system displays all production order records for the selected item.

When you select an item in the Schedule Grid and a production order in the Production Order Summary Panel that is part of a joint product structure, the Order Relationships Tab displays the related joint product set of work orders. This provides you with a view of the entire joint product work order set, regardless of whether you selected a base process, co-product, or by-product item/order in the Schedule Grid or Production Order Summary Panel.

For more information on co-/by-product scheduling within the workbenches, see *User Guide: Planning and Scheduling Workbenches* for version 3.3.3.1. To find the user guide, see “Finding User Documentation” on page 38.

**Fig. 4**
Order Relationship Panel




## CAC Improvements and Enhancements

To reduce CAC calculation time, the following changes were implemented:

- Internal performance improvements
- New CAC Chunksize field in User Preferences
- New work order status selection in User Preferences

### Internal Performance Improvements

Internal performance improvements were made to the CAC calculation function, including reduced message sizes sent to/from the server and internal improvements to the CAC calculation engine.

### New CAC Chunksize Field in User Preferences

You can now specify a CAC chunk size in the Component Availability tab of the User Preferences. In the CAC Chunksize field, you specify a number that represents the number of work order component detail records that are sent in each call to the server; see Figure 3.

Single, large CAC calculation server calls that take more than five minutes can result in timeout problems when running over a wide-area network (WAN) or using the OpenEdge AppServer Internet Adapter. The ability to divide a single large, long-running CAC calculation server call into a number of smaller and shorter server calls shortens the processing time per call and avoids timeout problems.

When you set CAC Chunksize to a non-zero value, this indicates the maximum number of work order component detail records that the system sends in each call to the Appserver.

When you set CAC Chunksize to 0 (zero), chunking is disabled and the system sends all work order component detail records in one call to the Appserver.

### New Work Order Status Selection User Preferences

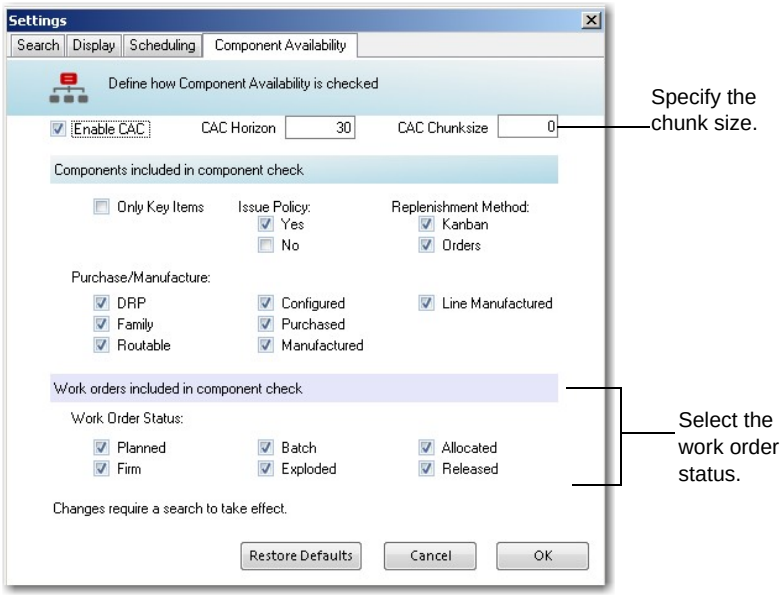
You can now select a particular order status to be included in the CAC calculation in the Component Availability tab of the User Preferences; see Figure 3.

Selecting an order status reduces the number of work orders for which CAC is calculated, thereby reducing the overall calculation time. You can select from the following statuses:

- P(lanned)
- F(irm)
- B(atch)
- E(xploded)
- A(llocated)
- R(eleased)

The system calculates CAC status for the specified order types only. The system does not calculate orders with a status you did not select and sets the status of unselected orders to a CAC status of `No Status`.

**Fig. 5**
New CAC User Preferences




## Fixes

The following fixes are in this 3.3.3.1 release. Most of these fixes were also made to releases earlier than 2012.

Fixes for the 3.3.1.1 release are included in the 3.3.3.1 release. For a list of 3.3.1.1 fixes, see “Fixes” on page 36.

### Performance

Several workbench performance improvements were included in the March 2012 EE release. The workbench 3.3.3.1 bundle makes these performance improvements available for customers using the workbenches on 2010.1 through 2011.1 EE. Refer to release notes for that version for specific descriptions of performance enhancements; see Table 1 on page 22 to find the March 2012 EE Release Notes.

The following lists a performance improvement not previously documented in earlier versions.

- The server side search processing has been improved. Specifically, calculation of the supply/demand data processing has been streamlined.

### Application Interface Fixes

- The Capacity Panel now correctly updates data after you switch from one resource to another when you use the Product Structure Filter capability. Previously, the Capacity Panel did not update correctly when you selected a resource in the Resource Panel and an item in the Schedule Grid, clicked on the Product Structure Filter feature button, then selected another item.
- The Planning and Scheduling Workbenches now work properly with different cultures/locales. Previously, languages other than US/English caused breakage, errors, or other issues.
- Resources now display correctly in .NET UI versions of the browses. Previously, some resources did not display correctly.
- When the Use Plan/Sched Workbenches field is No in Site Maintenance (1.1.13) and you attempt to pull workbenches records for the site, the system now displays a message, informing you that the workbenches are not enabled for that site.
- The workbenches and QAD repetitive functions now explode global phantom component items when creating scheduled work orders. Previously, the workbench and QAD repetitive and advanced repetitive functions only included the component global phantom item when creating scheduled work orders.
- The workbenches no longer freeze when you move a production order from a source to a destination production line. Previously, when the source production line had a single production order record for the item and you moved the production order record to another production line, the Production Order Maintenance frame displayed no records, and the screen froze.
- Quantity on hand (QOH) is now included in the Past Due column in the Supply/Demand Frame for the projected quantity on hand (POH) and available to promise (ATP) row. Also, the Supply/Demand Summary column now highlights correctly.
- Cumulative orders with a blank start/end effective date (release/due date) now process correctly. Also, the system no longer resequences cumulative orders that the system sends to the server to save. Previously, the system resequenced cumulative orders when saved on the server.
- With future planned orders outside the scheduling horizon, the system now prevents the display of Calculate Due or Release Date options in the right-click context menu. Previously, these options displayed even though the order was in the future. Also, the Calculate Date option is disabled now in the context menu when the order has a Planned or Closed status.
- The Past Due column is now formatted similar to the Capacity Panel.
- The workbenches now use data for the correct production line record when you create a new item in the workbenches that is not attached to an existing production line. Previously, when you created a new item that was not attached to a production line, the system incorrectly used another, existing production line.
- Within the Capacity Panel, the system now correctly updates the past due load in the past due column when you close a past due open order.
- The system now correctly displays POH status for work centers with no inventory issues within the scheduling horizon dates within the capacity frame. Previously, POH shortage visual indicators displayed for some work centers even though no shortage existed.
- The system now suppresses PQOH coloring in the Schedule Grid for alternate production lines with no orders.

- Additional logging messages are written to log files to facilitate troubleshooting. When searching, the client build number and chunk numbers are written to the AppShell and AppServer log files.
- The system now processes the holiday calendar and shift calendar exception records the same on both the client side and the server side of the workbenches. Previously, the holiday calendar and shift calendar exception records were processed differently on the client side and server side of the workbenches. The client side workbenches were corrected so that when you add a calendar exception on a holiday, the system ignores the calendar exception. For both the server side and the client side and for both work centers and production lines, holidays override calendar exceptions.
- The right-hand grid in the PSW now lists production orders with a P(lanned) status.
- The system now lets you make layout changes only after a search completes. Previously, the system displayed an error, indicating that it could not process your request, when you selected to change the layout before running a search.
- The system now displays information for an item in the Demand Details frame when you click anywhere in a Schedule Grid row. Previously, it was necessary to click in one of the Due Date columns in the Schedule Grid to display information for the item in the Demand Details frame.
- The system now correctly resets the sort indicator of a previously sorted column when you sort two or more columns consecutively in the Schedule Grid. Previously in this scenario, the system did not reset the sort indicator.

### User Preferences Fixes

- The system now preserves the History/Future Horizon values you set in the User Preferences from the last search. Also, when you introduce new preferences when pre-existing preferences were saved, the system no longer displays an error. The system also now processes changes you make to user preferences immediately.
- When you choose to apply projected order duration through the Order Duration Calc Method field in the Scheduling tab of the User Preferences, the system now correctly prevents the recalculation of the release date when you manually change the release date or change the release date via the drag and drop workbenches feature.

  Applying projected order duration now updates the work order duration field, too. When you change the quantity, required capacity, and projected hours/days duration, the system applies projected duration when you specify that the system use projected duration in the User Preferences option.
- The User Preference default value is now No for Use Shifts and Consume Prior Day Remaining Capacity.
- The horizon value within the CAC user preferences now means that the horizon value of 0 (zero) is today, a value of 1 is tomorrow, and so on. Also, the CAC horizon default was changed to 7 days.
- The system now displays an error message in the User Preference panel when you specify 0 (zero) for the Sequencing Days field.

### Component Availability Browse Collections Fixes

- Manage Materials for Production Line has improved performance when you enter a search condition on Work Order Id. Previously in the above scenario, performance was slow.
- The Monitor Material Shortages collection browse no longer displays messages that indicate the system was not able to process your request.

### Workbenches Component Availability Check (CAC) Fixes

- The CAC-related Progress Bar no longer displays unless CAC is enabled.

- The CAC Shortage Monitor Report no longer displays incorrect values for the Buyer/Planner. Also, other Item Planning fields, such as Issue Policy, Pur/Mfg Code, and Item Replenishment are now correctly updated with values from Item or Item-Site Master data.
- The system no longer considers inventory set to expire in the future as allocated demand. Previously, the system applied the inventory set to expire in the future to the allocated demand, causing CAC to return the wrong PQOH calculation.
- Now, the workbenches consider inventory set to expire in the future as scheduled demand. For example, if today's date is 12/7 and inventory is set to expire on 12/8, the system considers the demand status as scheduled and displays the correct quantity in Prior Gross Requirements in the Demand/Supply Summary panel.
- The system now processes correctly when you delete a production order in Production Order Maintenance within the workbenches before CAC recalculations complete. Previously, in this scenario, the system did not process correctly.
- CAC components no longer fail to process when you delete a production order before the system merges the calculation results.
- The CAC Horizon user preference now represents the number of days from the current date to a future date. Previously, it represented the number of days from the current date to a future date plus one.

### Production Order Function Fixes

- The system no longer displays error messages when you:
  - Create multiple orders with comments.
  - Close an order in the workbenches.
  - Create a new work order, then save it.
  - Repeatedly select a resource or item and enter data for the selected resource or item on the Schedule Grid.
  - Enter a quantity of 0 (zero) in the MSW Schedule Grid.
- The system no longer counts the setup time as part of required capacity when you close an order or reduce the quantity to zero. Previously, when an order had setup time and you either closed the order or set the order quantity to zero, the system viewed the setup time as left over and included it in residual required capacity for the order.
- The system no longer updates the run rate when you change the release date or an order. Previously, when the release date changed, the system overrode the value you entered for the run rate.
- The system now correctly defaults the routing code and BOM code from the item/site record. Previously, the system defaulted these values from the production line record.
- The system now populates the Tool ID field on a QAD EE work order when you create the order in the MSW. Also, when you change the resource for an order in the PSW, the system updates the Tool ID field.
- The Required Capacity column in the Production Order Maintenance Summary frame is now correctly formatted so that it matches the display in the Details tab and PSW displays.
- The system now sequences correctly when you drag and drop two production orders into three production orders.
- The system now correctly filters MRP detail data in the Production Order Maintenance component Supply/Demand Detail panel for the item/site of the component you select to view.
- The system now properly recalculates the Run Time and required capacity when you change the Production Rate.

- The system no longer produces data errors when you assign a shift, then reassign a blank shift to a production order in the PSW Sequence Grid.
- The system correctly handles warning and error messages that the system generates without contextual information. For example, previously, the Invalid Receipt Status message that the system generated from within the Attributes frame caused a system exception to occur. This no longer occurs.
- The system now correctly handles warning and error messages that generate without contextual information. For example, previously, the Invalid Receipt Status message that the system generated from within the Attributes frame caused a system exception to occur. This no longer occurs.
- The system no longer changes the order routing record's quantity ordered to the production order's net open quantity (quantity ordered – quantity completed) when you modify scheduled orders with production reported.
- The system now correctly calculates release and due dates when you set the Duration Calculation Method in user preferences to something other than MF-LT.

### Search Functions

- The workbenches search function now correctly pulls item records where no demand records exist within the history or future.
- The workbenches now properly process when you search and there are production order routing data available with blank order IDs.

### Non-Workbench Function Fixes

- New selection fields to include P(lanned), F(irm) Planned, E(xploded), A(llocated), and/or R(eleased) production orders were added to the reports and inquiries of the Capacity Requirements Planning (24) menu. Since the workbenches generate capacity loads for planned orders, planned order load was being included in the capacity load reports and inquiries. The new fields let you include or exclude load for orders of any status from the capacity load reports and inquiries.
- The Production Line Item Update (18.22.1.21) now correctly generates generalized codes when you set the Pur/Mfg field in the Item Data Master (1.4.1) for line scheduled items. Previously, the system did not generate generalized codes when you set the field.
- Production lines for older, past due orders are now correctly populated after running Production Line/Order Update (18.22.1.19).
- Site Maintenance (1.1.13) and Production Line Maintenance (17.21.1.4) no longer cause lock table overflows. Previously, when processing a large number of work orders, a lock table overflow could result as the system processed work orders within one transaction. Code was changed so that the work order processing is done with one transaction per work order, thus preventing the lock tables from surpassing defined limits.
- The system now defaults the primary production line in Work Order Maintenance (16.1) when you enter the site in the program and when an item has a primary production line defined in Production Line Maintenance (18.22.1.1). Previously, the primary production line did not default in Work Order Maintenance when you entered the site for a new work order.
- Work Order Maintenance (16.1) no longer changes the order routing record's quantity ordered to the work order's net open quantity (quantity ordered – quantity completed) when you modify scheduled orders with production reported.

## Component Availability Browse Collection Enhancements

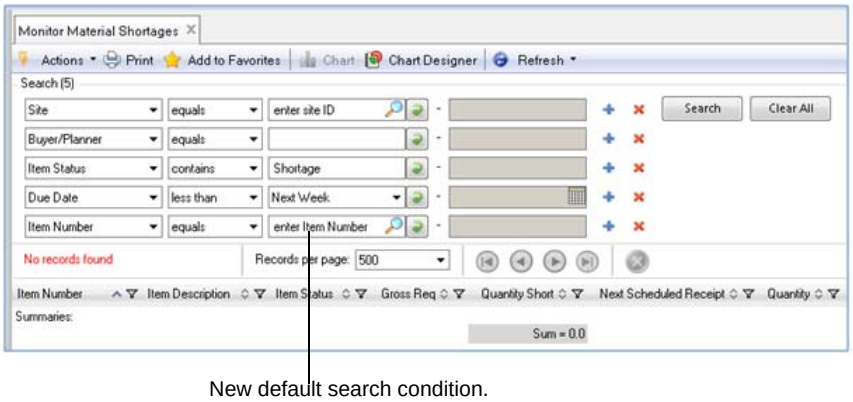
Component availability browse collection enhancements include:

- A new default search condition
- New Workbench Control File field

## New Default Search Condition

Monitor Material Shortages and Purchase Direct Materials now have an additional default search condition. For both browse collections, the system now includes a default search condition for Item Number. The purpose for this is to improve the startup performance of the browse collections.

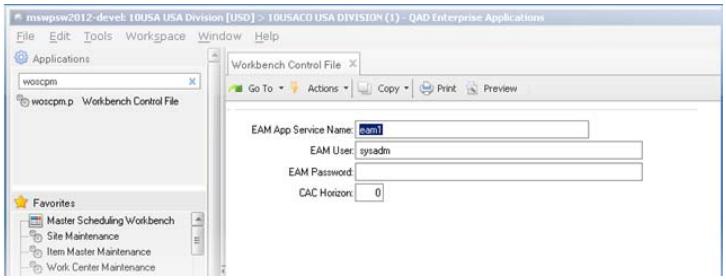
**Fig. 6**
Browse Collection Item Search Change




## New Workbench Control File Field

A new CAC Horizon field was added to the Workbench Control File (22.20.24). This is similar to the MSW/PSW CAC user preference field of the same name, but the Workbench Control File CAC Horizon field applies to the component availability check browse collections only. The new field provides for improved performance when running the component availability check browse collections by limiting the amount of MRP data that the system processes.

**Fig. 7**
Workbench Control File, CAC Horizon Field



# Release Notes for Version EE 2010.1

**Planning and Scheduling Workbenches version:** 3.3.1.1

**QAD Enterprise Edition:** 2010.1

**Release Date:** June 2011

**Prerequisites:**

- 2010.1EE release installed, including the Planning and Scheduling Workbenches that have an active Maintenance license
- NET UI 2.9.2 or .Net 2.9.3 installed
- Progress OpenEdge 10.2B
- Currently active QAD Maintenance license

  You obtain the Maintenance license key through the following Web site:

  http://www.qad.com/erp/Support

  In the Web URL, click the Generate License Key button to generate a license key, then follow the prompts to generate the license key. Once you select the Accept key, the system generates the key, displaying it on the Web URL screen, and e-mails the license key to you.

  Once you obtain the license key, you must register the Maintenance license with the system through License Registration (36.16.10.1).

  If you attempt to run either the MSW or PSW and you do not have an active Maintenance license, the system displays an error message. The system displays a warning if the active Maintenance license is close to the license expiration date.

***Important*** Because the Planning and Scheduling Workbenches are powerful tools that summarize all your demand, supply, and capacity information across your planning/scheduling horizon, you should allocate one processor (core) per production planner/scheduler to prevent performance degradation.

**Supported languages:** US English, Castilian Spanish, Latin Spanish, Dutch, French, German, Italian, Japanese, Polish, Portuguese (Brazilian), Simplified Chinese, Traditional Chinese, and Korean

**User Guide:** *Planning and Scheduling Workbenches*, item 70-3156A; see “Finding User Documentation” on page 38.

**Administration Guide:** *Planning and Scheduling Workbenches*, item 70-3155A; see Finding User Documentation.

**Install Guide:** *Planning and Scheduling Workbenches*, version 3.3.1.1, item 78-0947A; see Finding User Documentation.

**Conversion Information:** Planning and Scheduling Workbenches conversion information can be found in *Administration Guide: Planning and Scheduling Workbenches.*

## Planning and Scheduling Workbenches Enhancements

***Note*** For introduction information on the Planning and Scheduling Workbenches, please refer to the 2010.1 EE release notes. See Finding User Documentation for a link to the 2010.1 EE release notes.

QAD’s Planning and Scheduling Workbenches—which include both a Master Scheduling Workbench (MSW) and a Production Scheduling Workbench (PSW) with integrated component checking capabilities (CAC)—provide planners and schedulers with unprecedented, simultaneous visibility to schedules and all supporting data and enable control and collaboration across the production and materials planning space.

The following Planning and Scheduling Workbenches enhancements are introduced with this 2010.1 EE 3.3.1.1 release.

## PSW Forward Consumption

Forward consumption is needed in the PSW when production orders typically run longer than a day. For example, available capacity for today's release date is eight hours. The same amount of capacity of eight hours is available for tomorrow's release date. You place Production Order A under today's release date and the order requires 12 hours to run. The PSW release date for today shows 0 (zero) remaining capacity and four hours of remaining capacity for tomorrow's release date.

With the new forward capacity logic, you can see the following within the PSW Sequence Grid:

- Forward consumed capacity - informs you that a production order released in the past can be completed with future capacity
- Prior consumed capacity - informs you that prior released orders are consuming this future release date capacity
- Forward remaining capacity - informs you that a production order released in the past can be completed with future capacity

Forward capacity occurs when there is a past due load from orders that were not completed prior to today. New carryover logic pulls the load requirements forward; the PSW Sequence Grid shows you the hours carried over in a new Carry Over column. The system displays the results in a new Cum Remaining column of the PSW Sequence Grid to help you consider this data when building a schedule.

The following graphic depicts the required hours for a production line, including the carry-over hours for each date. You can also see the cumulative remaining hours for each date.

**Fig. 8**
PSW Forward Capacity-Related Columns


## Production Order Required Capacity Recalculated

When you change the Production Rate (run rate), the Run Crew, or the Setup Time fields in the Production Order Maintenance Details tab in the workbenches, the system now recalculates the production order required capacity.

Also, when you now modify the Production Rate field value, the system recalculates the production order run time and the required capacity. The calculation for required capacity is:

*Run Time + Setup Time*

When you modify the Run Crew Size field, the system recalculates the Run Crew Productivity field value, Run Time field value, and the required capacity of the production order.

The new calculation logic is as follows:

- The system verifies whether the Enable Run Size field in Production Line Maintenance (18.1.1) is set to activate the run crew size relationship to the run rate. If No, the run crew productivity remains a constant 100%.
- If Yes, the system calculates the run crew productivity by calculating the difference between the production line standard run crew size and the modified order run crew size:

  Order run crew size minus the production line/item run crew size

### Order Release Date Now Based on Actual, Not Planned Values

The workbenches calculate the order release and due date based on actual, not planned, input values for each production order.

***Important*** The calculations described in this section are only applicable within the workbenches and do not apply to planning/scheduling QAD EE functions outside of the workbenches.

If order release and due date are in the past, the system sets the order release date to today and calculates the due date. If the calculated release date pushes the release date into the past, the system sets the release date to today.

For order release date and due date calculations in the workbenches, the system calculates as follows:

- From the order due date, working backward, the system determines the required release date by taking the projected duration and factoring non-working days to determine non-working and working days.
- From the order release date, working forward, the system determines the required due date by taking the projected duration and factoring non-working days to determine non-working and working days.
- For days prior to history horizon, the system considers all days working days.

### New Order Due Date Calculations

If the order due date is in the past, calculating the order due date starts with capacity of today, going forward. If the system calculated the order due date to a date beyond the future horizon, it sets the order due date equal to last day of the future horizon.

### Workbenches Planned Capacity

The workbenches now determine the planned capacity of a production line by considering the capacity defined for shifts in Shift Maintenance (18.22.1.22). The capacity defined in Shift Maintenance is always defined as the hours of operation for the production line with 24 hours maximum, regardless of the number of resources the production line represents.

***Example*** You define the production line capacity in terms of the operating hours within a day, maximum 24 hours. You also define the number of production lines that the system uses to compute the total planned capacity of the production line. The system:

- Calculates the planned capacity on the MSW to take the capacity defined in Shift Calendar Maintenance times the number of production lines, defined on the production line header record.
- Calculates the planned capacity on the PSW to take the capacity defined in the Shift Calendar Maintenance for each shift times the number of production lines defined on the production line header record.
- Adjusts the current computation that calculates the weighted and shift level productivity to consider the number of lines on the production line header record.

For the workbenches, the planned capacity formula is:

*Working hours * Number of Lines*

Where:

Number of Lines is the number of production lines the system uses to process the production order. The system also uses Number of Lines to calculate the production order duration by dividing the production run time/resources.

### Weekly and Monthly Buckets

You can now expand and collapse the Capacity Panel and the MSW Schedule Grid to show capacity and schedule quantities in weekly and monthly buckets. The weekly and monthly buckets are display only, however; no editing can be done.

### New Order Duration Calc Method Field in Preferences

You can set a new Order Duration Calc Method field in the Scheduling tab of the Preferences window. The new field lets you set the method to calculate the order duration when the order is firmed, created, and modified (future).

*Order Duration Calc Method.* Enter the calculation method for duration. The default is MF-LT. You can change the duration calculation method during the scheduling process; the change is effective immediately.

MF-LT: Calculates with manufacturing lead time.

Order Method: Calculates with production line rate (setup and run rate) and line data.

### Applying Order Duration

In the workbenches, you now have two ways to apply the projected duration to the production order:

- Automatically
- Per user action in the workbenches grid

The system applies order duration automatically when:

- You modify any field on the work order (quantity, run rate, BOM/routing ID, the status field, and so on).
- A production order status is changed from P(lanned) to any other status.

The system uses the method you specify to use for calculations through the Scheduling tab of the Preferences window; see “New Order Duration Calc Method Field in Preferences” on page 33.

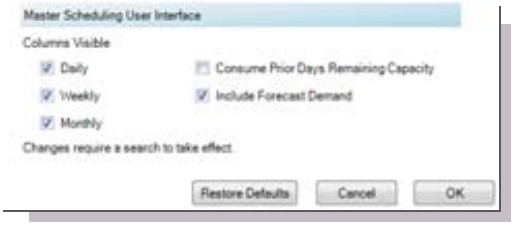
When you select an order in the Scheduling Grid, then right-click on the mouse, the system displays the following options:

- Calculate release date
- Calculate due date

### New Columns Visible Area added to Display Preferences

Within the Preferences window in the Options tab, a new Columns Visible area was added to the Display tab.

**Fig. 9**
Columns Visible Area of Display Preferences




You specify Daily, Weekly, and/or Monthly as the increment by which scheduling totals are displayed in the MSW Schedule Grid. When you enter a value in the Schedule Grid, the totals display by the increment you enter in the Display Preferences.

## New Fields Added to Production Order Maintenance Details Tab

New fields were added to the Details tab of Production Order Maintenance within the workbenches:

- Quantity Open
- Run Time (Hrs)
- Run Crew Size
- Number of Lines
- Duration Buffer (Hrs)
- Duration Hours
- Run Crew Productivity
- Projected Duration (Days)

The following topics describe the fields.

*Quantity Open.* This field is display only and shows the scheduled order quantity that the system uses to calculate the duration of a production order. The system uses this quantity to calculate run time.

*Run Time (Hrs).* This field informs you of the amount of run time that is required to produce the production order. When you update the production rate, the system recalculates the run time. It calculates the new required capacity (run time + set up time).

The calculation for run time is:

*(Open quantity / Run Rate) * PLP% * RCP%*

Where:

*RCP% = 1 - ((WO run crew size - PL run crew size) / PL run crew size)*

***Note*** The system only calculates this if you set Enable Run Size to Yes in Production Line Maintenance; otherwise, it is always 100%.

*PLP% = Shift productivity % if the order is assigned to a shift, otherwise it is the weighted average %.*

*Run Crew Size.* Enter a number that reflects the size of the run crew. The number affects the order run time. When you update the run crew size, the system recalculates run crew productivity, run time, and required capacity of the production order.

*Number Of Lines.* Enter the number of resources the system uses to process the production order. The default is 1 (one). The system uses it to calculate the production order duration by dividing the production run time/resources. Changes to this field recalculate duration hours and duration days.

*Duration Buffer (Hrs).* Enter the number of hours for the duration buffer. This field also exists in Production Line Maintenance (18.1.1). Changes to this field recalculate duration hours and duration days.

*Duration Hours.* This field is display only and shows the number of hours for the duration. The workbenches calculate duration hours as:

*(Required Capacity / Number Of Lines) + Duration Buffer*

QAD EE, however, calculates duration as:

*Defaults = MFL-LT for planned orders*

The system calculates this planned capacity per delta of order release/due dates for non-planned orders when the orders are pulled into the workbench.

*Run Crew Productivity.* This field is display only and depicts the percentage of productivity for the run crew.

*Projected Duration (Days).* This field is calculated by the system and informs you of the projected number of days it takes to complete a specific work order. The value in this field can be informational only, or the system can apply it to the production order. When you apply the projected duration, the system determines a new order release/due date.

- Number of Lines
- Duration Buffer (Hrs)
- Run Crew

The projected duration in days helps you monitor production activity against the scheduled due date. As the production order is processed and you report against the order (daily), the quantity open reduces; therefore, the required capacity reduces. The Projected Duration reflects the current required capacity for the order, providing a number of projected remaining days the order requires to complete. You can then compare this value to the scheduled due date to validate that the order is on schedule.

***Note*** You set the Order Duration Calc Method in the Scheduling tab of the Preferences window of the workbenches.

### New Fields in Production Line Maintenance

The following new fields were added to Production Line Maintenance (18.1.1.) in QAD EE:

***Note*** Some fields were previously described in “New Fields Added to Production Order Maintenance Details Tab” on page 34.

- Number of Lines
- Run Size Enabled

  Enter Yes to enable a link between the run crew size and the run rate. When Yes, any modification to the run crew size on the production order causes the system to calculate the run crew productivity value. The default is Yes.
- Duration Buffer Hrs. D,H, M,S
- Setup

  Enter the number of days required to set up the production line for this item. The default is 0 (zero.)
- BOM Code

  Enter a valid bill of materials (BOM) code for this item.

### Editable Run Rate

You can now edit the Run Rate field in the Details tab of Production Order Maintenance within the workbenches. Previously, the field was display only.

### Projected On Hand Visual Indicator

The red projected on hand visual indicator in the workbenches depicted when projected on-hand is negative within firm schedule period. In this release, a clarification was added to documentation to note that alternate production lines without orders are not colored for POH. For example, when you have the same item on two production lines, and you schedule quantities on the first production line but not the second line, the system does not display colored schedule grid cells for the second production line.

### Addition of PSW Column Selections

You can now add additional columns to the PSW Sequence Grid as well as add or modify column header labels using QAD EE standard label maintenance programs; that is, Label Detail Maintenance (36.4.17.5), Label Master Maintenance (36.4.17.1), and Label Control (36.4.17.24).

## New Delayed CAC Statuses

New delayed CAC status codes were added to this release. The CAC statuses were added to both the workbenches CAC functions and the EE role-based CAC browse collections.

The system retrieves production order component detail records when CAC is enabled through user preferences in the Planning and Scheduling Workbenches Preferences window. The system calculates CAC statuses when it returns data from your initial search for records and displays the production order component status of each production order retrieved. Results are shown in the Component Status column within the Sequence Grid. New statuses that display include:

- Authorized receipts delayed

  The production order item is covered by authorized receipts but the authorized receipts have a due date in the past.
- Scheduled receipts delayed

  The production order item is covered by scheduled receipts but the scheduled receipts have a due date in the past.

### Pull-Down Windows Added to Fields

The following fields within Production Order Maintenance Details tab in the workbenches now have pull-down windows that let you select the field entry:

- Scheduled Line
- Order Type

## Fixes

The Planning and Scheduling Workbenches maintenance release for 2010.1 EE fixes the following defects:

| Internal Defect-Tracking Number | Description |
|---|---|
| QPS-1313 | The Planning and Scheduling Workbenches now work properly with different cultures/locales. Previously, a PC Locale of German resulted in a breakage due to a change in the format of a string date. |
| QPS-1555 | Text within the MSW order comments now wraps correctly to the next line when you display comments. |
| QPS-1556 | The MSW now correctly displays Item-Site Planning (1.4.17), not Item Data Master (1.4.1), information on the shortage report when item-site data exist. Since each site may have completely different item-site planning data set up for an item, item-site data now correctly takes precedence over item master data. |
| QPS-1557 | The Scrap Transaction (18.22.18) now correctly applies the scrap quantity to scheduled production orders. |
| QPS-1558 | The system now correctly saves the value of the Lot Number field in the Compliance Tab of the Planning and Scheduling Workbenches for production orders. |
| QPS-1559 | The component availability check (CAC) process now correctly merges updated data when you sequence production orders that display in the PSW for a production line, then save your changes. Previously, the CAC merge process started, then did not complete, causing an error message to display. |
| QPS-1560 | The system no longer displays incorrect errors and warnings in the Planning and Scheduling Workbenches when you:<br>• Disable Compliance in Compliance Control (1.22.24).<br>• Create a new production order in the Production Order Maintenance panel.<br>• Enable the Active field in the Production Order Maintenance Compliance tab.<br>• Save the newly created production order.<br>Previously, with this scenario, the system displayed an incorrect message regarding the active state of compliance. Then, after you saved the production order, the workbenches regarded the order as new, even though it actually saved the order. |
| QPS-1575 | The workbenches no longer display a message, informing you that it was unable to cast from DBNull to string after you created a succession of new production orders for various items and/or production lines. |
| QPS-1579 | New selection fields to include P(lanned), F(irm) Planned, E(xploded), A(llocated), and/or R(eleased) production orders were added to the reports and inquiries of the Capacity Requirements Planning (24) menu. Since the workbenches generate capacity loads for planned orders, planned order load was being included in the capacity load reports and inquiries. The new fields let you include or exclude load for orders of any status from the capacity load reports and inquiries. |
| QPS-1580 | Material availability check functions within the CAC portions of the workbenches now display the component status for global phantom items with an E(xploded) status. Previously, QAD EE repetitive functions displayed the status of global phantom components with a repetitive E(xploded) status, but the workbench CAC functions did not. The workbenches are now synchronized with this functionality. |
| QPS-1583 | CAC performance was improved through a change wherein the CAC horizon now correctly defines the production order records that the CAC engine processes. For example, when you set the CAC horizon to seven days, the CAC engine processes only production orders with release dates less than or equal to today + seven. Now that the system correctly applies the CAC horizon preference setting, the number of work orders processed by CAC is reduced, thereby, increasing CAC processing time. Previously, the CAC horizon was ignored by the backend processing of production order records so that the CAC horizon preference setting was not being fully applied to reduce the number of work orders processed by CAC. Also, the default CAC horizon was changed from 30 to seven days. |

| Internal Defect-Tracking Number | Description |
|---|---|
| QPS-1586 | Problems caused by relational data integrity were corrected so that the workbenches no longer display a message, informing you of unsaved changes, when you enter a number in a Schedule Grid cell, then click Tab to get out of the cell, save, then re-search for records. Previously, the number you entered in the cell, using the above scenario, vanished, even though the system created an entry in the Production Order Maintenance panel. And, once you saved, then re-searched for records, the system displayed a message, informing you of unsaved changes. |
| QPS-1588 | Data retrieval work order master and detail performance was improved through internal code changes. |
| QPS-1590 | The QAD EE Advanced Repetitive Picklist Calculation (18.22.3.1) no longer calculates an incorrect quantity if you split an order in the workbenches. |
| QPS-1591 | When you enter data and select Next in the Production Line Maintenance (18.22.1.1) Item frame, the system no longer exits without saving. Previously, when you maintained or added a production line in the program, the system exited, saved the header data, did not save item data, and did not display an error or message. |
| QPS-1598 | SSM and PRM production orders with a non-blank FSM Type other than RMA no longer cause the MSW search to return an error, stating that the system was unable to process the request. |
| QPS-1602 | In the PSW Sequence Grid, the system no longer returns a data error when you unassign a previously assigned shift to a production order. |
| QPS-1603 | The workbenches no longer lock when you move a production order from the source to a destination production line; for example, when you move a production order from production line A to production line B. This typically occurred when only one production order record existed for the item. |

## Finding User Documentation

You can find documentation for this release of the Planning and Scheduling Workbenches by searching for the product by name under the Enterprise Edition (EE) menu of Documentation on:

http://www.qad.com/erp/Support

You can register for a QAD Web account by accessing the Web site and clicking the Accounts link at the top of the screen. Your customer ID number is required. Access to certain areas is dependent on the type of agreement you have with QAD. The support site includes documents that support this 3.3.3.1 maintenance release of the workbenches.

The following documents are on the support site listed above. You select:

Documentation

QAD Enterprise Edition

Then, use the following table to find the correct category.

**Table 2**
Supporting Documents

| Title | Information | URL |
|---|---|---|
| *Release Notes (this document): Planning and Scheduling Workbenches, for 2010.1 through 2013.1 EE, dated October 2013* | Enhancements and release information | qad.com \| Support \| Document Library \| QAD Enterprise Edition \| 2013.1 \| Release Notes |
| *Administration Guide: Planning and Scheduling Workbenches* | Technical product information | qad.com \| Support \| Document Library \| QAD Enterprise Edition \| QAD 2013.1 \|User Guides |

| Title | Information | URL |
|---|---|---|
| *User Guide: Planning and Scheduling Workbenches* | Instructions on navigating and using the workbenches | qad.com \| Support \| Document Library \| QAD Enterprise Edition \| QAD 2013.1 \| User Guides |
| *Training Guide: Planning and Scheduling Workbenches* | Training documentation | qad.com \| Support \| Document Library \| QAD Enterprise Edition \| QAD 2013.1 Training Guides |
| *Installation Guide: Planning and Scheduling Workbenches for EE 2010.1 through 2013 for version 3.3.5* | Installation instructions | qad.com \| Support \| Document Library \| QAD Enterprise Edition \| 2013.1\| Installation-Conversion Guides |