QAD Planning and Scheduling Workbenches Release Notes

Revised November 2014

These release notes include information about fixes and enhancements, related to the eB2.1 SP4-2014 SE release of the Planning and Scheduling Workbenches and role-based component availability check browse collections. This release adds new enhancements and corrects issues.

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 50.

Use the following list to find a specific release:

Release Notes for Versions eB2.1 through 2014 SE Nov 2014

Planning and Scheduling Workbenches Version: 3.2.5

Note This release covers all subsequent builds under 3.2.5; for example, version 3.2.5.*x*, where *x* is a subsequent build number for 3.2.5. This release also includes Component Availability Check (CAC) fixes. For information on the browse collections, see “Role-Based Browse Collections” on page 48.

Release Date: November 2014

Prerequisites:

- QAD eB2.1 SP4 through QAD 2014 SE
- NET UI 2.9.1, 2.9.4, and 2.9.6 and associated server-side code

  Note If you run a .NET UI version lower than 2.9.4, you should install the Cancel All Requests fix. See the *Planning and Scheduling Workbenches Installation Guide* for version SE 2013 for more information.
- Oracle databases, version 10g
- Progress OE10

  Important To run the workbenches, ensure that you run a Progress OE10 version that is compatible with your SE version and .NET UI 2.9.1, 2.9.4, or 2.9.6 release combination. Currently, OE11 is not supported. If you require the Planning and Scheduling Workbenches to run on OE11, contact your QAD Support representative.
- Currently active QAD Maintenance license

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

  https://support.qad.com/license_keys/activemaintenance/

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

User Guide: *Planning and Scheduling Workbenches*, 70-3127-3.2.5 for eB2.1 SP4-2014SE; see “Finding User Documentation” on page 50.

Administration Guide: *Planning and Scheduling Workbenches*, 70-3174-3.2.5 for eB2.1 SP4-2014SE; see Finding User Documentation.

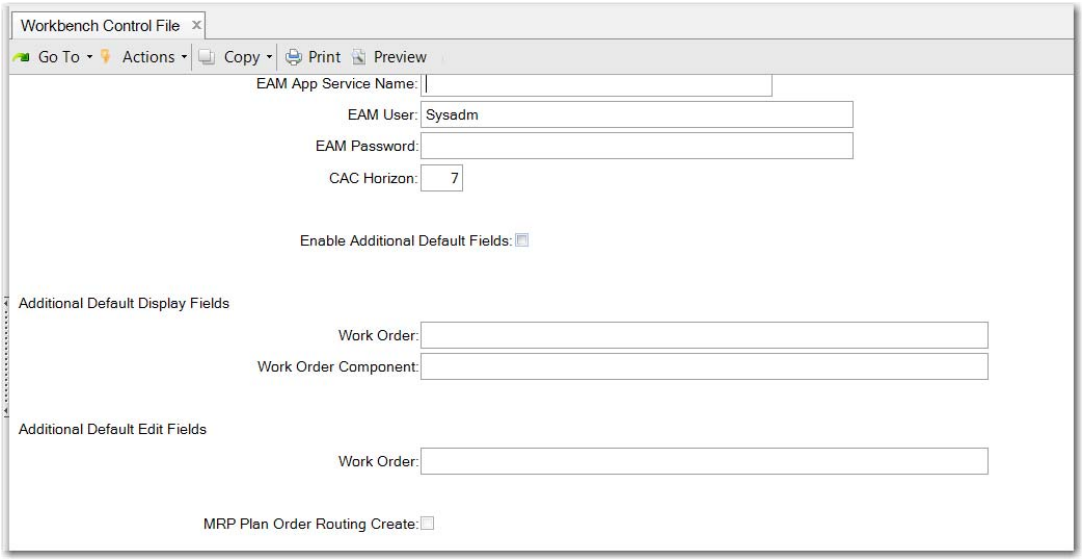
Install Guide: *Planning and Scheduling Workbenches*, 78-0953-3.2.5 for eB2.1 SP4-2014SE; see Finding User Documentation.

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

New Workbench Control Field

A new MRP Plan Order Routing Create field was added to the Workbench Control File (22.20.24). When set to Yes the system creates MRP routing detail records for P(lanned) orders that are created.

Fig. 1
Workbench Control Field



Planning and Scheduling Workbenches Fixes

Performance and Memory Fixes

- MSW now shows improved performance when calculating Component Availability statuses. Previously, the performance was poor, which was a result of excessive abs_mstr reads.
- MRP (23.1, 23.2, and 23.3) performance fixes include the following:
  - For sites that are enabled for the MSW/PSW, the MRP functions now have the ability to optionally create routing detail records for P(lanned) orders that are created. This option is controlled by the MRP Plan Order Routing Create field in the Workbench Control File (22.20.24); see “New Workbench Control Field” on page 3. Previously, for sites enabled for the MSW/PSW, routing detail records were always created for P(lanned) orders and this resulted in increased MRP run times and database disk space usage.
  - For sites that are enabled for the MSW/PSW, the MRP functions and the Schedule Explosion function (18.22.2.4) now show improved performance when refreshing the routing and component detail for scheduled work orders. Previously, the schedule refresh would completely delete and re-create the routing and component detail and this resulted in increased MRP run times.
- Memory fixes were made in this release. The MSW/PSW now uses much less memory when processing. Previously, searches that retrieved large amounts of data could result in out-of-memory issues.

MSW

- The system now displays the detail record (lbld_det) label for the WO Rate field in the MSW/PSW. Previously, the label was missing.

- MSW and PSW now correctly use the same order number for orders that you split using the split function in the workbenches. Previously, the system did not use the same number for orders that were split.
- MSW now correctly aligns the columns in the Capacity Grid when you include the Number of Lines column; it also now displays the Number of Lines column before the Record Type and after the Horizon End columns. Previously, the alignment was distorted.
- MSW now correctly displays the schedule projected quantity on hand (PQOH) in the Supply/Demand Details tab when you define the production forecast for an ATO type configured item in Forecast Maintenance (22.1). Also, it correctly displays the prior gross requirements and POH for scheduled and planned demands. Previously, in this scenario, the system displayed incorrect scheduled PQOH, prior gross requirements, and POH.
- MSW no longer displays an error and now correctly saves changes when you perform any of the following:
  - Enter quantities for a co-product in the Scheduling Grid.
  - De-select the Adjust Co/By Order Quantities field for co-products and adjust dates in the Order Relationships tab.
  - Modify the quantity and release date for co-products, then save.
  - Change the status for co-products from E or F to R, then save.
  - Change the status to R for the first co-product, or to A for a second co-product, then save.
  - Change the status to E or modify the quantity and release date for a base process.
- MSW now correctly calculates and displays values for the release date and due date when you change the status of an order from P(lanned) to B(atch). Previously, the system incorrectly calculated the release and due dates in this scenario.
- MSW now correctly calculates and displays values in the Scheduled Duration Days and Due Date fields when you modify the setup time for planned orders. Previously, in this scenario, the system incorrectly calculated the Scheduled Duration Days and Due Date values
- MSW no longer displays a 4GL condition and correctly shows levels in the Schedule Grid when you select the Product Structure Filter for an item that has a component at a higher level in the product structure and has a past end effective date. Previously, in this scenario, the system displayed an error and the levels were not shown.
- MSW and PSW no longer display an error indicating values do not exist in generalized codes, correctly update, and let you modify and save changes in the workbenches-embedded Production Order Maintenance when you:
  - Delete the Comment page from the order in Work Order Maintenance (16.1)
  - Do not define a generalized code for a blank Type in 3 Generalized Codes Maintenance (6.2.13)

  Previously, in this scenario, the system displayed the error message and did not update.
- MSW no longer creates production orders when you change the status of a co-product from F(irm) to R(eleased) after you enter a quantity in the Schedule Grid for the co-product. Previously, the system incorrectly created orders. Also, the MSW no longer displays error messages when:
  - Production order components have been issued for the order when you save.
  - You change the status back to F(irm) then save.
  - You release the base process order and save; then, change the status from R(eleased) to F(irm) and save.

- The MSW now correctly displays the production line data in the Details tab of Production Order Maintenance when you change the production line in Work Order Maintenance for a discrete work order with B(atch) status. Previously, in this scenario, the system did not update the production line data.

PSW

- The system no longer displays an error informing you that values must exist in generalized codes and correctly saves when you enter a Sequence number in the PSW, add a new page in the Comments tab, then save when there is no generalized code defined for a blank type in Generalized Codes Maintenance Previously, in this scenario, the system displayed the error and did not save changes.
- The PSW now correctly sequences the orders in the order in which you selected them when you select, then drag and drop orders in the Sequence Grid. Previously, on a single day, when you selected multiple orders, then dragged and dropped them up in the Sequence Grid, the system dropped the orders in the opposite order in which you selected them.

Workbenches User Preferences and Setup Fixes

- The system now correctly recalculates the date when you change the number of lines or duration buffer value for the production order and set the Duration field for the calculation method to Projected Duration in the Workbenches' User Preferences Scheduling tab.
- The workbenches now correctly:
  - Update and display Scheduled Duration Days for planned work orders when you set the:
    - Mfg LT field in Item Master Maintenance (1.4.1)
    - Date to Release Date for any of the Date Calculated Rules By Order Status fields in the Workbenches' User Preferences Scheduling tab

    Previously, in this scenario, the system incorrectly calculated the scheduled duration days.
  - Calculate and display Scheduled Duration Days and the Due Date when you change the status of an order to a status other than P(lanned) or select Calculate Due Date from the context menu for complete/partial past orders. Previously, in this scenario, the system incorrectly calculated the scheduled duration days and due date.
- Workbench Setup Utilities (22.20.2) has improved performance and no longer locks the following records in non-current domains:
  - Work order master
  - Line master
  - Work center master
  - Item master
  - Item planning detail records

Workbenches Supporting Tabs

- In Production Order Maintenance, the system no longer incorrectly increments the due date and scheduled duration when you:
  - Set workbench user preferences Duration to Scheduled Duration.
  - Set workbench user preferences Release Date to Anchored.
  - Change the order status.
  - Update the production rate field.

Previously, in this scenario, the system incorrectly calculated the due date and the scheduled duration.

- The Production Order Maintenance Detail tab form no longer lets you update the following read-only fields:
  - Quantity Open
  - Run Crew Productivity
  - Line Productivity
  - Run Time (Hrs)
  - Required Capacity (Hrs)
  - Duration Hours
  - Projected Duration Days

  Previously, you could update the fields.
- The Item Planning tab now shows the correct MRP Required field value after you generate MRP using Regenerate Materials Plan (23.2). Previously, the system incorrectly displayed the MRP Required field value.
- The Accounting tab now displays the sub-account for the Floor Stock field. Previously, the sub-account was blank.
- In Production Order Maintenance, the Required Capacity column was restored to the workbenches-embedded Production Order Maintenance frame as a selectable column.
- In the Production Scheduling tab, the system now correctly sets the Release Date field to today when you select the Release/Print context menu for the order with a status other status than the R(elease) status and the Release Date is not set to today. Previously, in this scenario, the release date was not changed.
- The release and due date are now correctly equal to and remain in the past and are no longer rescheduled to today's date when you create an order in Production Order Maintenance that is completely or partially in the past and have the following user preferences set:
  - Anchor Release Date and Anchor Due Date are enabled.
  - Date Calculation method for both set to Scheduled Duration.

Non-Workbench Functions

- MSW and the following programs now correctly display and update the production line, production rate, routing, BOM/formula, tool code, run crew size, number of lines, duration buffer, and setup time when a work order is created for a routable component item:
  - Work Order Maintenance (16.1)
  - Work Order Release/Print (16.6)
  - Multiple WO Release/Print (16.7)
- WO Release (16.6) now populates the production line for routable sub-assembly work order.
- The following programs now correctly default the routing/BOM code from the production line in Production Line Maintenance (18.22.1.1) when there is no open scheduled order and you define the routing and BOM code in Production Line Maintenance:
  - Backflush Transaction (18.22.13)
  - Run Labor Transaction (18.22.14)
  - Setup Labor Transaction (18.22.15)
  - Reject Transaction (18.22.16)

- Rework Transaction (18.22.17)
- Scrap Transaction (18.22.18)
- Move Transaction (18.22.19)
- Down Time Transaction (18.22.20)

Previously, in this scenario, the system incorrectly defaulted routing and BOM from either Item-Site Planning Maintenance (1.4.17) or Item Master Maintenance (1.4.1).

Also, BOM and routing codes default from production line records only when the associated site is enabled for the Planning/Scheduling workbenches.

- Cumulative Order Maintenance (18.22.6) now correctly defaults the routing and BOM code from the production line when you define the routing and BOM code in Production Line Maintenance (18.22.1.1) and set Use Plan/Sched Workbenches to Yes in Site Maintenance (1.1.13). Previously, in the this scenario, the system incorrectly defaulted the Routing and BOM from either from Item-Site Planning Maintenance (1.4.17) or Item Master Maintenance (1.4.1).
- Backflush Transaction (18.22.13) now correctly calculates the Qty On Order value, when the system processes a scheduled order and you set Use Plan/Sched Workbenches to Yes in Site Maintenance (1.1.13) Previously, in this scenario, the system incorrectly calculated the Qty on Order value.
- You can now change the production line on a rework or expense work order in Work Order Maintenance (16.1) for sites that are enabled for the MSW/PSW. Previously, the system only let you change work orders whose items were defined with a Purchase/Manufacture code of L.
- Work Order Maintenance and MSW now correctly calculate the quantity required in inventory master for the components when you change the quantity ordered for a saved scheduled order with an E(xploded) status. Previously, in this scenario, the system did not reduce the work order quantity issued for the component.
- Work Order Maintenance now lets you create type R(ework) and E(xpense) with the following conditions met:
  - The site that the work order references has its Use Plan/Sched Workbenches field set to Yes in Site Maintenance (1.1.13).
  - The item that the work order references has its Purchase/Manufacture Code field set to L Item Planning Maintenance (1.4.7) or Item Master Maintenance (1.4.1).

  Previously, in the above scenario, you could not create an R and E type work order.
- Work Order Maintenance now correctly displays the existing Master Reference comment when you make changes to the work order and save using the MSW. Previously, the existing Master Reference comment was overwritten with the Item number.
- Schedule Maintenance (18.22.2.1):
  - Now shows improved performance when you press Go after you enter scheduled quantities. Previously, in this scenario, the performance was poor.
  - No longer displays a Progress error informing you that a WO master already exists when you add or modify a scheduled quantity and set Audit Trail to Yes in Domain/Account Control (36.1). Previously, in the above scenario, the Progress error was displayed.
  - No longer displays record-locking errors when two different users process two different items and production lines.
- Net Change Materials Plan (23.1), Regenerate Materials Plan (23.2), and Selective Materials Plan (23.3) now:
  - Correctly display the gross requirements of the components when you set Use Plan/Sched Workbenches to Yes in Site Maintenance (1.1.13) and close a partially completed scheduled order. Previously, in this scenario, the system incorrectly calculated the gross requirement.

    - Correctly update inventory master quantity required when you run the program after you change the work order status to E in the MSW. Previously, the system incorrectly updated the quantity required.
    - Create work orders for co-products with the correct value in the Quantity Ordered field. The MSW now displays P(lanned) work orders when you provide a forecast for one of the co-products in Forecast Maintenance (22.1) and run MRP. Previously, the system incorrectly stored the value as a question mark (?) and did not display the order in the workbenches.
- Regenerate Materials Plan no longer displays an error informing you of server use and prompting you to press CTRL-C to stop when you delete orders in the MSW and attempt to save. Previously, in this scenario, the system displayed the error and neither the materials plan or workbench sessions would complete.
- Auto Firm Planned Orders (22.20.2) no longer displays the `woscpreupdatex.p Shared Variable hdswoscwxad has not been created (392)` error message when you set Enable Additional Default Fields to Yes in Workbench Control File (22.20.24).
- The system now correctly updates the inventory master quantity required (in_qty_req) table for product structure components when exploded orders have components issued to them and you run MRP. Previously, in this scenario, the system did not update the in_qty_req table after you combined or exploded planned orders from the Planning and Scheduling Workbenches, then ran MRP. Corrections impact the following programs:
    - Selective Materials Plan (23.3)
    - Regenerate Materials Plan (23.2)
    - Net Change Materials Plan (23.1)
    - Flow Schedule Copy (17.21.5)
    - Flow Schedule Receipts (17.21.7)
    - Schedule Explosion (18.2.4)
    - Backflush Transaction (18.22.13)
    - Scrap Transaction (18.22.18)
- Production Line Maintenance (18.22.1.1) and (18.1.1) no longer display an error informing you that the run rate must be greater than 0 (zero) when:
    - The units/hour is 0 (zero).
    - You disable the Planning and Scheduling Workbenches in Site Maintenance (1.1.13).
    - You set Allow Zero Run Rate to Yes in Repetitive Control (18.22.24).

  Previously, in this scenario, the error displayed.

  The error also no longer displays only when Units/Hour is 0 at both the header and line level, and you set Allow Zero Run Rate to Yes in Repetitive Control. In this scenario, the error was displayed even when the Units/Hour was not entered as 0 at the line level.

EAM Fixes

- The EAM-MSW/PSW integration now works for all versions of EAM. Previously, the integration would fail due to EAM repair order schema changes.

Component Availability Fixes

- CAC memory fixes were made to cut the schema size.

Release Notes for Versions eB2.1 through 2013 SE Aug 2013

Planning and Scheduling Workbenches Version: 3.2.4

Note This release includes Component Availability Check (CAC) fixes. For information on the browse collections, see “Component Availability Browse Collection” on page 21.

Release Date: August 2013

Prerequisites:

- QAD eB2.1 SP4 through QAD 2013 SE
- NET UI 2.9.1, 2.9.4, and 2.9.6 and associated server-side code

  Note If you run a .NET UI version lower than 2.9.4, you should install the Cancel All Requests fix. See the *Planning and Scheduling Workbenches Installation Guide* for version SE 2013 for more information.
- Progress databases
- Oracle databases, version 10g
- Progress OE10

  Note To run the workbenches, ensure that you run a Progress OE10 version that is compatible with your SE version and .NET UI 2.9.1, 2.9.4, or 2.9.6 release combination.
- Currently active QAD Maintenance license

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

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  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.

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

User Guide: *Planning and Scheduling Workbenches*, 70-3127-x.x.x, for eB2.1 SP4-2013SE; see “Finding User Documentation” on page 50.

Administration Guide: *Planning and Scheduling Workbenches*, 70-3174-x.x.x, for eB2.1 SP4-2013SE; see Finding User Documentation.

Install Guide: *Planning and Scheduling Workbenches*, 78-0953-x.x.x, for eB2.1 SP4-2013SE; see Finding User Documentation.

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

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.

New Capacity Columns

Two new columns were added to the production order temp-table (tt-wo_mstr) that the system creates and populates when you search:

- Capacity Quantity Completed

  The quantity completed to use for capacity purposes. The system sets it to the following formula for the production order as the default:

  Quantity completed + quantity rejected

  You can override this quantity by implementing code in the Capacity Quantity Completed user exit program. For more information, refer to *Administration Guide: Planning and Scheduling Workbenches* for workbenches version x.x.x.

- Capacity Open Quantity

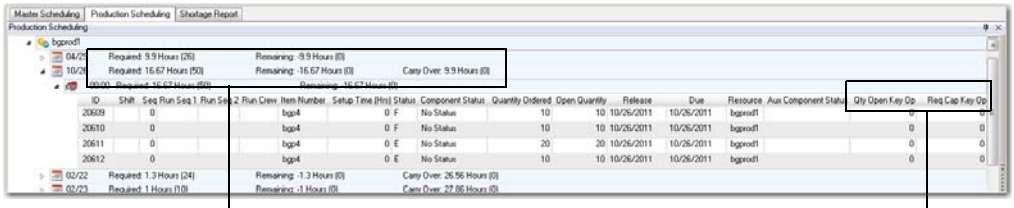
  The quantity open to use for capacity purposes. The system sets it to the following formula for the production order:

  Quantity ordered - capacity quantity completed

The two new columns are used in the workbenches as follows:

- PSW Panels:
  - Required capacity is now based on capacity open quantity.
  - In the left-hand structured grid, the release date and shift band totals—Required, Remaining, Cum Remaining, Carry-over, and so on— are now based on capacity open quantity.

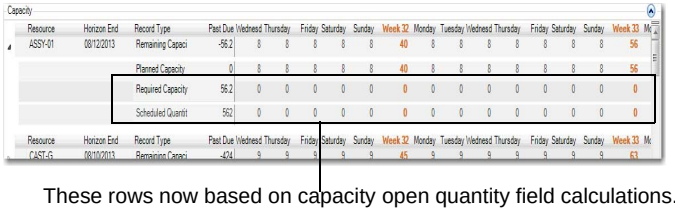
Fig. 2
PSW Panel Capacity Open Quantity Changes



- MSW Capacity Panel:

  The Required Capacity and Scheduled Quantity rows are now based on capacity open quantity.

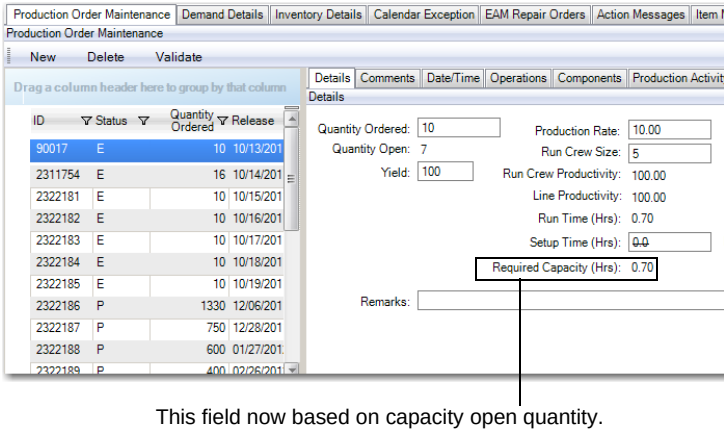
Fig. 3
MSW Capacity Panel Changes



- Workbenches-embedded Production Order Maintenance:

  In the Details Panel, the Required Capacity (Hrs) field is now based on capacity open quantity.

Fig. 4
Production Order Maintenance Changes



Capacity Quantity Completed User Exit Program

This user exit provides the ability to set the production order's capacity quantity completed to any value; for example, the quantity completed at a particular operation, instead of the production order's quantity completed plus quantity rejected.

Routable Items

The system now supports routable items for discrete items in SE 2013.

Fixes

The following topics discuss fixes for this release.

Application Interface Fixes

- 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.

- For co-/by-products, when you enter a quantity for an order in a joint order set, the system now delivers expected results. Previously, the system had unexpected results in these scenarios when you entered:
  - A quantity of 0 (zero) for base process item.

    The system did not update the orders of the joint order set. The system did not set the quantities of the joint orders to zero, and it deleted the order when you saved.
  - A quantity of 0 (zero) for a by-product order.

    The system did not change the joint product orders.
  - A quantity of 0 (zero) for a co-product order.

    The system corrupted the order, and you could no longer adjust the order without causing errors or causing the system to use the wrong calculations.

    Also, when you modified a co-product order quantity, the system did not respond to changes and corrupted the record.
- The MSW now correctly sorts the order by release/due date in the browse panel in the Production Scheduling tab when you:
  - Click the Undo button on the order after dragging and dropping to a different date.
  - Sort the PSW order browse by release/due date.

  Previously, in the above scenario, the order was not sorted.
- The MSW no longer displays a message informing you that the system was unable to process your request and correctly displays data in the workbench when you change the Qty Ordered field to 0 (zero) for a production order with a closed status, then save the workbench. Previously, in the above scenario, the system displayed an error.
- The MSW now correctly displays data in the workbench when you set your Windows Regional Settings to a language other than English; for example, Korean.
- The MSW now correctly retains the entered sequence when you change the sequence from 0 (zero) and the same sequence already exists. Previously, the system incorrectly assigned the entered sequence to another number.
- The MSW/PSW now correctly shows the long label for all the columns in the Production Order Maintenance tab when the following are defined:
  - A term for the column in Label Detail Maintenance (36.4.17.5)
  - A column label in the database schema

  Previously, in the above scenario, the Long Label was not displayed.
- 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.
- 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 MSW Schedule Grid and the workbenches-embedded Production Order Maintenance no longer have a performance issue. Previously, data entry in the MSW Schedule Grid and in Production Order Maintenance was delayed 5-10 seconds for each newly created entry.

Release Notes for Versions eB2.1 through 2012 SE May 2013

Planning and Scheduling Workbenches Version: 3.2.3.2

Note This release includes Component Availability Check (CAC) fixes. For information on the browse collections, see “Component Availability Browse Collection” on page 21.

Release Date: May 2013

Prerequisites:

- QAD eB2.1 SP4 through QAD 2012 SE
- NET UI 2.9.1 through 2.9.4 and associated server-side code

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- Progress databases
- Oracle databases, version 10g
- Progress OE10

  Note To run the workbenches, ensure that you run a Progress OE10 version that is compatible with your SE version and .NET UI 2.9.1 or 2.9.4 release combination.
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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.

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 70-3174-3.2.3.2.

- 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 remaining 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:

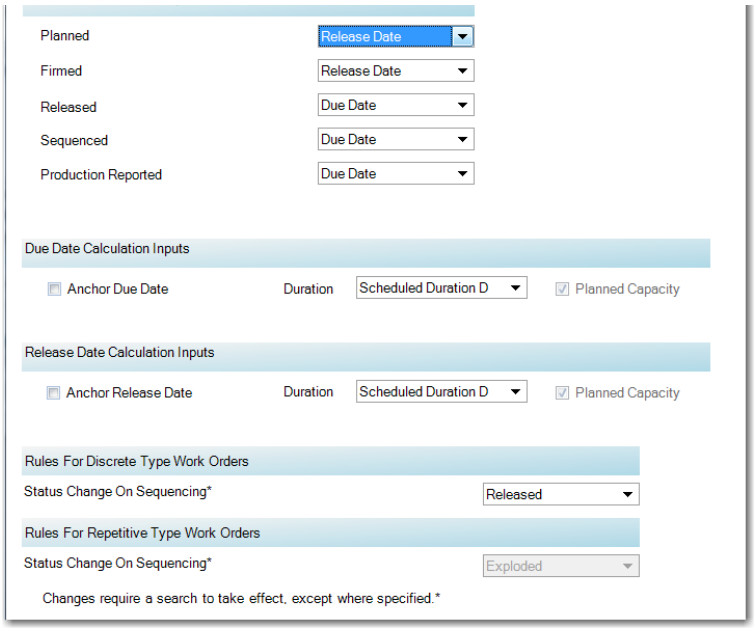
Anchor Release Date. When Yes, the release date stays fixed during date calculations, unless you select the release date to be calculated.

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 remaining planned capacity to determine whether a production order can be scheduled for that date.

Fig. 5
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 Scheduled 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.

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 production 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 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.

- Entries removed

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

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.

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 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 70-3127-3.2.3.2.

  Important After 3.2.3.2 is installed, 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* 78-0953-3.2.3.2.

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 if 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.

Product Fixes

The following topics discuss workbenches fixes.

Application Interface Fixes

- The system now displays warnings and other messages in the workbenches when you deny access to users to certain maintenance programs that interact with the workbenches. Previously, the system did not display warnings or error messages, and changes to the orders or calendar exceptions were saved. Now, when you deny access to the following programs through QAD SE security programs, the system displays messages informing users that they do not have access to the following programs and that the system does not save their changes:
  - Work Order Maintenance (16.1)
  - Master Schedule Order Maint (22.13)
  - Shift Maintenance (18.1.22)
  - Shift Maintenance (18.22.1.22)

- For planned orders, the system now correctly displays the quantity in the BOM Qty field in the workbenches-embedded Production Order Maintenance Components tab. Previously, the system displayed all 0s (zeros) in the field for planned orders and did not display the quantity for orders with a Planned status.
- The workbenches-embedded Holiday Calendar browse no longer displays past holidays. Previously, the Holiday Calendar Browse displayed all holiday records, including those created many years in the past, making the browse difficult to use.
- The system no longer displays incorrect data when you change the Comment Reference field in the MSW embedded Production Order Maintenance. Previously, the system was overwriting the data in the production order comment table, causing incorrect defaulted data to display.
- The system now correctly displays component detail records when values in different cases do not match. Previously, for example, when production order master records had an uppercase-specified production order domain, but associated detail records had a lowercase-specified production order domain, the system did not display component detail records.
- The MSW frame that informs you of merging data no longer displays over other application windows. Previously, when you merged, the system displayed an alert, informing you that it was merging data; however, the alert overlaid other application windows that were running on your desktop.
- You can now cancel the error message that displays when you enter a large value that exceeds 9999999 in the Qty Ordered field in the MSW. Previously, even though the field let you enter a very large, invalid number, the system displayed an error message that you could not cancel, and you had to end the .NET UI session to continue.
- 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 that the system attempted to carry forward caused exceptions when processing.
- 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.

User Preferences Fixes

- The default for the Component Availability Check user preference Computation Method field was changed from Dynamic to On Search and Save.

Workbenches Component Availability Check (CAC) Fixes

- The Quantity Short field was changed to Quantity Short PQOH for the Shortage Report.

Production Order Function Fixes

- The system no longer corrupts production order bill records when you change an S type order quantity. Previously, in this scenario, the system corrupted the production order bill records.
- Corrections were made to operation schedule logic for production orders so that selective MRP no longer leaves the production order start and due dates blank. Previously, MRP left the dates blank.
- You can now correctly save changes to a discrete production order when you report production. Previously, for discrete orders, you were unable to save changes to an order when you reported production.
- You can now correctly modify a production order when the scheduled quantity on the order is less than the completed quantity. Previously, in this scenario, you were unable to modify the order.

- The production rate is now correct for 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.

Save Function Fixes

- When you save views in the workbenches, the system now retains the panel formatting. Previously, the view load and save functionality only functioned with grid layouts and did not appear to function with UI element layouts such as the panel layouts for tabs.

Search Function Fixes

- When you save views in the workbenches, the system now retains all grid and panel layouts. Previously, the view load and save functionality only functioned with certain grid and panel layouts.
- 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

- Auto Firm Planned Orders (22.20.2) now correctly displays product line look-up data from the line master for the Line field. Previously, the system incorrectly displayed look-up data from the product line master for the field.
- You can now correctly report production for items in Backflush Transaction (18.22.13) when a closed repetitive scheduled order exists; however, you should delete the closed repetitive scheduled order, change the status to E, change the quantity to 0, or change the quantity to Quantity Completed before attempting the report. Previously, the system displayed an error that informed you of existing unexploded schedules when you attempted to report production and had unclosed repetitive scheduled orders that you deleted.
- Prod Line/Item Update Delete (18.22.1.21) now correctly validates when production order records exist before you delete items from the production line. Previously, the program did not validate existing production order records before deleting the item from the production line.

  Note Even though you can manually delete the item when there is more than one record for the item with a different start date in other SE programs, you cannot do this in Prod Line/Item Update Delete. So when there are repetitive schedules with multiple items defined with different start dates, you cannot delete using Prod Line/Item Update Delete.
- Production Line Item Create (18.22.1.20) now correctly populates existing production orders with a status of P(lanned), F(irm), B(atch), E(xploded), or R(eleased) when you associate the production line with the item. Previously, the items were correctly added to production; however, the Production Line field remained blank on existing production orders.
- Work Order Maintenance (16.1) now correctly validates the `Quantity ordered cannot be less than quantity completed` message when you enter a negative order quantity. Previously, the program incorrectly validated and displayed the message when you entered a negative order quantity.
- Work Order Receipt Backflush (16.12) now correctly picks up orders from the workbenches that were indicated for printing using the Release/Print function in the workbenches.

Component Availability Browse Collection

For the Component Availability Browse Collections, the following topics discuss fixes.

Browse Collection 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 for the statuses.
- 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(leased) intersite order supply status in the Demand/Supply Details Panel Planned PQOH column and related Demand/ Supply Summary Panel.

Release Notes for Versions eB2.1 through 2012 SE October 2012

Planning and Scheduling Workbenches Version: 3.2.2.1

Note This release includes the Component Availability Check (CAC) role-based browse collections. For information on the browse collections, see “Role-Based Browse Collections” on page 48.

Release Date: October 2012

Prerequisites:

- QAD eB2.1 SP4 through QAD 2012 SE
- NET UI 2.9.4 and associated server-side code

  Note If you run a .NET UI version lower than 2.9.2, you should install the Cancel All Requests fix. See the *Planning and Scheduling Workbenches Installation Guide* for version SE 2012 for more information.
- Progress databases
- Oracle databases, version 10g
- Progress OE10

  Note To run the workbenches, ensure that you run a Progress OE10 version that is compatible with your SE version and .NET UI 2.9.1 or 2.9.4 release combination.
- Currently active QAD Maintenance license

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

  https://support.qad.com/license_keys/activemaintenance/

  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.

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

User Guide: *Planning and Scheduling Workbenches* for version eB2.1 SP4-2012SE; see “Finding User Documentation” on page 50.

Administration Guide: *Planning and Scheduling Workbenches* for version eB2.1 SP4-2012SE; see Finding User Documentation.

Install Guide: *Planning and Scheduling Workbenches* for version eB2.1 SP4-2012SE; see Finding User Documentation.

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

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 “Component Availability Browse Collection” on page 36.

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.

Quick Find

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

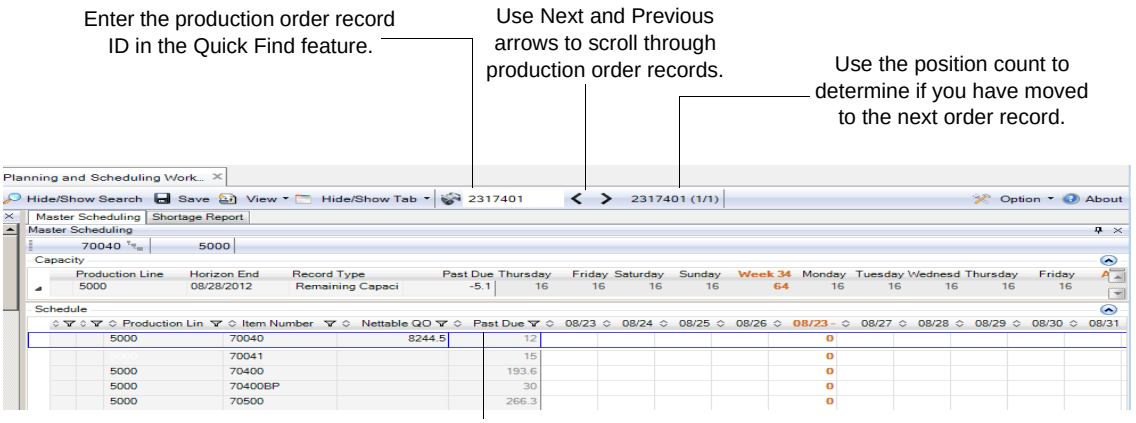
Note You can use this feature in the PSW, too; however, since the PSW displays a limited number of orders, the order may or may not be visible in the PSW. If the order is not visible in the PSW, you can switch to the MSW and find the order using the next/previous buttons.

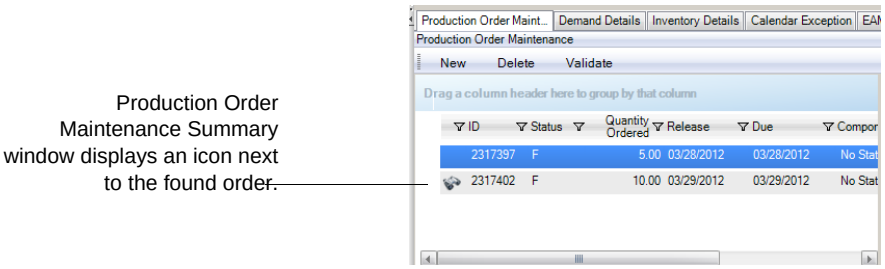
You can enter either numbers or text in the Quick Find feature. You can be at the site level, work center level, and so on. Once results display, click on the Next arrow (>) to go from find to find, one record at a time. For examples of criteria for the Quick Find search see the MSW chapter of *User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

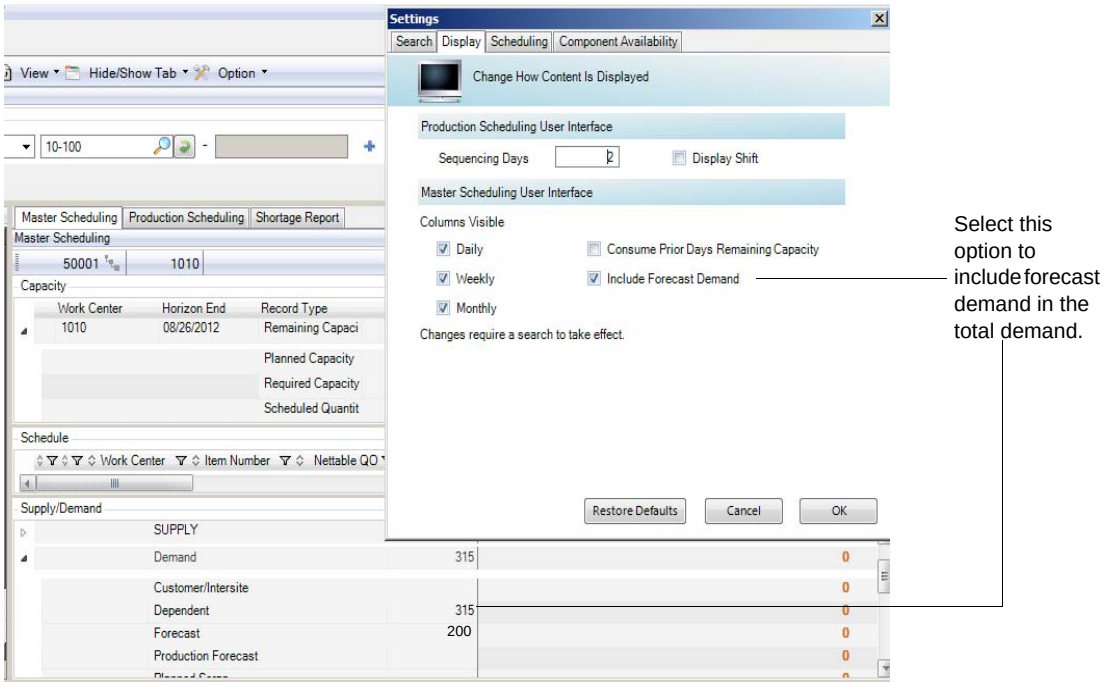




Dynamic Forecast

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.
- 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

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.

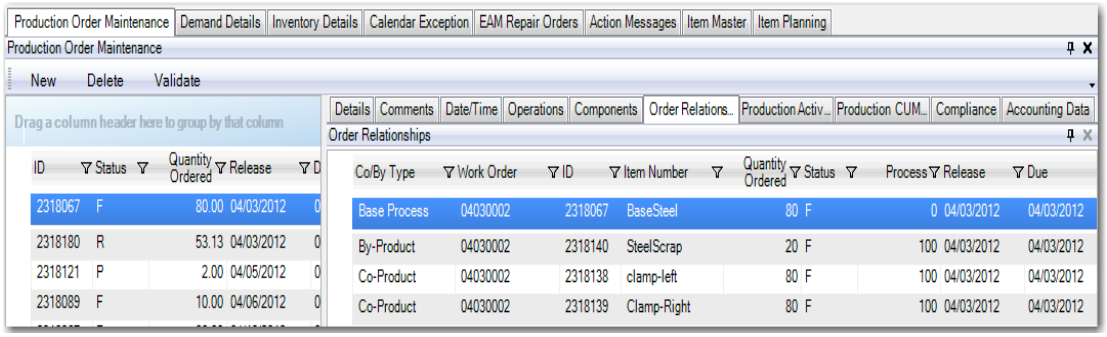
  Note The PSW only displays and sequences base process orders.
- Display co-/by-product items on work centers (MSW only).
- Display calculated CAC status for base process orders.
- Update due dates and depending on order status, optionally synchronize the updated dates across all orders in the set.
- 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 eB2.1 SP4-SE 2012. To find the user guide, see “Finding User Documentation” on page 50.

Fig. 6
Order Relationship Panel



EAM Support

The Planning and Scheduling Workbenches are integrated with QAD Enterprise Asset Management (EAM).

EAM provides supply chain management solutions for project accounting, plant maintenance, repair, and operation, including inventory and purchasing. EAM is integrated with the Manufacturing and Financial modules in QAD ERP, too. Using EAM, you can create entries that describe individual pieces of equipment with assigned attributes, then create repair orders that reference the equipment entries. These work orders also contain information about how long the equipment is down. It is this aspect of EAM that constitutes the bulk of the interaction with the Planning and Scheduling Workbenches.

Within the Planning and Scheduling Workbenches, you can see information about planned/preventive maintenance work that is scheduled in EAM. Since EAM manages your organization's physical assets by maximizing manufacturing equipment use and minimizing repair costs, you can see EAM orders within a new EAM Repair Orders tab that displays at the bottom of the workbenches. You also can see that an order is an EAM order as well as the status of the order by an icon that displays in the Schedule Grid.

Reverting Production Order Changes

This release provides the ability to undo all changes made to a production order. This feature is useful when you accidentally make a change to a production order or when you decide that the resulting effect on the schedule is not as expected or wanted. You can undo all changes to a production order as long as you have not saved your data.

CAC 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 7.

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 CAC 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 7.

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`.

CAC User Preference Computation Method

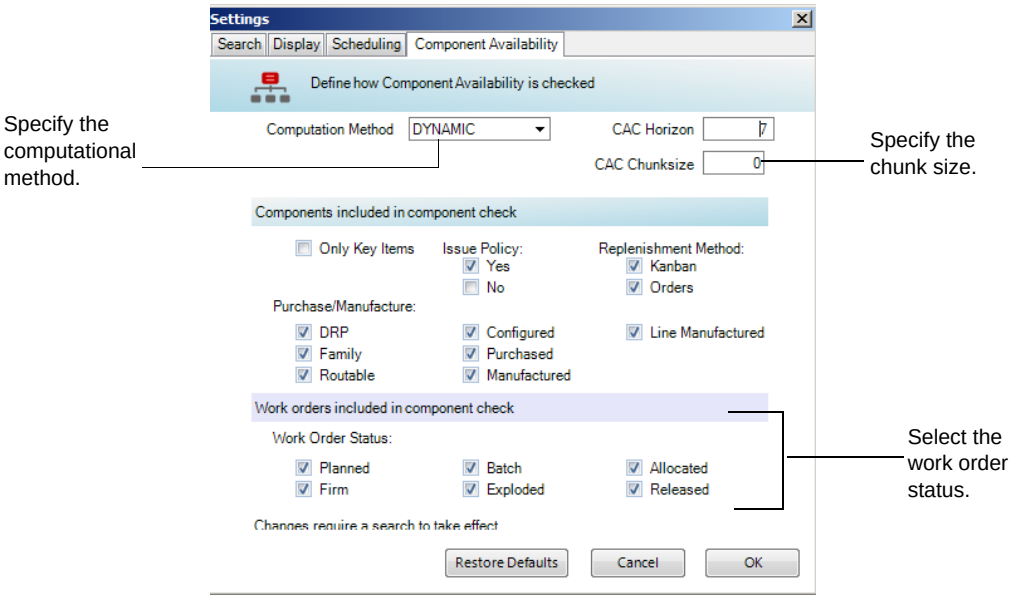
For workbenches-embedded component availability check user preferences, you can now indicate how and when CAC processes and calculates data. You can use the new Computation Method field when you select Preferences |Settings|Component Availabilty; see Figure 7.

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. 7
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:

- For searches, the search now takes significantly less time and places a smaller load on the system that hosts the NetUI AppServer.
- 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.
- 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 MSW background is no longer black as long as you do not change system settings.
- 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 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.
- The MSW Capacity Panel now correctly includes cumulative capacity calculations as found in capacity requirements planning reports. The new Cumulative Capacity row identifies the next available-to-promise date for an order, displays capacity in weekly and monthly buckets, and displays in weekly or monthly capacity buckets. The cumulative capacity uses remaining capacity or planned and required capacity as input.
  - Remaining capacity as the input:

    [N] = each day. [N Remaining Capacity + Prior Day Cumulative Capacity = Cumulative Capacity of [N]
  - Using the Required Capacity and Planned Capacity as an input:

    [N] = each day. [N Planned Capacity - Required Capacity + Prior Day Cumulative Capacity = Cumulative Capacity of [N]
- 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.

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 Order Duration Calculation Methods (Order-Release Date or Order-Due Date), the system now correctly recalculates the order dates when you modify:
  - Order dates (directly or through drag and drop)
  - Production Order Maintenance fields for quantity order, production rate, run crew size, setup time, number of lines, duration buffer

  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.

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.
- 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 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 of 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 production 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. Also, the system no longer displays errors when you enter a zero (0) or the number 5 in the Shift field.
- 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 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 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.
- 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.
- 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.
- The system no longer displays an unremovable error message when you enter values larger than 9999999 in the Qty Ordered field within the workbenches Production Order Maintenance panel, then click in the Grid. Previously, when you entered a value that was larger than the number of characters allowed for the field, then clicked in the Grid, the system displayed a data error that remained in the workbenches.
- 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.

Save Function Fixes

- 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.
- 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

- 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 is production order routing data available with blank order IDs.
- 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

- 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.
- For Production Line Item Update (18.22.1.21):
  - The program 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).
  - Production Line Item Update no longer creates duplicate line or machine master records without first checking production scheduler master records or machine records. Previously, without checking for domain, site, resource type, resource ID, and machine in the production scheduler master or machine records, the system created duplicate records.
- For Production Line Maintenance (18.22.1.1):
  - Production Line Maintenance and Site Maintenance (1.1.13) 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. Previously, the primary production line did not default in Work Order Maintenance when you entered the site for a new work order.
  - 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.
- 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 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.

Component Availability Browse Collection

For the Component Availability Browse Collections, the following topics discuss:

- Browse Collection Enhancements
- Browse Collection Fixes

Browse Collection Enhancements

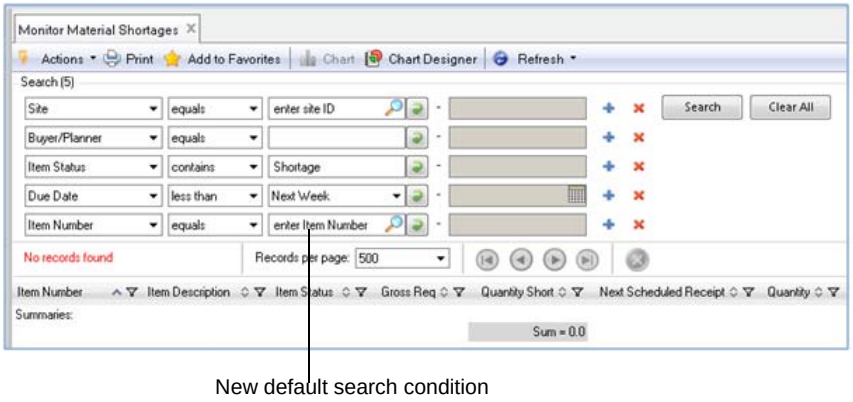
Component availability browse collection enhancements include:

- 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.

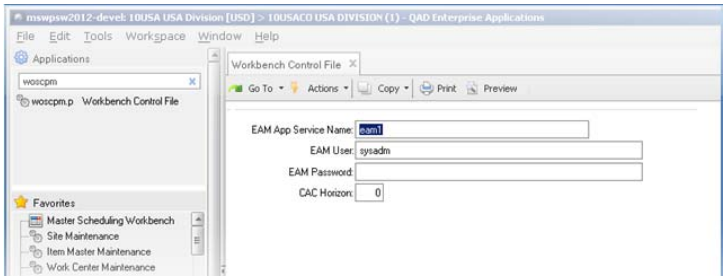
Fig. 8
Browse Collection Item Search Change



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. 9
Workbench Control File, CAC Horizon Field



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.
- Manage Materials for Production Line has improved performance when you enter a search condition on Work Order ID. Previously in that 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.
- The Manage Materials for Production Line browse collection no longer defaults the site to JSN.

- CAC browse collections now calculate columns in order (one at a time) and apply search conditions by the order, resulting in improved response times when you search on certain fields. Previously, the browse collections calculated all calculated columns before applying search conditions. Also, the system calculated in more than one loop, causing slower response time for calculated columns and calculated fields.

Release Notes for Version eB2.1 SP4 -2011 SE

Planning and Scheduling Workbenches Version: 3.2.1.2

Note This release includes the Component Availability Check (CAC) role-based browse collections. For information on the browse collections, see “Role-Based Browse Collections” on page 48.

Release Date: August 2011

Prerequisites:

- QAD eB2.1SP4 through QAD 2011SE
- NET UI 2.9.1 or 2.9.4 and associated server-side code

  Note If you run a .NET UI version lower than 2.9.2, you should install the Cancel All Requests fix. See Install .NET UI Fix for Versions Lower than 2.9.2 in the Planning and Scheduling Workbenches Installation Guide, version 3.2.1.2 for more information.
- Progress databases

  Note Oracle databases are not supported at this time.
- Progress OE10

  Note To run the workbenches, ensure that you run a Progress OE10 version that is compatible with your eB2.1 SP4-2011 SE and .NET UI 2.9.1 or 2.9.4 release combination.

  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, Czech, Korean, and Russian

User Guide: *Planning and Scheduling Workbenches* for version 3.2.1.2; see “Finding User Documentation” on page 50.

Administration Guide: *Planning and Scheduling Workbenches* for version 3.2.1.2; see Finding User Documentation.

Install Guide: *Planning and Scheduling Workbenches* for version 3.2.1.2; see Finding User Documentation.

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

Planning and Scheduling Workbenches

The following topics describe Planning and Scheduling Workbenches:

- Product Structure Filter Enhancement
- Product Fixes

Product Structure Filter Enhancement

Business Case

Customer demand is dynamic; that is, schedulers constantly face increasing/decreasing order quantities, new orders entries, and changes in order dates. In mid- to long-term planning and scheduling, MRP assists a scheduler with these dynamic changes by updating the planned production orders, time-phased across all levels of the product structure; however, once the scheduler firms those planned orders, MRP no longer has the authority to change the orders. In these situations, the scheduler must manually update the firm orders that are impacted by changes in customer demand.

To make changes across all product structure levels that relate to a change at the parent level—the finished item level—schedulers typically had to go through many multi-level planning cycles to make updates. When a product has a bill of materials (BOM) that is two or more levels deep, schedulers had no way to:

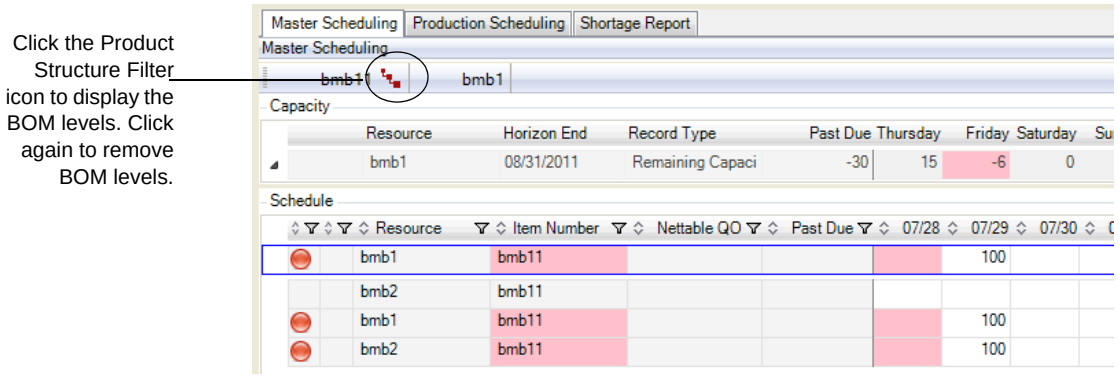
- Quickly determine the demand impact on the dependent lower levels.
- Efficiently update the schedules across all levels of the BOM impacted by the change.
- Perform an update for just a single item and the related dependent items, which could take considerable time. Dozens of such updates can be performed every day.

Solution

With the 3.2.1.2 version of the workbenches, schedulers can use the new Product Structure Filter to gauge the impact of the change immediately for all levels of the BOM. The MSW Schedule Grid includes the Product Structure Filter (see Figure 10).

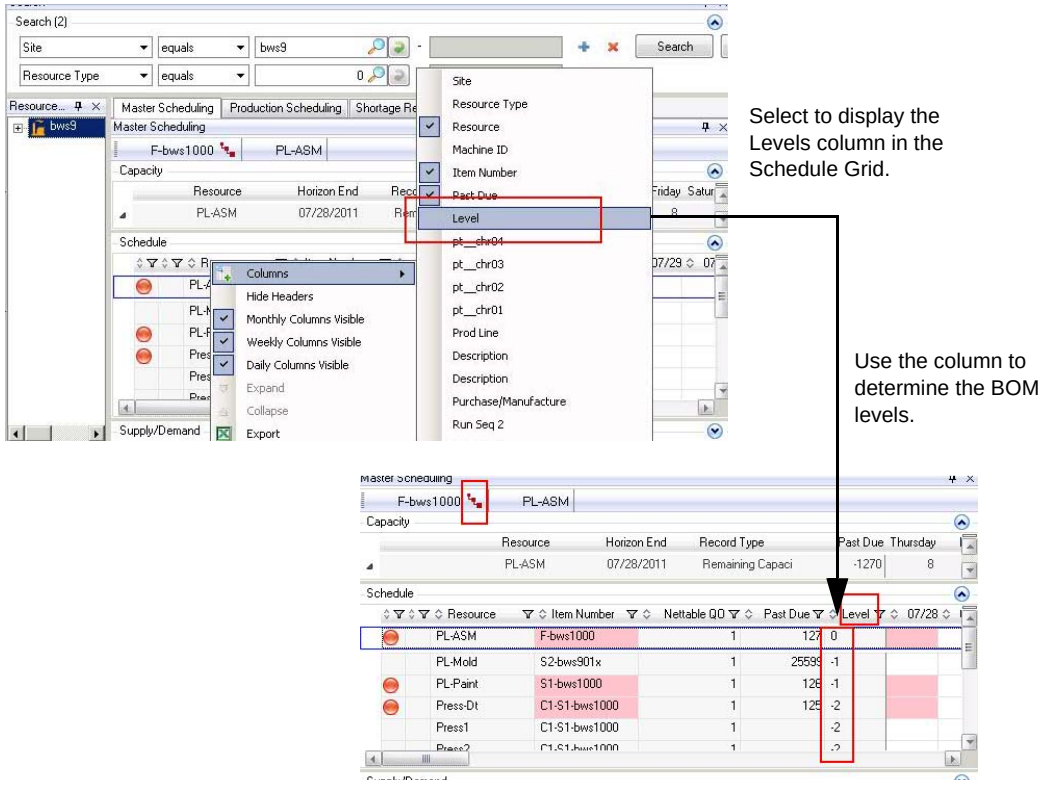
With a single click, schedulers can render all levels of an item—both up and down—within the Schedule Grid. When schedulers click the Product Structure Filter, the filter turns red and the MSW Schedule Grid provides immediate visibility to all items and item schedules related to the selected item. Schedulers can quickly visualize QOH as well as the PQOH for each component across the BOM for the scheduled production order, letting them quickly gauge the impact of the change for lower levels. When the scheduler clicks the Product Structure Filter again, the BOM levels are removed from the Schedule Grid.

Fig. 10
Schedule Grid Product Structure Filter



To determine BOM levels, select to display the Levels column in the Schedule Grid by right-clicking on any column header in the Schedule Grid, then selecting Columns, and Levels. When levels display in the grid, you can determine the product hierarchy. A level 0 (zero) is the main item, while a 1 is one upper level, a 2 is two upper levels, and -1 is one lower level, -2 is two lower levels, and so on.

Fig. 11
Product Structure Levels



Levels and Search Results

The search process may result in only a subset of BOM components and levels. So, for example, if you search for a finished item and a component item that is five levels down the BOM, you may only see two items that display in the Schedule Grid.

This is because your original search criteria did not include all components and the product structure filter can only display components that are available, based on the criteria you set for the search.

Product Fixes

The 3.2.1.2 Planning and Scheduling Workbenches maintenance fixes the following defects:

Production Order Create and Modify Functions

- The system no longer displays a casting error after you create a production order record for different items within the MSW Schedule Grid.
- The QAD SE Advanced Repetitive Picklist Calculation (18.22.3.1) no longer calculates an incorrect quantity if you split an order in the workbenches.
- 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.

Search Functions

- 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.
- SSM and PRM production orders with a non-blank FSM type other than RMA no longer cause the MSW search to return an error that informs you that the system was unable to process the request.

Application Interface

- User Preferences labels were corrected so that long label strings, such as those that occur in the German language, display correctly.
- The Post Variances at SFC field in Work Order Maintenance (16.1) now displays in the Accounting tab in Production Order Maintenance within the workbenches.
- The system no longer displays a mismatched parameter error message in Schedule Maintenance (18.22.2.1) when the Workbenches are disabled.

Non-Workbench Functions

- 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.

Component Availability Browse Collections

- The workbenches and QAD SE repetitive functions now explode global phantom component items when creating scheduled work orders. Previously, the workbench and QAD SE repetitive functions only included the component global phantom item when creating scheduled work orders.
- 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 fields are now correctly updated with values from Item-Site Master data, so the correct values display.

Release Notes for Version eB2.1 /SE

Planning and Scheduling Workbenches Version: 3.2.1

Note This release includes the Component Availability Check (CAC) role-based browse collections. For information on the browse collections, see “Role-Based Browse Collections”.

Release Date: April 2011

Prerequisites:

- Active QAD maintenance license to leverage the workbenches
- eB2.1/SE package installed
- .NET UI 2.9.1 installed
- Minimum Progress versions required: OE10.1C04, OE10.2A02, OE10.2B
- License entered; to enter the license:
  - Go to the QAD support site (URL on first page of these release notes).
  - Select Downloads, Term License Key Request section.
  - Enter a license key request for the workbenches for the site that holds your QAD maintenance contract.

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

User Guide: *Planning and Scheduling Workbenches*, item 70-3127B

Administration Guide: *Planning and Scheduling Workbenches*, item 70-3128C

Install Guide: *Planning and Scheduling Workbenches*, item 78-0938D

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

Planning and Scheduling Workbenches

Successful planning and scheduling deals with analysis, review, and manipulation of all data that impacts production departments, work centers, production lines, machines, production orders, and other related resources of the manufacturing process. It also requires complex calculations that are immediately applied to production plans, schedules, or any supporting data. More importantly, it requires immediate display of calculation results, especially when planning or scheduling issues arise as a result of the calculations.

Before, the planning and scheduling processes in most ERP systems was an iterative process. That is, planners and schedulers typically ran MRP; determined changes to the master schedule, then made updates; ran CRP to verify a balanced capacity; adjusted the master schedule for capacity issues; re-ran MRP to calculate materials; then, repeated this process for BOM lower levels. These steps are time consuming, and therefore, not feasible for today's fast-paced and dynamic manufacturing environments.

QAD has now introduced a new planning and scheduling toolset that integrates the master and production scheduling processes into a single application, synchronizing the scheduling analysis and actions into a unified, fluid motion. The toolset includes all relevant data for making intelligent planning and scheduling decisions. This is an entirely new solution that lets you effectively and efficiently create a master and/or production schedule from a single view, whether you are in a discrete, repetitive, or mixed-mode environment.

The Planning and Scheduling Workbenches were developed using QAD’s .NET UI architecture. The toolset provides the following:

- Master Scheduling Workbench (MSW)
- Production Scheduling Workbench (PSW)
- Integrated component check capabilities
- Several QAD Standard Edition (SE) programs and browses that provide supporting information
- The flexibility to modify and configure virtually every aspect of the UI to reflect the needs of each application user in your organization

MSW and PSW features let you build plans and schedules in less time, meeting customer demands while at the same time optimizing the shop floor. Creating a schedule is only one part of the equation, though, as material availability determines if the schedule can execute. For this reason, several integrated material shortage-monitoring features are also available to help you make realistic and intelligent planning and scheduling decisions.

Master Scheduling Workbench (MSW)

The MSW increases master scheduling effectiveness by letting you simulate and commit scheduling changes, factoring demand, supply, capacity (inventory and production orders are supply), and MRP data from several QAD SE programs in a single workbench.

Note Production orders are all orders associated with production-production lines, work centers, or other production areas-including discrete orders and repetitive scheduled orders.

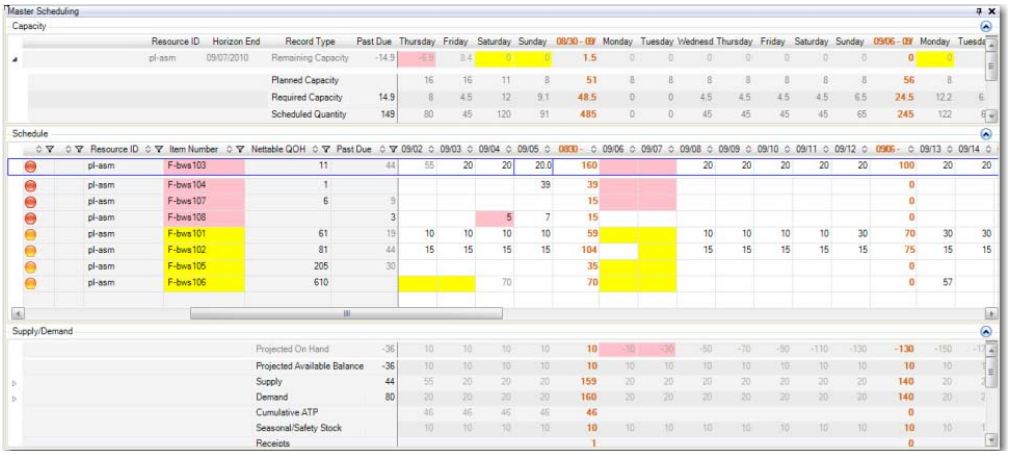
You can use the MSW to interact with production line and work center schedules and make changes where necessary. Within MSW, you can update the production order status, as well as release, create, or close production orders, while considering all supply, demand, and capacity sources from the single workbench. You can also identify items with demand issues, and check component availability for each production order to be released.

User-configurable parameters control the number of days that you are in control of the schedule as opposed to MRP control. You can also set the number of future and historical days to which you want visibility to your production data in the MSW.

Event-based color coding lets you easily identify areas of concern. You can review and manipulate schedule and production order data. Once satisfied, saving your schedule creates firm repetitive production schedules or revised and new production orders in QAD SE applications. The following graphic depicts the MSW.

Note While QAD currently supports scheduling at the work center level, operational-based scheduling is not supported until the next product version; therefore, there are some limitations. Contact your QAD representative to discuss the limitations and the advised approach.

Fig. 12
MSW



Production Scheduling Workbench (PSW)

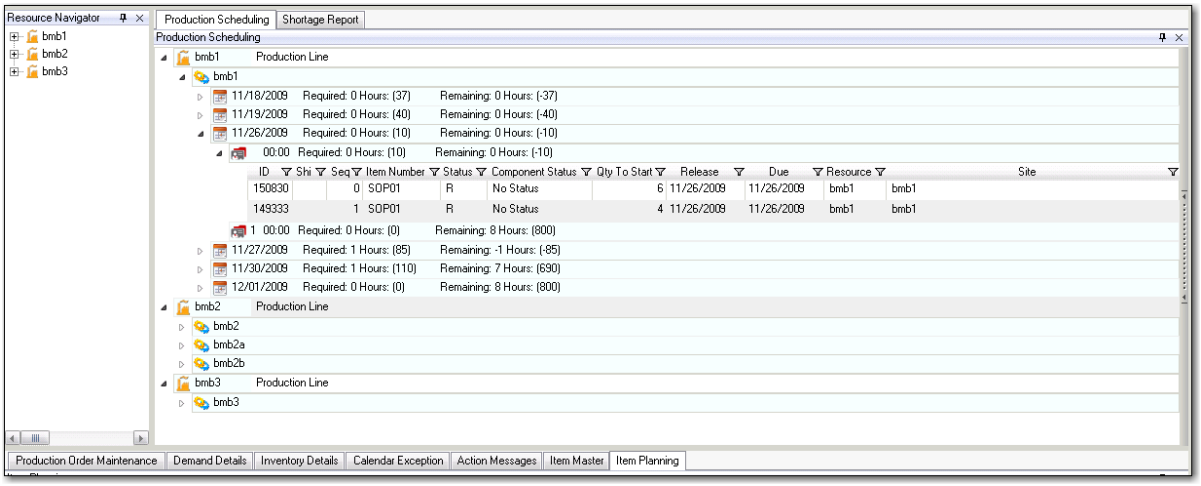
Once you generate a master production schedule, you may need to refine the schedule for the shop floor to drive shop floor execution. This near-term scheduling and optimization is often referred to as production scheduling. The goal is to optimize shop floor efficiency by scheduling and sequencing production orders that have like attributes together, reducing machine setups and maximizing labor utilization.

Some companies run a single production order over several days, while others run multiple production orders within a single day. Further, some companies define a production sequence/priority by shift to monitor shift performance or to ensure that products are available for a specific shipment time. The PSW lets you schedule discrete and repetitive production orders on production lines. You can schedule, sequencing items within a day and shift.

Note The PSW does not currently support scheduling work centers.

The following graphic depicts the PSW.

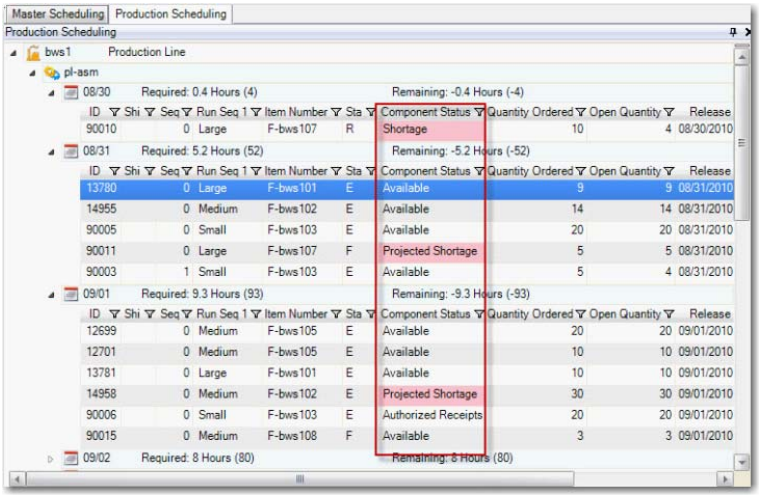
Fig. 13
PSW



Component Availability Check (CAC)

The MSW and PSW provide for integrated component checking capabilities, which enable you to verify that materials are available to meet your plan and/or schedule. This is particularly crucial if you have material constraints and want to ensure that materials are available before you release production orders to the shop floor. The following graphic depicts the Component Status column within the PSW.

Fig. 14
Component Status



Programs with Supporting Schedule Data

When the MSW or PSW identify a potential problem in the plan or schedule, you can use supporting programs provided in the form of tabs to help you find the cause of the problem. Supporting tabs shared between both workbenches include:

- Production Order Maintenance

  Production Order Maintenance lets you view individual item production order supply records for items that display in the MSW Schedule Grid or PSW Sequence Grid. You can view, monitor, and interact with all elements of a production order, such as changing the setup time or routing codes, or adding special instructions.

- Demand Details

  When you make selections in the MSW or PSW, the Demand Details tab reflects demand data for your selection. This helps you determine whether the item supply is related to actual customer demand, forecast demand, or other types of demand, such as safety stock demand. This information is useful, for example, when capacity is at a maximum for the day or when materials are not available.

- Inventory Details

  The Inventory Details tab displays the item number, site, quantity on hand, inventory master data, location, lot/serial, status, expiration date, and the date created.

- Calendar Exception

  Occasionally, exceptions to production line capacity can occur; for example, overtime and machine downtime. When you set up shifts in QAD SE programs, you can enter exceptions to the normal operating hours by entering an adjustment in the Calendar Exception tab. The adjusted information is displayed and is maintainable in the Calendar Exception tab within the MSW/PSW.

- Action Messages

  The Action Messages tab displays MRP-generated actions.

- Item Master

  The Item Master tab provides critical planning and scheduling information through a browse of active fields. The frame lets you view/manage items on multiple resources at once.

- Item Planning

  The Item Planning tab displays item master/planning details for a selected item. At any point during the scheduling process, you can refer to the Item Planning tab to find information to identify lead time, order quantity, and so on. If an item-site record exists, planning data from item-site record display for the selected item-site record.

- Shortage Report

  An additional tab in the planning and scheduling toolset provides a summarized view of all material shortages that impact the production plan. You can use this global view for multiple uses, such as printing it as a materials shortage list for material expediting or to identify a list or production orders to be rescheduled to adjust for the material shortage.

Figure 13 on page 46 shows the Shortage Report tab as well as the tabs for other supporting programs and data.

You must have an active Maintenance license, registered through QAD SE License Registration (36.16.10.1), before you can access the MSW or PSW. If you do not have an active Maintenance license, the system displays an error message when you attempt to access the workbenches. The system displays a warning if the active Maintenance license is close to the license expiration date. Refer to *Administration Guide: Planning and Scheduling Workbench* for more information on registering the license key.

Role-Based Browse Collections

You can synchronize the production plan with your organization with role-based browse collections.

QAD understands that it is not only important for your production planners and schedulers to have a toolset available that helps efficiently plan and schedule, but it is equally important to provide personnel within your manufacturing organizations with the right quantities to support the production plan. Personnel in your organization need to ensure that the right purchased materials are lined up on time in the right quantities to support the production plan.

To this end, QAD offers six browse collections that synchronize your buyers, material expediters, shop floor operators/supervisors and material handlers with your planners and schedulers.

You can use the following role-based browse collections for real-time retrieval of production order component availability, maintenance, manipulation, viewing, and reporting of production details:

- Release Production Orders by Production Line is typically used by shop floor operators/supervisors.
- Manage Materials for Production Line is typically used by material handlers or the department for which they work
- Release Production Orders by Work Center is typically used by shop floor operators/supervisors.
- Manage Materials for Work Center is typically used by material handlers or the department for which they work
- Monitor Material Shortages is typically used by material expediters and/or material planners.
- Purchase Direct Materials is typically used by buyers.

The browse collections let you perform material component shortage checks across your selected range of work orders and order statuses. Whether you need to see material shortages two days into the future or six months, the solution lets you quickly identify and analyze the shortage, providing you with early detection and response capability.

Release Production Orders

You can now release production orders more effectively by using two new collections:

- Release Production Orders by Production Line
- Release Production Orders by Work Center

Shop floor operators or supervisors can use these collections at the beginning of the day; for example, to determine current orders in production and new orders to be released. The most notable feature is the visibility that lets you determine whether the material is available for production orders. When a shortage occurs, the operator can drill down to see when the next scheduled receipt is expected. As such, the browse collections arm personnel with information they can use before starting a production order.

Manage Materials

Materials handlers and other materials personnel can use the following to check which production orders have a release date of today and the related material status for each production order:

- Manage Materials for Production Line
- Manage Materials by Work Center

Materials personnel can quickly see the production orders with a problematic material status, such as shortage, and can drill down into details that triggered the material status. They can also determine when the next scheduled receipt provides the resolution. Having this information available to them is key to

enabling them to make swift and intelligent decisions without being dependent on other personnel, such as the material planner or buyer.

Additionally, for the production orders that have materials available they are able to both create material picklists and transfer materials right from within the collection. And thus, the collection becomes a one stop shop for them.

Monitor Material Shortages

The Monitor Material Shortages browse collection lets materials expediters and material planners quickly identify the material status for purchased components and sub-assemblies they manage. They can check material status over a period of time—for example, for the upcoming week—and together with all context information provided to them, they can make the right decisions quickly. Having this information helps keep production running by letting them determine and avoid situations during material expedition.

Purchase Direct Materials

Buyers or planners who are responsible for ensuring available material to support production can use Purchase Direct Materials to quickly identify the components they manage and determine if there are shortages that impact production.

The system calculates availability and lets you view production order component status in terms of shortage severity. That is, you can easily determine which production order components have a shortage and the level of severity for the shortage. Because you can view time-phased supply and demand, you can know your supply and demand based on any given item, date, or production order. You can:

- Select from a wide range of item attributes to include.
- Identify which items have component material shortages related to them.
- Identify the production order related to the shortage.
- Locate and determine the cause of material shortages.
- Use the Next Scheduled Receipt column to view dates of the next scheduled receipt of the item.
- Use functions in the collection to review or create purchases for an item.

Knowing this information helps buyers or planners know when to generate purchase orders for direct material requirements.

Finding User Documentation

You can find documentation for this release of the Planning and Scheduling Workbenches by searching for the release, then the product by name under 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 the following documents that support this maintenance release of the workbenches.

The following documents are on the support site listed above. You select Documentation, then the release. Then, use the following table to find the correct QAD category.

Table 1
Supporting Documents

Title	Information	URL
Release Notes (this document): Planning and Scheduling Workbenches	Enhancements and release information	Initially, posted on media only. On the QAD support site, posted under QAD SE 2014 Release Notes.
Administration Guide: Planning and Scheduling Workbenches	Technical product information	Under QAD SE 2014 User Guides.
User Guide: Planning and Scheduling Workbenches version	Instructions on navigating and using the workbenches	Under QAD SE 2014 User Guides.
Training Guide: Planning and Scheduling Workbenches	Training documentation	Under QAD EE 2014 Training Guides.
Installation Guide: Planning and Scheduling Workbenches	Installation instructions	Initially, posted on media only. On the support site, posted under QAD SE 2014 Installation-Conversion.