Ramco Aviation Solution

Version 5.7

User Guide

Capacity Planning

DISCLAIMER

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The documentation has been provided for the entire Aviation solution, although only a part of the entire solution may be deployed at the customer site, in accordance with the license agreement between the customer and Ramco Systems Limited. Therefore, the documentation made available to the customer may refer to features that are not present in the solution purchased / deployed at the customer site.

About this manual

This manual briefly describes the basic processes and functions in Ramco Aviation Solution.

Who Should Read This Manual

This manual is intended for users who are managing the Aviation industry processes and are new to Ramco Aviation Solution.

This manual assumes that the user is familiar with the Aviation Industry nomenclature and systems based software.

How To Use This Manual

Ramco Aviation Solution provides extensive Online Help that contains detailed instructions on how to use the application. Users are suggested to use this manual for specific references, along with the Online Help. This manual contains enough information to help the users perform the basic tasks and points toward the Online Help for more detailed information.

How This Manual is organized

The User Guide is divided into 3 chapters and index. Given below is a brief run-through of what each chapter consists of.

Chapter 1 provides an overview of the entire **Capacity Planning** business process. The sub processes are explained in the next chapter.

Chapter 2 focuses on **capacity planning** sub processes.

The **Index** offers a quick reference to selected words used in the manual.

Document Conventions

- The data entry has been explained taking into account the "Create" business activity. Specific references (if any) to any other business activity such as "Modify" and "View" are given as "Note" at the appropriate places.
- **Boldface** is used to denote commands and user interface labels.
  Example: Enter **Company Code** and click the **Get Details** pushbutton.
- *Italics* used for references.
  Example: *See Figure 1.1.*
- The icon is used for Notes, to convey additional information.

Reference Documentation

This User Guide is part of the documentation set that comes with Ramco Aviation Solution.

The documentation is generally provided in two forms:

- The Documentation CD in Adobe® Systems' Portable Document Format (PDF).
- Context-sensitive Online Help information accessible from the application screens.

Whom To Contact For Queries

Please locate the nearest office for your geographical area from www.ramco.com for assistance.

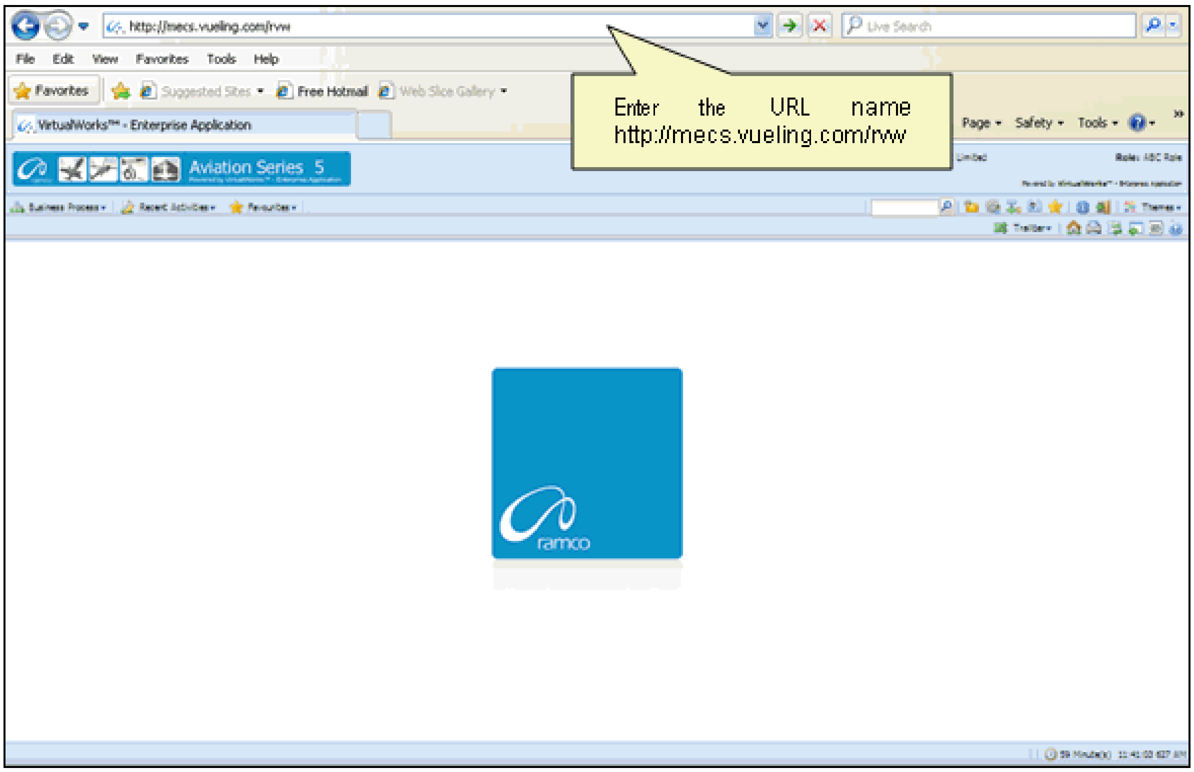
Table of Contents

Using Ramco Aviation Solution

This section explains the basics of using a Ramco Aviation Solution web page. At the end of this section, you will be familiar with the concepts based on which Ramco Aviation Solution works, and also understand how to navigate around Ramco Aviation Solution.

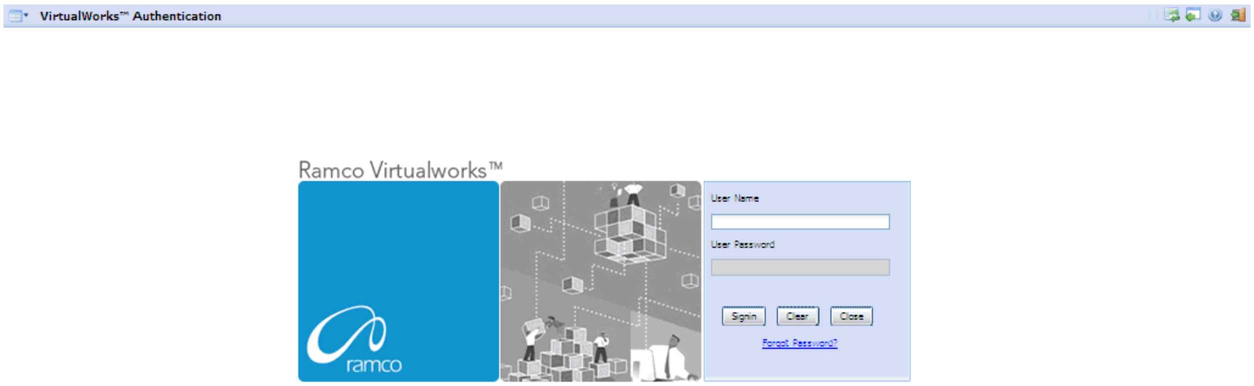
Logging into Ramco Aviation Solution for the first time

Enter the URL of the Ramco Aviation Solution in the Internet Explorer window. For example, URL: http://mecs.vueling.com/rvw.

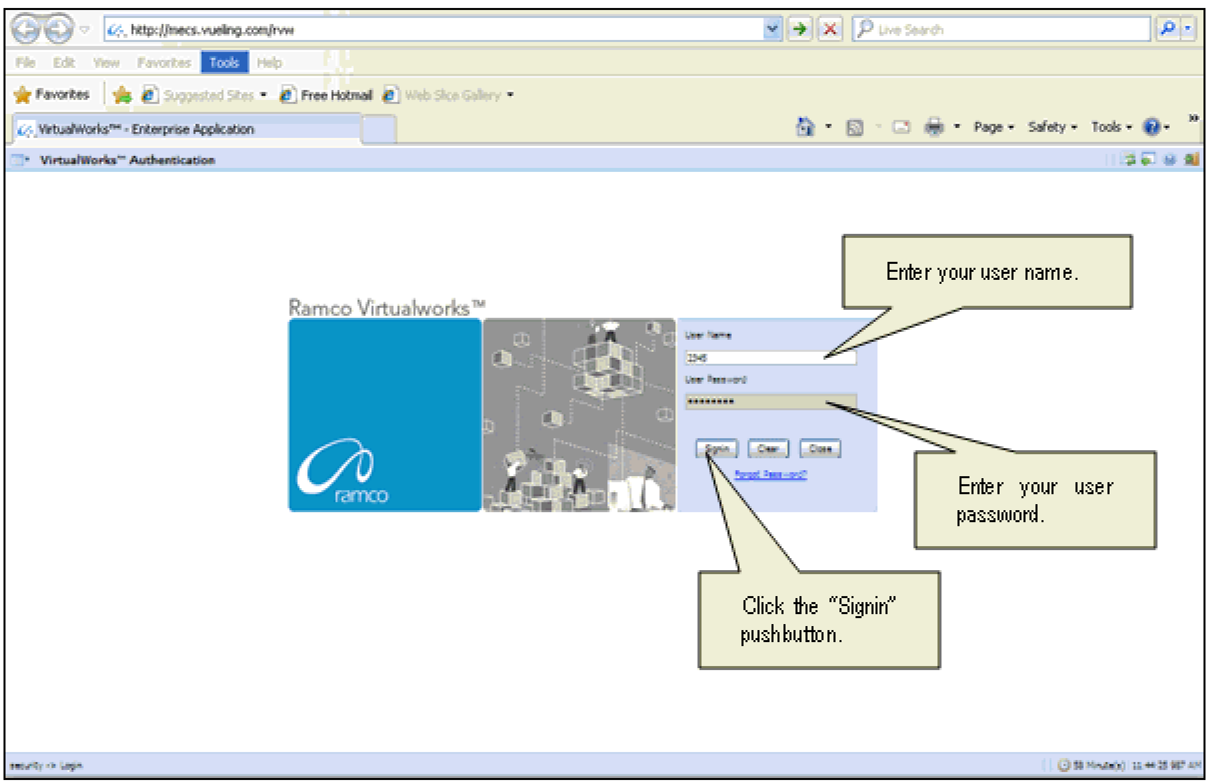


Note: The recommended browser platform for Ramco Aviation Solution is IE8.

The Login page appears.



Enter your **User Name** and **User Password** in the Login page, which have been provided by the System Administrator. Refer to the figure below.



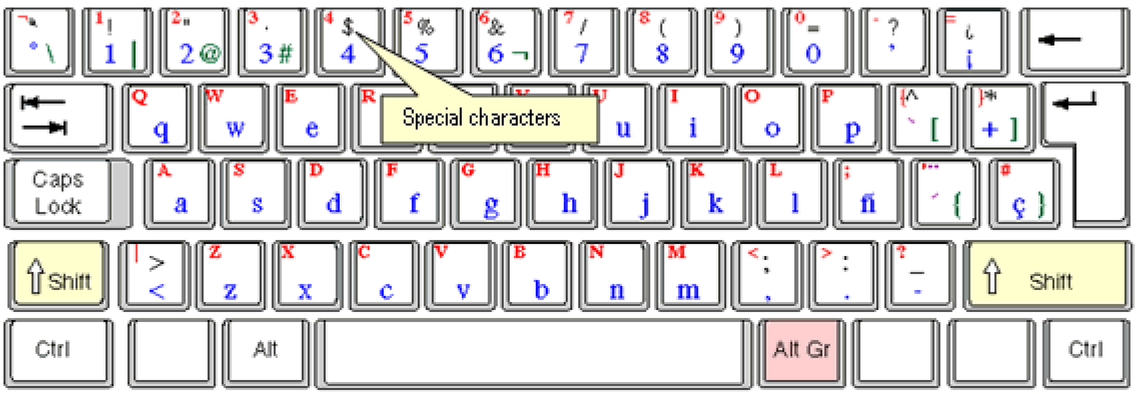
User Name: A unique identifier name or code for logging into Ramco Aviation Solution.

Password: A sequence of characters which, when combined with the user name, ensures that only the user with this password and user name can access Ramco Aviation Solution, where Ramco Aviation Solution offers the user a predefined set of business processes and components.

Passwords must be difficult to guess, and kept secret by the user.

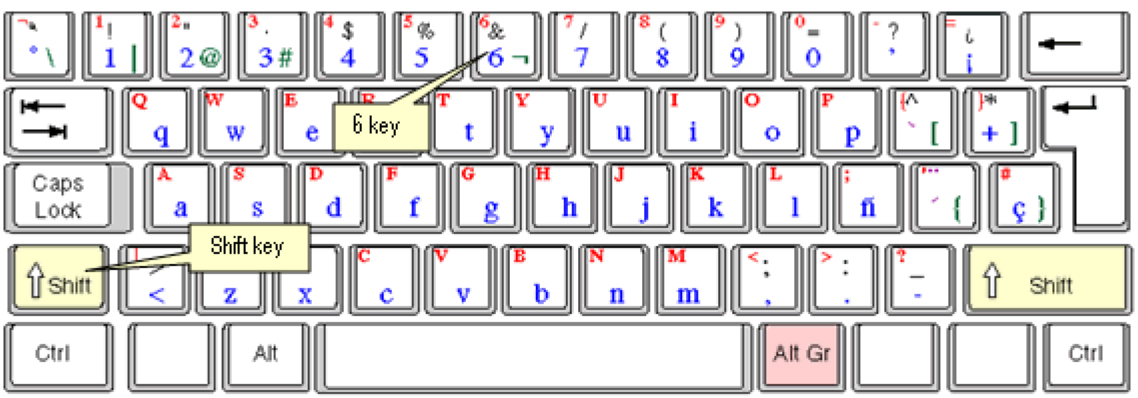
What is a Special Character?

A special character is a non-numeric character (not in the a-z alphabet and 0-9 numbers). Common examples are “!”, “@”, “#”, “$”, “%”, ^“”, “&”, “*”.



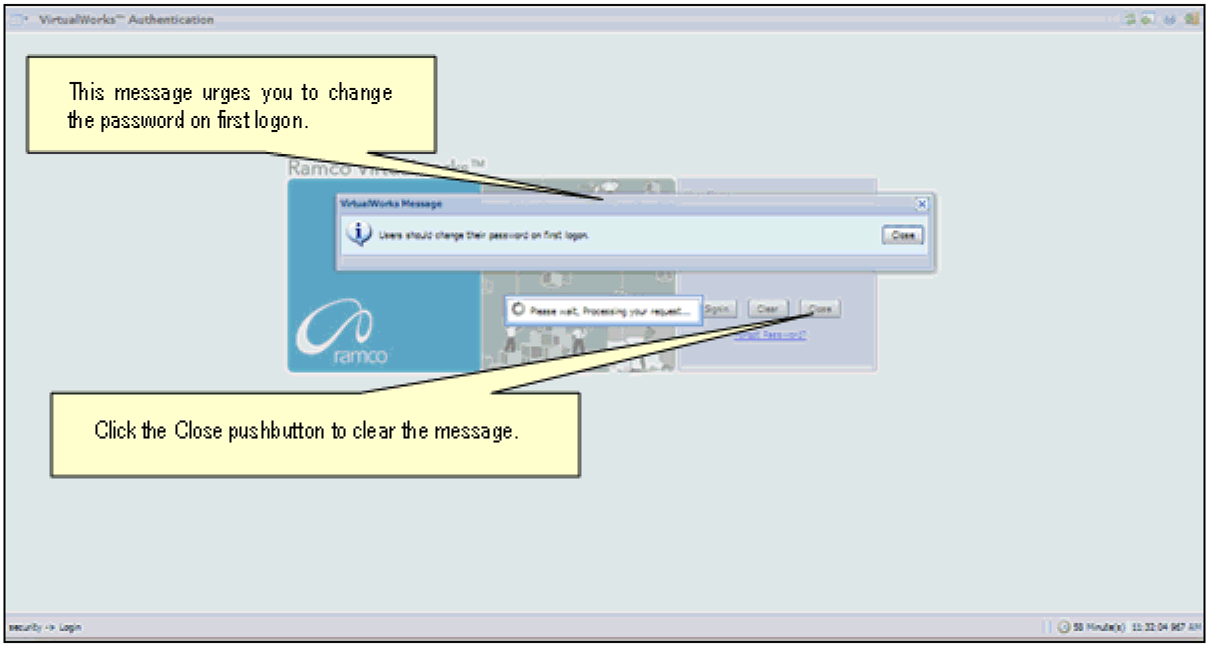
You can type the special characters by pressing Shift + the required character key.

Example: If you want to type “&” as the special character, then press Shift button + 6 Key.



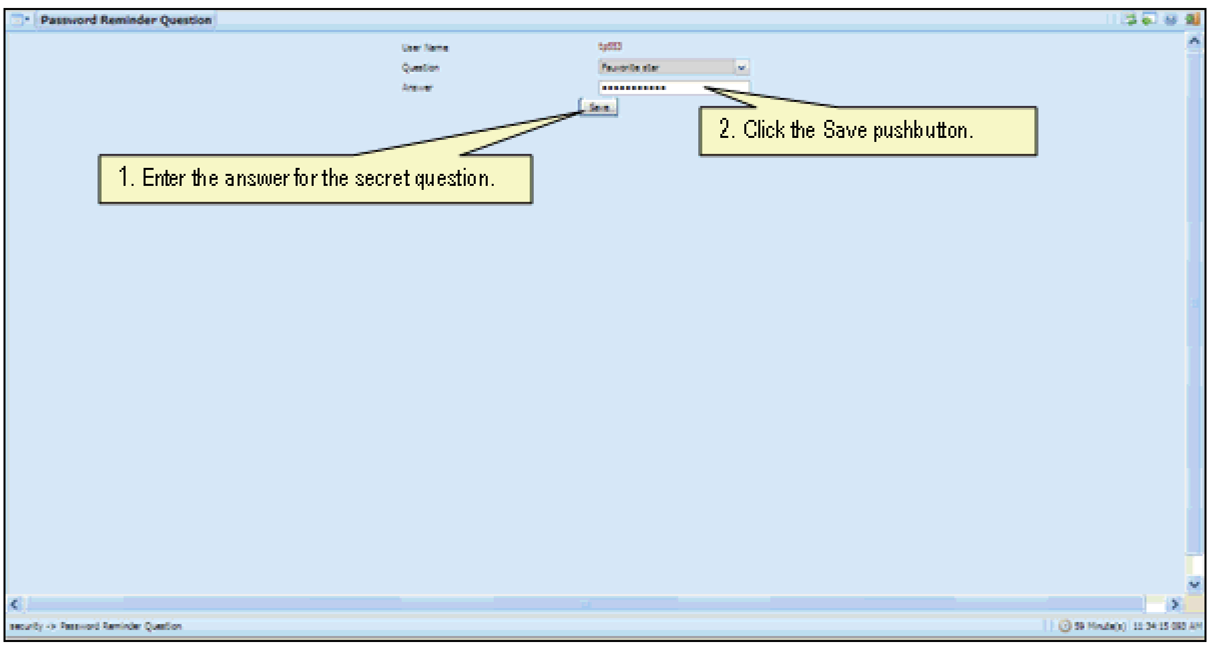
After entering the User Name and Password, click the **Login** pushbutton.

The system will prompt you to change the password, because it is your first login. Refer to the following figure.



Close the window by clicking the **Close** pushbutton.

The **Password Reminder Question** screen appears. The system prompts you to provide an answer to the question.

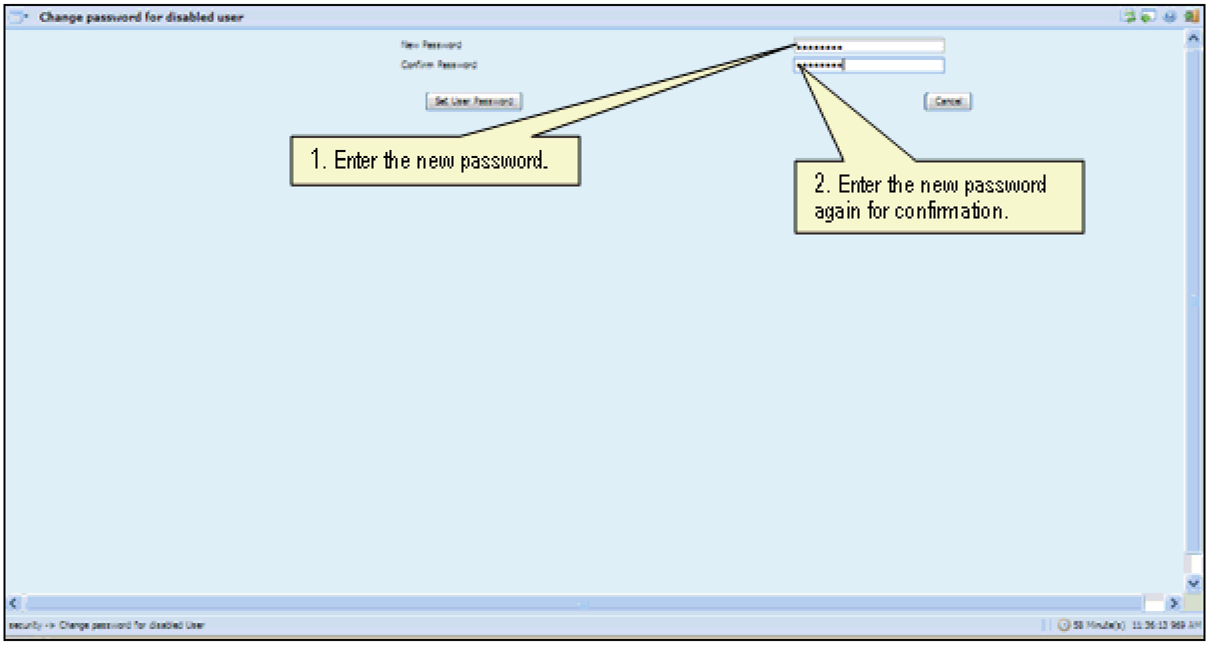


Enter the **answer**.

Click the **Save** pushbutton to save the answer.

✎ *Note: The answer provided here will be used for changing the password if you forget your password.*

The “Change Password” screen appears.

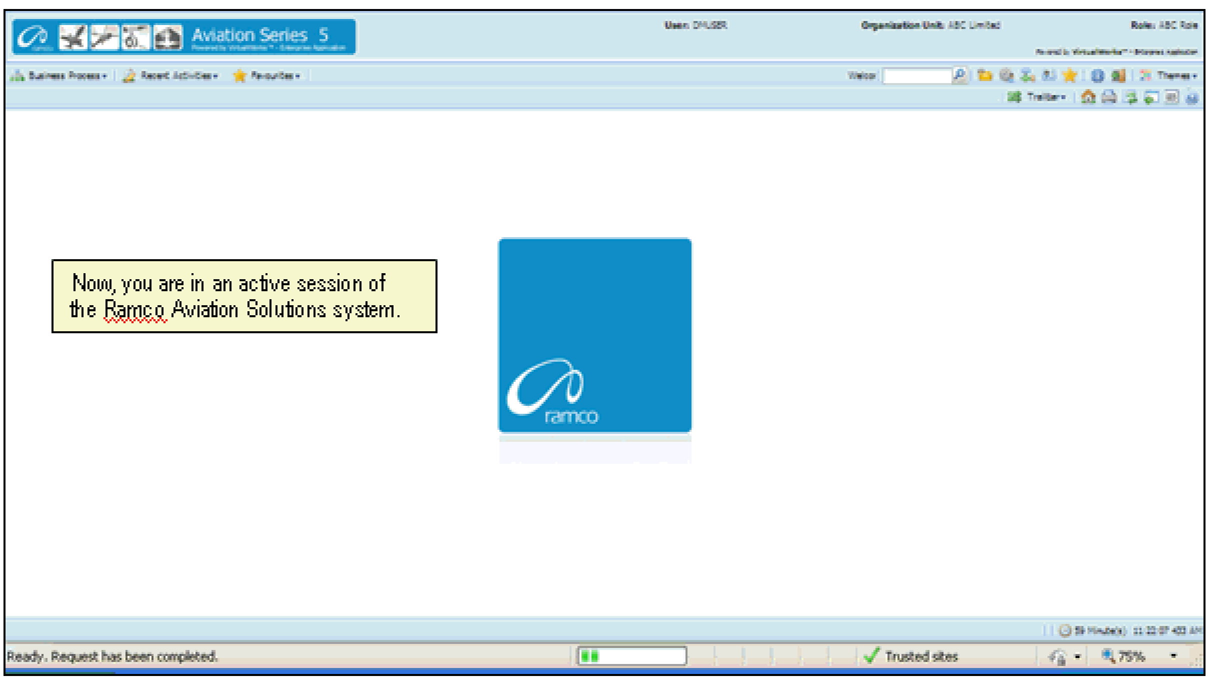


Enter a password of your choice. Ensure that the new password comprises a minimum of six characters and a maximum of 15 characters and includes a special character as well.

Example of passwords: abcd&, abcd*, abc@best

Click the **Set User Password** pushbutton, to save the password.

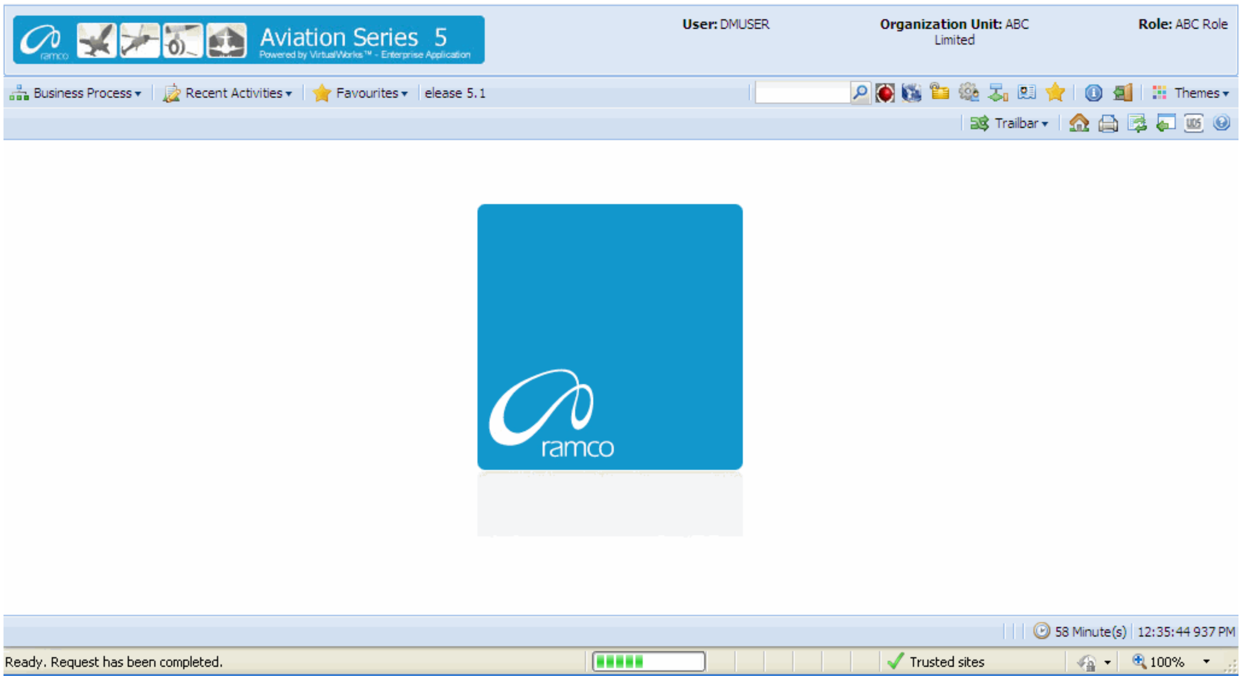
The home page of Ramco Aviation Solution appears. You can now access the activities for which you have permission, from this page.



Ramco Aviation Solution Home page

Welcome to Ramco Aviation Solutions!

You are now in the Ramco Aviation Solutions Home page. This is the first page you encounter, after successfully logging into the application.



From now on, your user name, organization unit and role are displayed on the top right of every Ramco Web page.

Default login details

This section, which occupies the area immediately below the address bar and to the right, side, shows:

- Your user name
- The default role to which your user name is mapped
- The organization unit mapped to the default role

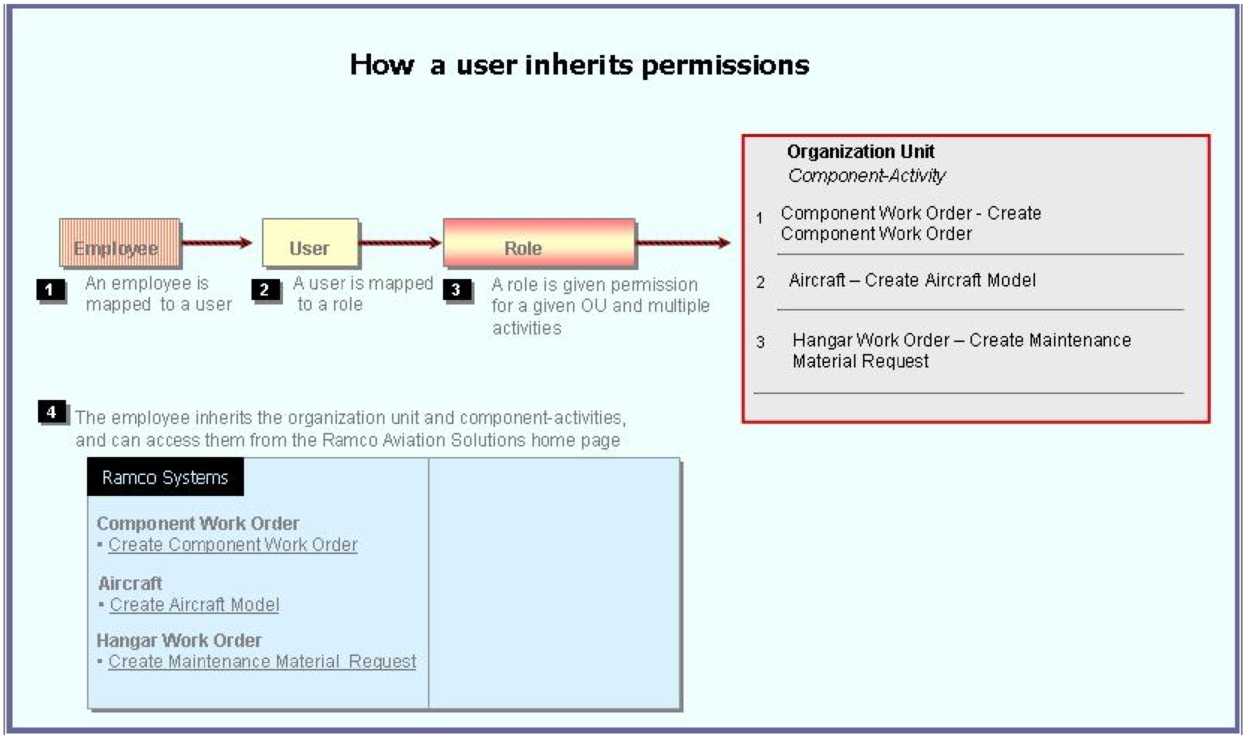
How a user inherits permissions

During deployment, each user name can be mapped or linked to multiple role-organization unit combinations. Shown below are a few examples.

User Name	Role	Organization Unit
John	Configuration Administrator	Tech Records-Indianapolis
John	Engineering Manager	Engineering-New York
John	HR User	Engineering-New York
Andrea	Stores Clerk	Central Warehouse-Los Angeles
Andrea	Shift In charge	Line Station-Chicago
Daniel	Shop Maintenance Manager	Maintenance Shop-Memphis
Daniel	Project Engineer	Head office-New York

For each user name-role-organization unit combination, permission is given to a set of activities. These activities could be across the components deployed in the organization unit. Each user name-role-organization unit combination, therefore, refers to access to (i) a specific organization unit and (ii) one or more activities.

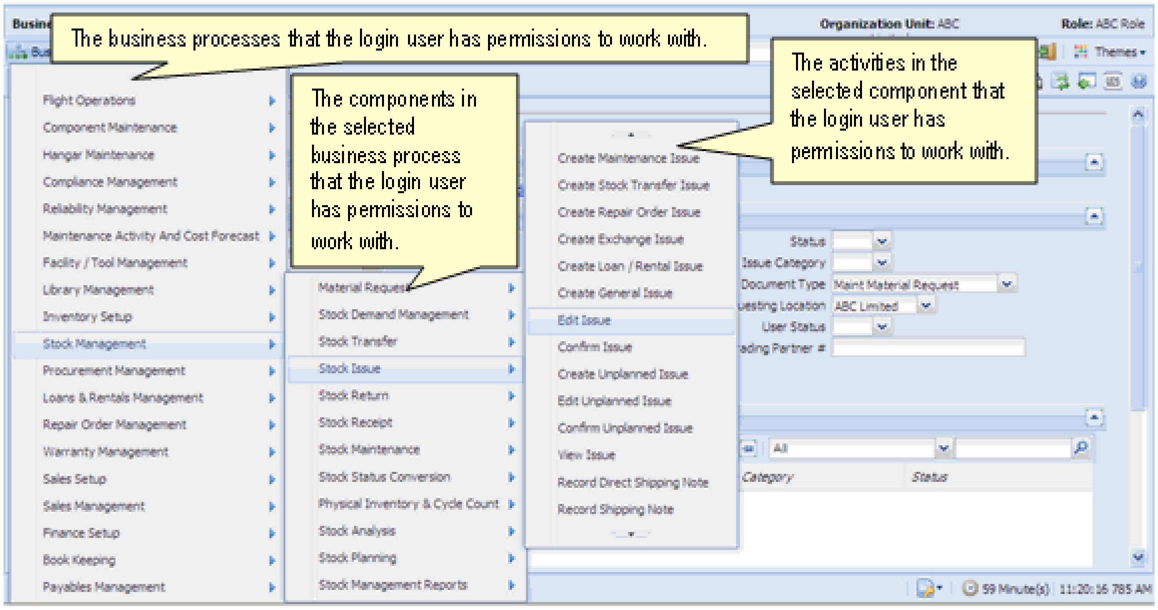
Although a user name can be mapped to multiple role-organization units, the user is assigned a default role-organization unit. This is accomplished through the Setup Defaults icon on the Web toolbar. Therefore, when you login with a given user name, the system retrieves the default role-organization unit and displays it to the right of the page.



Note that there is no separate permission to be obtained for a business process or a component. When you log into a permitted organization unit, the system displays all the business processes and components whose activities your role is permitted to access.

For example, your role may be given permission to two activities under the **Component Work Order** component, and one activity under the **Aircraft** component. When you log in, the system will show the following business processes: **Component Work Order** and **Aircraft**.

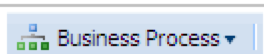
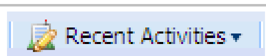
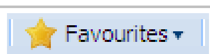
- Under the **Component Work Order** business process, the **Create Component Work Order** and **Edit Component Work Order** activities for which you have permission are displayed.
- Under the **Aircraft** business process, the **Create Aircraft Record** activity for which you have permission is displayed.



Business Processes and Activities

Immediately below your user name, the system displays two rows of icons in the Web page toolbar.

On the left half of the first row, there will be three adjacent tabs: they are labeled Business Processes, Recent Activities and Favorites.

	Those business processes to which your role-organization unit has been entitled permission. Click this icon at the left top of the Web page to find the business process list.
	The most recent list of business activities that you have visited. These activities could be across components and even business processes Click any link, to directly launch the recently visited page.
	This list, represented by the third icon from the left in the Web toolbar, shows those activities already earmarked as your favorites, using the Favorite icon on the Web toolbar. They will be activities to which your user name-role has been entitled permission. An activity under Favorites provides you a short cut to directly select it after you log into Ramco Aviation Solution, without having to search for the business process and component under which it is logically arranged. Pull down the Favorites menu and select the required activity. The activity is instantly invoked and the first page of the activity appears. This saves users time and effort of traversing to a Web page from the business process, the component and then the activity.

To start an activity under the Recent Activities or Favorites tabs

Select an activity listed under the Recent Activities or Favorites tab.

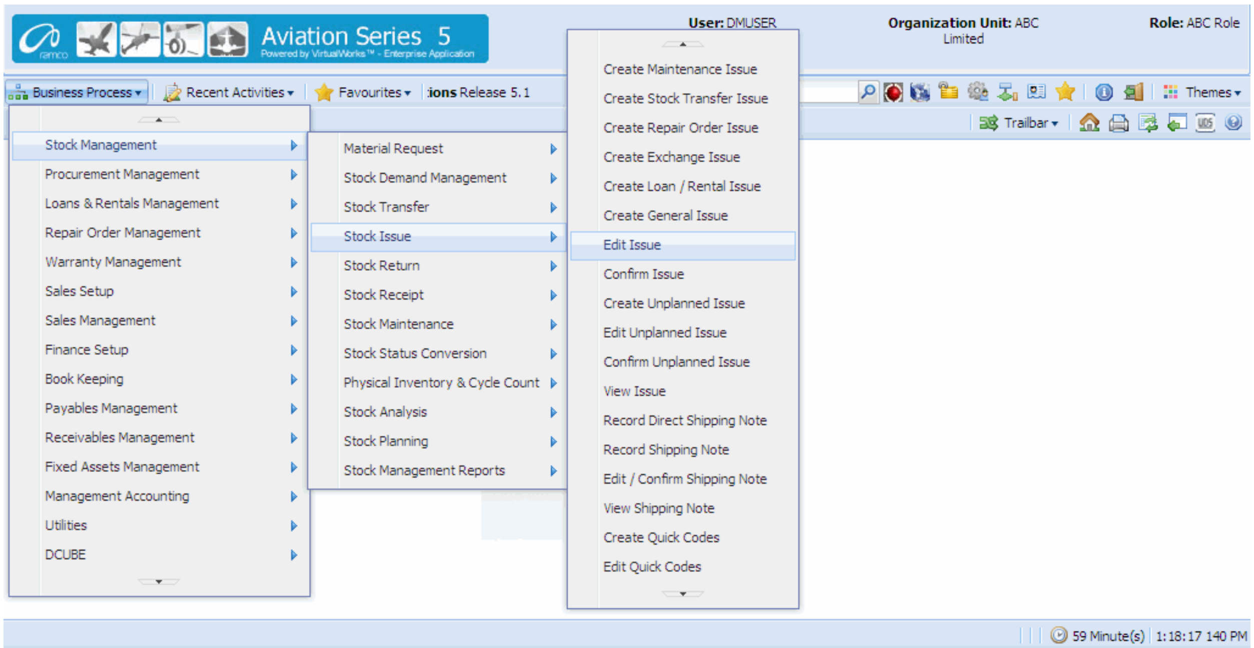
The system displays the first page of the selected activity.

For instance, if the activity Create Component Work Order is listed under the Favorites tab and you select it, the system will display the Select Component page.

To start a business process under the Business Process tab

Select any business process listed under the Business Process tab.

The system displays the components of the selected business process, in the submenu to the right of the selected business process.



Before using a Ramco Aviation Solution Web page

Components, activities and tasks

Before you get started on the Ramco Aviation Solution Web page, you need to know a few concepts based on which Ramco Aviation Solution works. These can be summed up in the few key words that follow.

- Business process
- Business component
- Activity
- Web page or user interface

A business process is a collection of interrelated components that pertain to a specific business domain/department, such as Book Keeping, Hangar Maintenance, Stock management, Human Resources Management, etc.

A business component refers to a set of logical actions or transactions that happen during the course of a business process. For example, components Stock Issue, Stock Return and Stock Receipt components are classified under the Stock Management BPC. Likewise, Journal Voucher, Currency Revaluation and Bank Reconciliation components are grouped under the Book Keeping BPC.

An activity refers to any task/transaction under a business component. For example, Create Maintenance Issue, Confirm Issue and Record Shipping Note activities under the

Stock Issue component enable users to perform specific functions of the Stock Issue process.

Business Component	Stock Management Stock Management	Click the arrow of any business process to display the list of components. Alternatively, click this icon to display the list of components for the previously selected business process.
Activity	Stock Management Edit Issue	Click the right arrow for any component to view the list of activities. Click the activity to view the first page of the activity. You can click links in this page to view more pages in the activity.

Essentially, clicking an Activity opens the **Web page** with which you work. When you are working with a Web page, you would be performing a task in an activity. However, it may or may not be necessary to perform all the tasks in an activity at one go. You may revisit the activity and perform some other tasks that are not mandatory at a later point of time. Hence, it may be concluded that you may have worked with as many **Web pages** as the number of tasks you have performed.

Note that there are several instances when a single Web page is used to carry out the activity straight away. Many of the activities comprise of a single Web page by which the user can both search for a specific record and perform the relevant task on the record.

Correlating tasks to web pages

Given below is an example of the Web pages under an activity, and the task correlating to each Web page.

Go to page…	…To carry out task
Select Issue to Edit	Selecting the stock issue for modification
Edit Issue	Editing the stock issue details
Confirm Issue	Confirming stock issue
Generate MMD Report	Generating MMD for the stock issue
Generate Part Barcode Label	Generate part barcode label for the stock issue

The second page is a hyperlink from the first page. The remaining pages are hyperlinks from the first page or other pages.

More about Search Criteria and the Select web page

You normally encounter a Select page before recording, editing or viewing a record. The "Select Issue Document" is an example of a select page. From this page, you can search for stock issue document you want to edit/view in the following way:

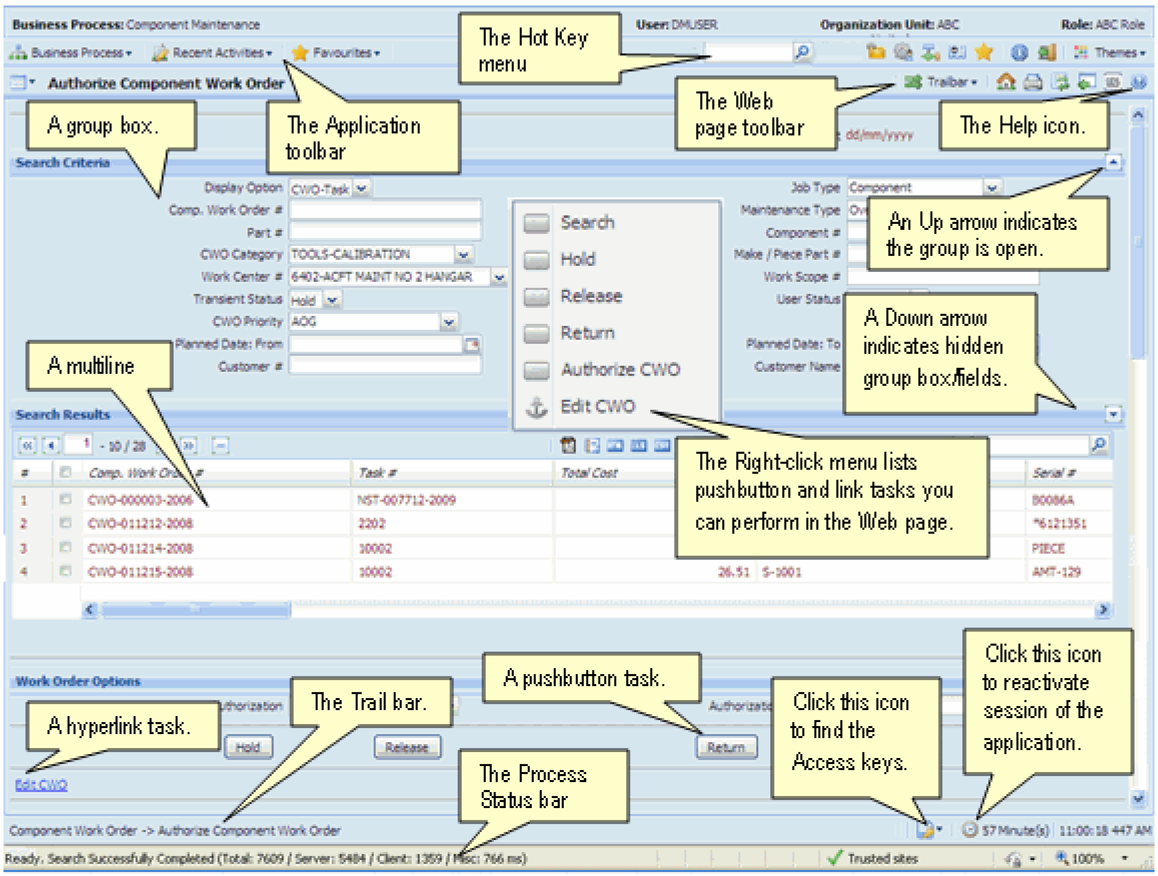
- Select search criteria such as Issue #, Warehouse #, Issue Type or Issue Category.
- You may also specify attributes of a stock issue such as, Ref. Document Type, Ref. Document #, Part # and/or Aircraft Reg. Type.

- The system displays all the stock issue records that satisfy the search criteria, in a multiline.
- From the multiline, select the specific issue record whose details are to be viewed or edited.
- From the Select page, click the link that takes you to the Edit page, Record Page or the View page. Alternatively, one of the fields in the multiline employee records will be hyperlinked, in the Select page. Select the hyperlinked field, to enter the Edit, Record or View page.

A typical Ramco Aviation Solution Web Page

Select a Web page by clicking on the activity on the left pane of the application.

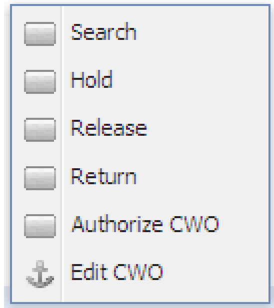
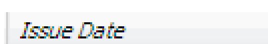
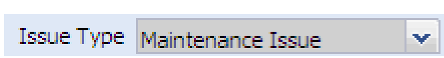
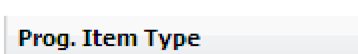
The web page appears.

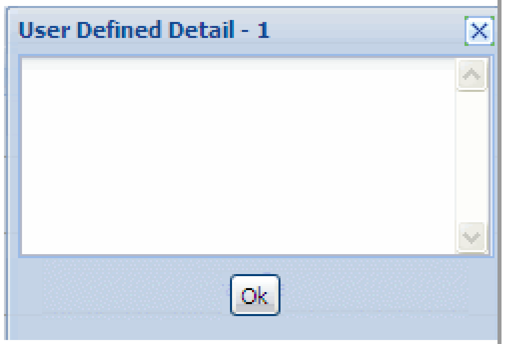
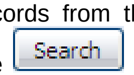
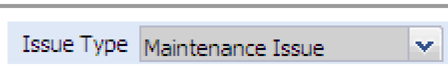


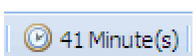
Knowing what a Web page consists of

A web page constitutes the entire document that you view online, which you use to either type in information or view information. All other elements described below, except the Menu button, will be inside the Web page.

While using a Web page, here are the basic elements you will be working with.

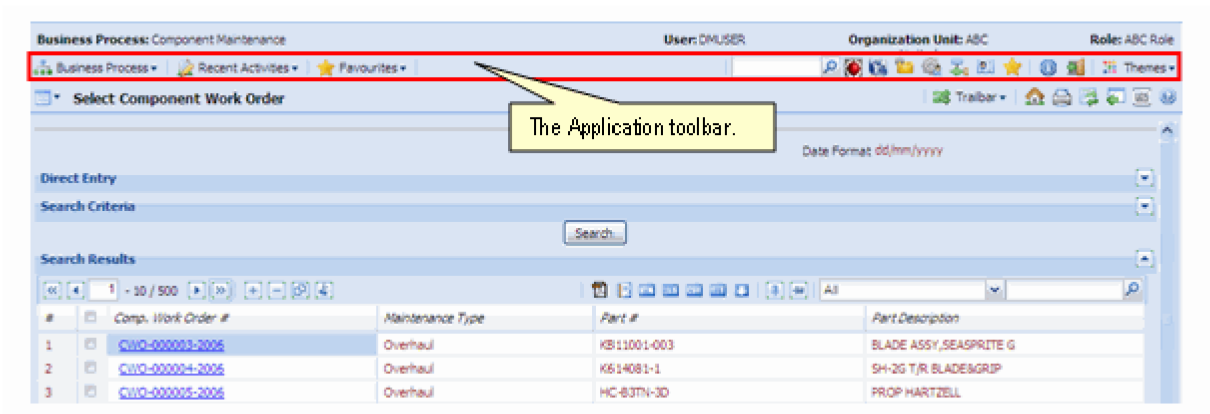
Element	Icon	Description
List of Tasks in Web Page		Right-click anywhere on the Web page to display a drop-down menu that lists the tasks you can perform in the Web page. The tasks include pushbuttons and links.
Record		A record refers to a collection of fields that represent attributes of an entity, such as aircraft, aircraft model, component or part. A record is uniquely identified by a key field, such as an identification number.
Multiline		A table, consisting of multiple rows and columns. Each row contains a single record. Each attribute of the record appears under a column with the field as the header in the multiline.
Field	   	Each data element in a page, which is either displayed automatically or which you enter/ type in, is a field. A display field appears in an Italic Regular font. An input field may be a text box or a drop-down list box. You may provide a valid input value. A drop-down list box displays a list of values from which you may select the required value. An input field appearing in Bold format implies data entry is mandatory for the field.

Field Input Window		Place your cursor inside an input field in any Web page and click the F2 key to open the input window. You can now type the required information, and click the  pushbutton to close the window. This proves convenient for data entry as you can type in text continuously without scrolling as well as view the typed text in its entirety.
Link		A hyperlink when selected opens up another Web page.
Data Hyperlink		Any data in a field when selected, takes you to another Web page.
Search Criteria		Refers to a group of fields you can specify, such as "From Date" and "To Date". It enables the system to retrieve those records that have the same attributes as you have specified. Essentially, fields in the Search Criteria group box are filters to enable the system to retrieve specific and precise records. After you specify filters for retrieving records from the database, you must click the  pushbutton to display records in the "Search Results" multiline. The number of records to be retrieved for each user interface is decided by the system administrator. Contact your system administrator for more details. The Search Criteria group box most commonly appears in Select pages; though it is not uncommon to find them in other pages as well.
Drop-down List Box		This refers to the list box that appears when you click inside a field containing a downward arrow. The list box shows a list of items, each of which represent an action you can choose.

Lens		The icon positioned next to fields where code search facility is available. Click this icon to search for a code or number. For example, Help on Employee Code.
Pushbutton		A rectangular button that performs an action when clicked. For example, clicking the "Add Employee" pushbutton saves the employee details entered in the page.
Up Arrow		Click this icon appearing at the top of certain drop-down menus to view the hidden list above.
Down Arrow		Click this icon appearing at the bottom of certain drop-down menus to view the hidden list below.
Show Group Box		Select this button to show/ expand a group box.
Hide Group Box		Select this button to hide a group box.
Reactivate Session		Click this icon to reactivate the current instance of the application. The timer next to the icon at the right bottom of the screen displays the time remaining for the end of the session.
Access Keys		Click this icon located at the bottom right of a Web page to view the short cut keys currently available for pushbuttons in the Web page.

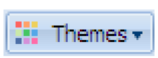
System Error Message		Click this icon located at the bottom right of any Web page to view error messages generated by the application whenever erroneous data is input. Note that this icon appears only when an error occurs.

Application Toolbar



You will find the following elements in the Application Toolbar.

Element	Icon	Description
Hot Key Menu		Use this text box to type in the menu code and then click the  icon for directly launching an activity page. Through the menu code you can open any activity page straightway by avoiding traversal across business components or business processes. Contact your System Administrator for more information.
Change Password		Use this icon on the Web page toolbar to change the password settings for the currently logged in user.
Setup Preferences		Use this icon to set the style and format for numeric, date and time displays.

Change User Context		Use this icon to switch across organization units or roles.
Setup Defaults		Use this icon to select the organization unit to which you will be logged in, by default.
Define Favorites		Use this icon to list down all the activities defined in the favorites. i) Click this icon to open the Organize Favorites window. ii) Specify the activities that must be set as favorites. iii) Click the Save user favorites pushbutton.
About VirtualWorks		Click this icon to know more about Ramco Aviation Solution.
Signout		Click this icon to log out of the current session of the Ramco Aviation Solution.
Themes		Use this drop-down list box to set the theme for the user interface (UI). Theme defines the color scheme, style and appearance of the user interface.

Note: Some more icons may appear in the Application toolbar, which may not be useful to end-users.

After the page appears, you may view it and then exit by clicking the Exit button on the Web page toolbar, after viewing the contents of the page.

When you complete selecting / viewing / entering data in all the required fields in the page, you can either:

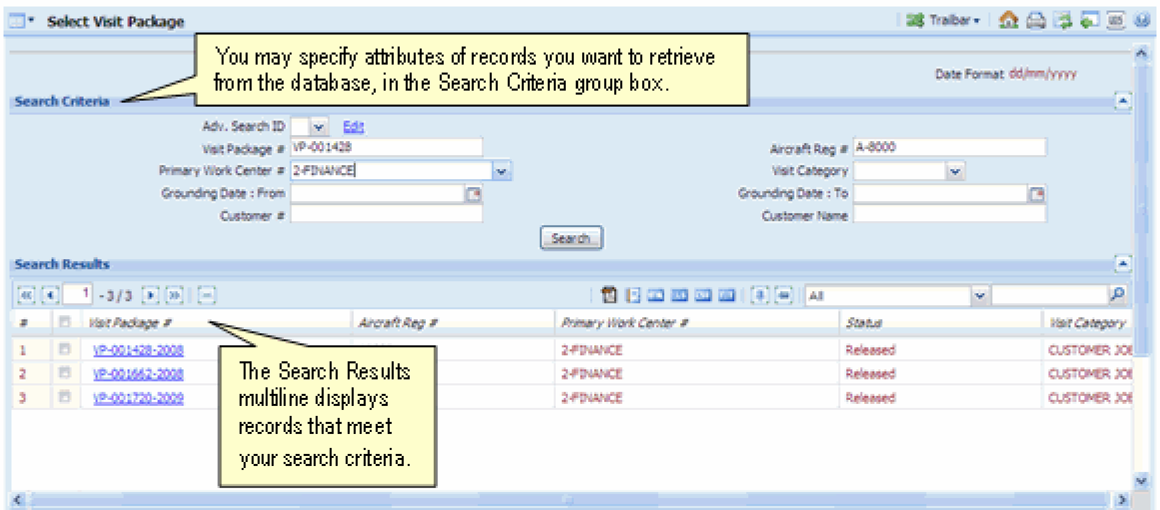
- Save the details you entered in the current Web page, by clicking the relevant pushbutton.
- Select or choose a row in the multiline, by checking the box that appears as the first field of the row. Traverse to the next page, by selecting a link in the current page. In the next page, you can enter additional details that pertain to the multiline row. (A row in a multiline represents a record.)
- Exit the Web page without effecting any action that you might have carried out in the Web page.

Adding a record

You can add a new record in a web page. You are to enter a unique code to identify the record, along with other details of the record such as description, type, etc. This unique code of the record

- Can identify it from other records
- Cannot be edited
- Can be used to retrieve the record for edit and delete tasks
- Selecting a record

For certain other actions such as edit, delete, authorize or report generation, at the onset you need to find and choose a record in a **Select** page.



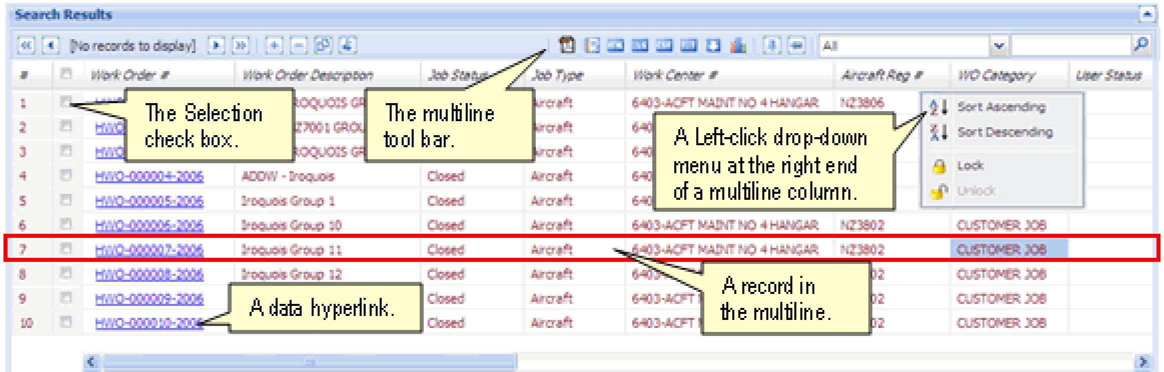
The Select page provides a **Search** facility to find a record based on the search criteria that you can specify. The application retrieves and displays records that match the search criteria in a multiline. You may then proceed to do the following,

- Select or choose a record in the multiline, by checking the box that appears in the second column of the multiline. (The first column displays the sequence number of the record, which depicts the order in the multiline.)
- Click the link for the required action/event at the bottom of the page.

The page for the chosen action/event appears, displaying all the details of the record you selected in the multiline of the previous page. You may now edit, delete, authorize or carry out any other valid action on the record.

However, some Select pages facilitate deletion, authorization or release of records in addition to the search and find feature.

Using the multiline



Adding a multiline row

A multiline row can be added, using the toolbar icons above the multiline. It can be either inserted between two existing multiline rows, or added to the end of the last row. You are to

- Position the cursor in the multiline row above which the row must appear.
- Click the icon on the toolbar above the multiline.

Deleting a multiline row

A multiline row can be deleted, using the toolbar icons above the multiline. The item to be deleted must not have been used in any transaction, so far. You are to

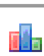
- Check the Selection check box for the record that appears in the second column of the multiline.
- Click the icon on the toolbar above the multiline.

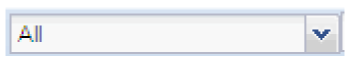
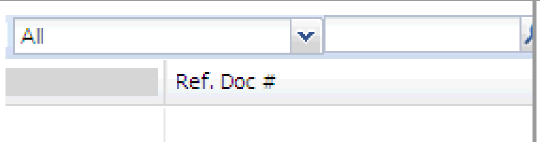
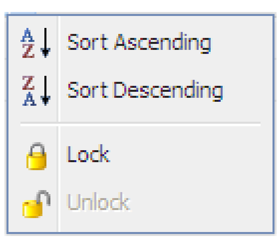
Multiline toolbar

The icons in the multiline toolbar are explained below.

Element	Icon	Description
Selection check box	☑	A check box normally occurring as the second column of every multiline row. It precedes the record in the row. Check the Selection box to mark the record for copy and append, cut and append or deletion. You must also check this box to perform any pushbutton task or hyperlink task available in a Web page. Use the check box in the same row as the multiline header, to simultaneously select all the displayed records in the multiline.

First Record		Click this button, to view the first set of multiline records.
Previous Row Set		Click this button, to view the set of multiline records immediately preceding the currently displayed set of multiline records.
Next Row Set		Click this button, to view the next set of multiline records. However, this is applicable only if the number of retrieved records cannot be accommodated in the current set of multiline rows, and the rest need to be displayed in the next set of multiline rows.
Last Record		Click this button, to view the last set of multiline records.
Insert Record		Click this button on the toolbar above the multiline, to insert a record in the multiline.
Delete Record		Click this button on the toolbar above the multiline, to delete the selected record in the multiline.
Copy and Append Record		Click this button on the toolbar above the multiline, to copy a selected record and insert it at the end of the multiline.
Cut and Append Record		Click this button on the toolbar above the multiline, to remove a selected record and insert it at the end of the multiline.
Export to Excel		Click this button on the toolbar above the multiline, to export the multiline contents to Microsoft Excel.

Show PDF		Click this button to view all the multiline records in PDF format. All those records the system cannot accommodate in the current set of multiline rows can also be viewed in PDF.
Show report		Click this button to view the entire report including the header and the records in a pop-up window. All those records that the system cannot accommodate in the current set of multiline rows can also be viewed by maximizing the window. You can also (i) hide a column in the report and/or' (ii) group and view a report by any of the columns in the report.
Show Html		Click this button to view the multiline records in a browser. All those records that the system cannot accommodate in the current set of multiline rows are also displayed in the browser.
Export to Excel		Click this button to view the multiline records in an Excel worksheet in the XML format. All those records that the system cannot accommodate in the current set of multiline rows are also displayed in the worksheet.
Export to csv		Click this button to view the multiline records in an Excel worksheet in the CSV format. All those records that the system cannot accommodate in the current set of multiline rows are also displayed in the worksheet.
Export to text		Click this button to view the multiline records in the Text format. All those records that the system cannot accommodate in the current set of multiline rows can be viewed in Notepad.
Show chart		Click this button for generating charts based on numeric columns.

Import data		Select this button to import data from a CSV or an XML file.
Save Personalize		Use this button to save any change in the size or order of the columns in the multiline that you have made. Once saved, the changed settings will appear when the page is launched again.
Remove Personalize		Select this button to remove the personalization that you previously made.
List of columns in the multiline		Use the first drop-down list box at the top right of a multiline for a complete list of columns in the multiline.
Find specific record from among the retrieved records		Select the required column from the first drop-down list box on the top right of a multiline. Specify a search value for that column in the input box alongside. Thereafter, click the icon to pass the control to the first instance of the value in the selected column in the multiline.
Sort/lock multiline columns		You can use this menu to (i) sort rows in the multiline in ascending/descending order. (ii) lock columns in the multiline.

Editing a record

You can edit most records through an Edit page. Although the rules governing the fields to be edited will differ between record types, most records do not allow an edit of the unique code identifying the record. Example, an employee record can allow most of the fields to be edited except the Employee Code field.

You can edit a record, provided the record has not been authorized or mapped to any other record. In short, the record must not have been used by any other transaction. You are to

- Select the Edit activity option on the left pane. The Select page appears.
- Select the record to be edited, from the Select page.
- Select the "Edit" link from the Select page. The Edit page appears, showing the details of the selected record.
- Edit the fields that the system permits you to edit. After completion, save the page. The edited details are updated in the database.

Authorizing a record

A record is authorized by any employee who has been given supervisory rights. The rules governing the authorization of records will differ between record types.

Keeping two web pages open simultaneously

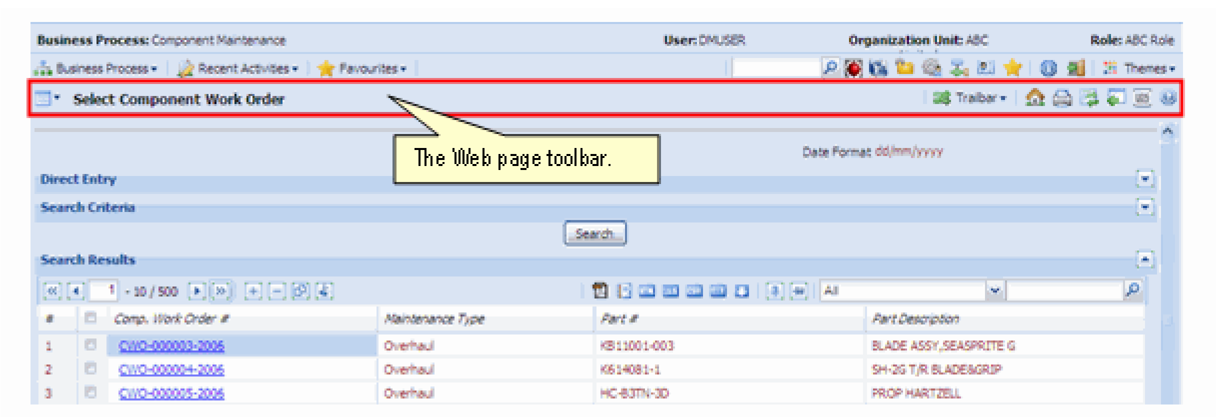
To keep two pages open at the same time, you are to open the browser twice. This implies that you login separately each time, and select the required activity and page.

IE8 is the recommended browser platform for Ramco Aviation Solution.

What is the bare minimum to enter?

In a typical Ramco Aviation Solutions Web page, certain fields crucial for identification of a record appear in **Bold** font. This implies they are mandatory and you must specify a value for the field. Conversely, any field that appears in the Regular font is not mandatory and hence the user need not provide any value for the field. However, certain mandatory fields are set to default values for easy usage, which you may modify, if required.

Web Page / User Interface Toolbar



Here are the elements you will be working with, in the Webpage Toolbar.

Element	Icon	Description
Trailbar		The Trailbar drop-down list box displays all the Web pages traversed to reach the current Web page.
Go to Home page		An icon you select to go to the Home page.
Print screen		Use this icon to obtain a hard copy of the Web page.
Refresh Screen		A button that you select on the Web Page toolbar to enable the system to fetch the most recently updated data from the database. When you select this button in a Create page, the fields are made empty.
Go Back		Click this icon to traverse to the previous page.
Launch UDS		Click this icon to launch the user-defined screens.
Show Help		Click this icon to open the online context -sensitive help for a Web page. Alternatively, click the F1 key to open the Help page. However, to access online Help for a tab page, position the cursor on the tab page and then click the F1 key.

Chapter 1/ Introduction

The Capacity Planning process is a tool that aids in scheduling the execution of maintenance jobs.

The central / work center planners can use this tool to overcome any bottlenecks involving time schedule, work center, parts or employee skills.

Planners can find out capacity load information for customer orders that are pending or in-progress, as well as orders that are planned but not confirmed. They can find out the available as well as the allocated parts, skills and work center capacity with regard to a customer order or maintenance object.

Employee skill shortage for a customer order can be resolved through the following means,

- Moving employee with the required skill to the work center / organization unit where necessary
- Overtime
- External repair
- Alternate work center

Similarly, rescheduling the maintenance job on a future date or moving the job to an alternate work center can solve work center / time bottlenecks

To overcome part bottlenecks, planners can define sourcing strategies including

- Alternate warehouse
- Alternate stock status
- Alternate part
- Purchase

Chapter 2/ Capacity Planning

The **Capacity Planning** sub process enables the planners to plan and schedule the execution of maintenance jobs.

This component aims to simplify the complex function of capacity planning by enabling the planners to balance load across work centers / facilities for scheduled / unscheduled maintenance of aircraft, and its sub-systems. The maintenance work for an entire customer order can be planned on a day-to-day basis.

Set Options

The Set Options sub process enables you to set / reset processing parameters for the Capacity Planning component.

Setting Parameters

This activity enables you to define processing parameters for the Capacity Planning component. These include,

- The short, medium and long terms
- The overtime hours or work allowed for employees
- The sourcing strategies for resolving material bottlenecks

1. Select the **Set Options** link under the **Capacity Planning** business component. The **Set Options** page appears. *See Figure 2.1.*

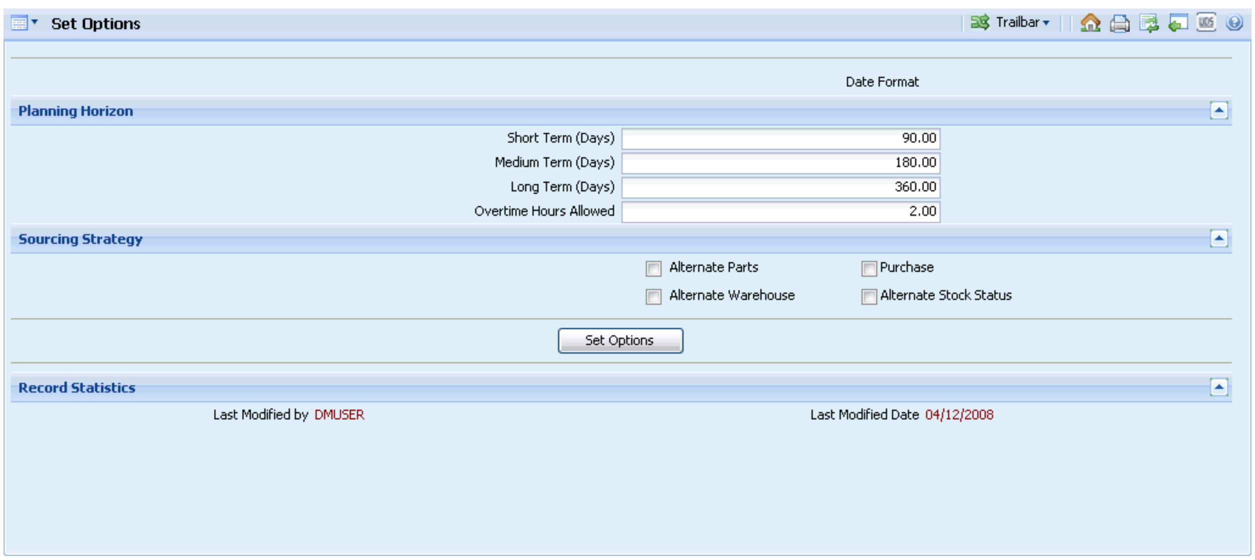


Figure 2.1 Setting Options

Record / change the following in the **Planning Horizon** group box.

2. The maximum number of days that comprise a short-term period in the **Short Term (Days)** field.

3. The maximum number of days that comprise a medium-term period in the **Medium Term (Days)** field.

4. The maximum number of days that comprise a long-term period in the **Long Term (Days)** field.

5. The number of hours an employee can work overtime in a day in the **Overtime Hours Allowed** field.

6. Specify the following in the **Sourcing Strategy** multiline.

7. Check the **Alternate Parts** box to indicate that alternate parts can be used to resolve material bottlenecks.

8. Check the **Purchase** box to indicate that parts can be purchased to resolve material bottlenecks.

9. Check the **Alternate Warehouse** box to indicate that parts can be procured from another warehouse to resolve material bottlenecks.

10. Check the **Alternate Stock Status** box to indicate that alternate stock status can be used to resolve material bottlenecks.

11. The work center number or sub fleet number or planning object number mapped to the planner group, in the **Planning Element** field.

12. Select the **Set Options** pushbutton.

Note: The work center # is required if you have selected Planner Group in the Planning Basis field.

Plan Capacity

Planning Capacity

This activity acts as a single-point access to plan and schedule execution of customer orders / maintenance objects for a central planner or a work center planner.

The capacity planning function takes into account three factors essential for executing customer orders / maintenance objects:

- Time schedule
- Work center load
- Employee skills

1. Select the **Plan Capacity** option from the left pane. The **Plan Capacity** page appears. *See Figure 2.2.*

Enter the following in the **Planning details** group box.

2. The basis for planning capacity in the **Planning Basis** field.

   - The work center number or sub fleet number or planning object number mapped to the planner group, in the **Planning Element** field.

*Note: The work center # is required if you have selected Planner Group in the **Planning Basis** field.*

   - The duration for planning capacity in the **Planning Horizon** field.
   - Use the **Order Type** drop-down list box to select the type of customer order. The system lists the options "Bid", "Prospect," Regular" and "Warranty Claim".

The system displays the following detail.

- The start-date of the planning horizon. The system defaults this field to the current system date.
- The end-date of the planning horizon. The system defaults this field to a date that is specified number of days later than the From Date. For example, if the Planning Horizon is "Short-Term", Short-Term is defined as 10 days in the "Set Options" activity and From Date being 01/07/2006, the To Date will be 11/07/2006.

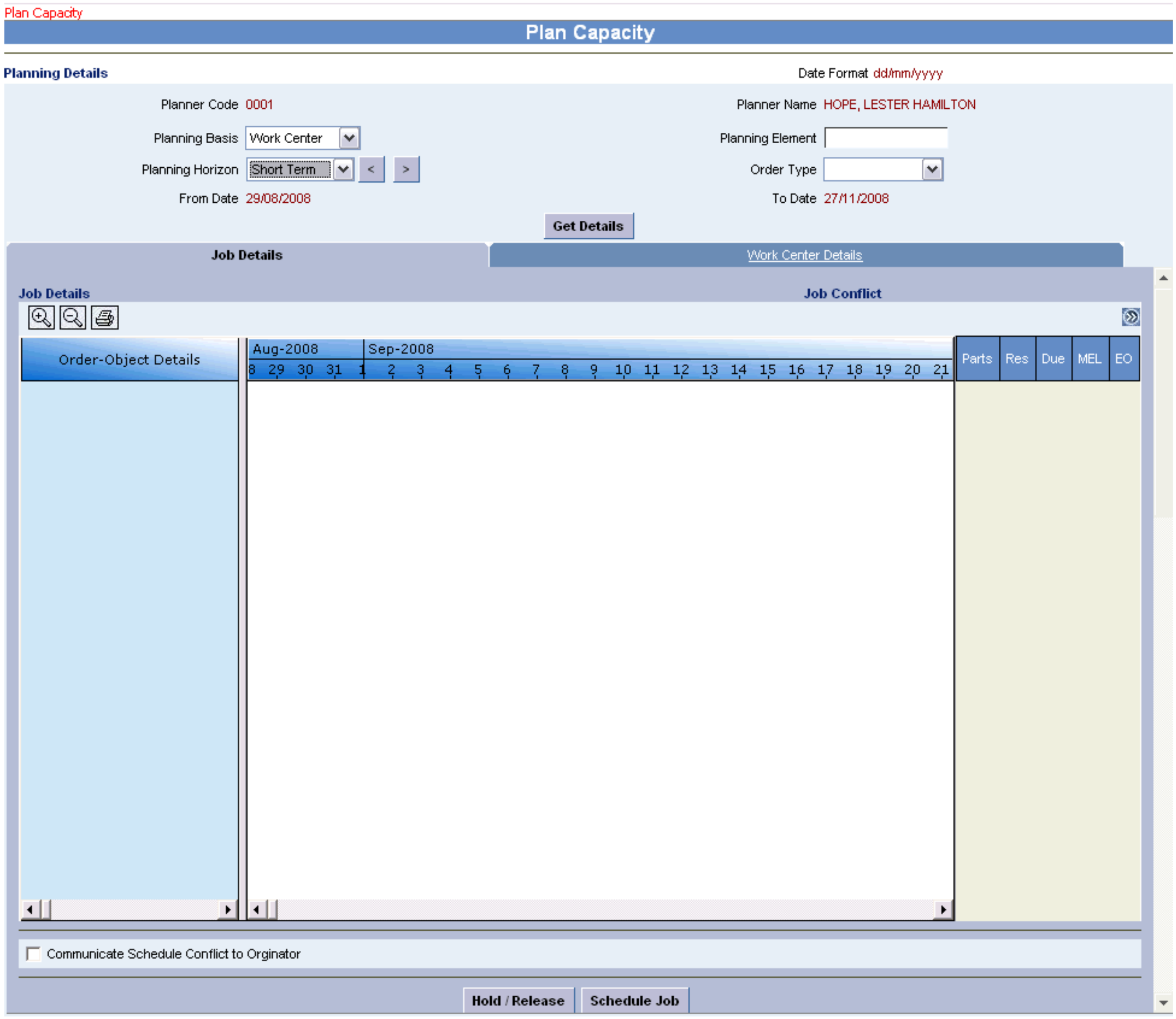


Figure 2.2 Plan Capacity

3. Select the **Lesser Than** and the **Greater Than** pushbuttons to navigate to the previous and the next planning horizons.

4. Select the **Get Details** pushbutton.

To proceed

- Select the **Job Details** tab to plan job details for the customer order.
- Select the **Work Center Details** tab to plan work center loading details for a particular work unit.
- Select the **Record Order Execution Comments** link to record execution comments of the maintenance job.
- Select the **View Hangar Work Order** link to view the hangar work order details.

- Select the **View Component Work Order** link to view the component work order details.
- Select the **View Customer Order** link to view the customer order details.
- Select the **Sch./Re-Sch. Hangar Work Order** link to schedule / re-schedule the hangar work order details.
- Select the **Sch./ Re-Sch. Comp.Work Order** link to schedule/ re-schedule the component work order details.
- Select the **Launch PMT to Schedule Work Orders** link to launch the project management template to schedule the work order.

Planning job details for a customer order

The **Job Details** tab displays the following details associated with a customer order or maintenance object graphically using Gantt chart for the values specified in the **Planning Details** group box. *See Figure 2.3*

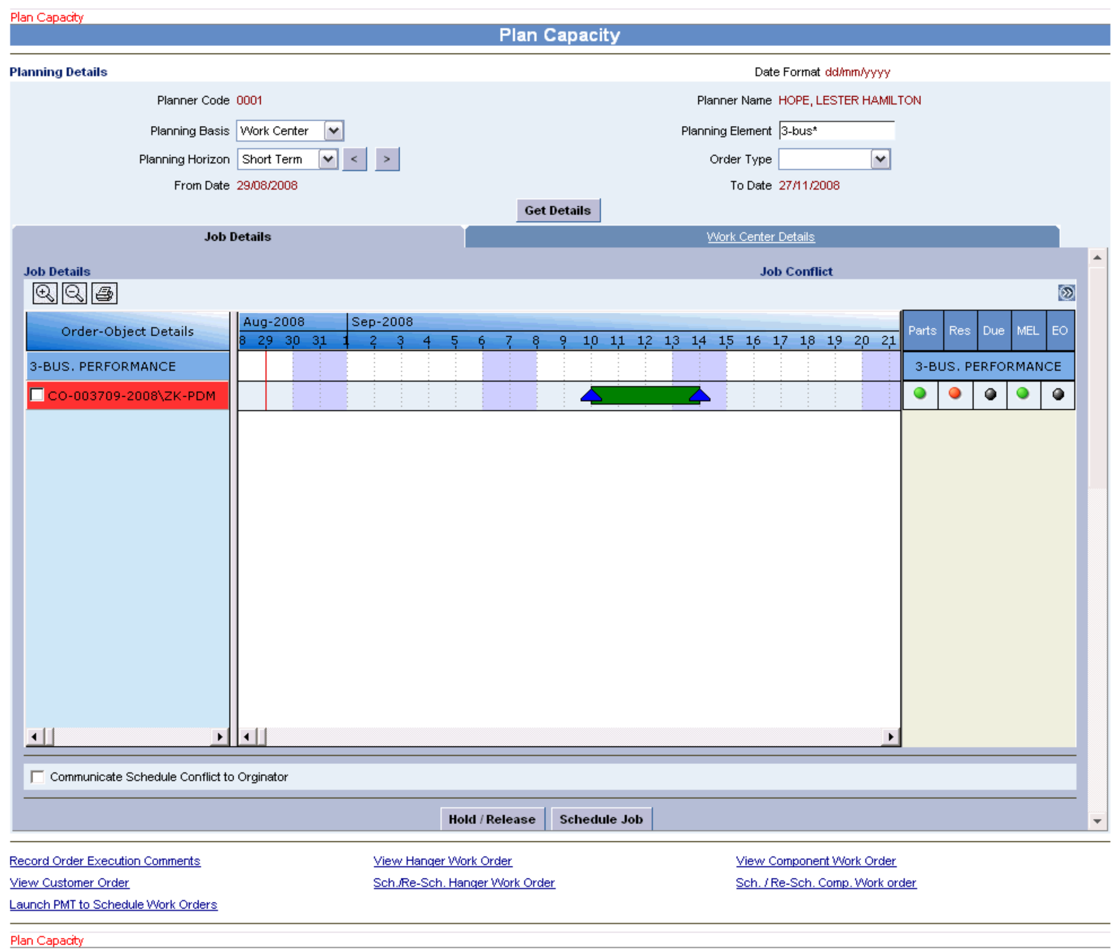


Figure 2.3 Job Details tab

The Job Details chart provides the following information.

- The identification number of the customer order based on the primary work center / maintenance object in the **Maintenance Object / Customer Order #** column. The Gantt chart will list the customer orders or maintenance objects with “Pending” status or for which execution documents have already been created and, the planned From and To dates occur within the specified planning horizon.
- The dates in sequence, which indicate the start and end dates of the execution of the customer order in the **timeline**.

Note: The customer orders with expected receipt date earlier than the From date and promised delivery date later than the To date, the customer orders with expected receipt date earlier than the From date and promised delivery date later than the From date but not later than the To date and the customer orders with promised delivery date later than the From date but not later than the To date are displayed.

Note: Customer orders with any of the following statuses are displayed: "Fresh" "Confirmed", "Authorized" or "Processed".

5. Place the mouse on top of the Gantt chart and then drag / move the Gantt chart to change the timelines to reschedule execution.

The **Job Conflict** Gantt chart displays the current status of the following aspects associated with the maintenance objects / customer orders. Traffic lights of specific colors are used to signify the bottlenecks / status with regard to the maintenance object / customer order.

- Red indicates the following
  - Required Qty > Available Qty & EAD > Start Date of execution orders
  - Green indicates the following
  - Required Qty < Available Qty or Required Qty = 0
  - Yellow indicates the following
  - Any other situation such as, Required Qty>Available Qty &EAD <= Start Date of execution orders.

Enter the following.

6. Any remarks on the execution of the customer order or maintenance object in the **Comments** field.
7. To select the required customer order in the multiline, check the box preceding the record.

8. Select the **Hold / Release** pushbutton to suspend the execution of an already scheduled customer order or release an already suspended customer order.

Note: The "Hold / Release" pushbutton is a toggle key. You can either hold a customer order to understand the effects of ignoring the resource and part requirements pertinent to the order or release the order to consider the parts and resource requirements.

9. Select the **Schedule Job** pushbutton to schedule execution of the order.

Planning of work center loading details for a work unit

1. Select the **Work Center Details** Tab in the **Plan Capacity** Page. *See Figure 2.4.*

Enter the following in the **Work Center Loading Basis** group box

2. Use the **Display Option** drop-down list box to indicate whether time bars need to be grouped by order or by work center. When you select "By Work Center", the system displays work center-wise the tasks associated with the customer orders / maintenance objects. When you select "By Order", the system displays the same tasks pertinent to various customer orders / maintenance objects order wise / maintenance object wise.

3. The identification number of the customer order in the **Order #** field, if you have selected "By Order" in the Display Option field. The system displays the schedules for all the tasks / standard procedures to be executed at the various work centers pertinent to the customer order.

4. Select the **Get Details** pushbutton.

The **Work Center Loading Details** Gantt chart depicts the following information graphically.

- If By Order is selected as the **Display Option**, the Work Center # and the Work Unit # are concatenated and displayed in the list section. If By Work Center is selected as the Display Option, the Customer Order # and the Work Unit # are concatenated and displayed in the list section.
- The dates in sequence, which indicate the start and end dates of execution of the tasks / standard procedures.

5. Place the mouse on top of the Gantt chart and then drag / move the Gantt chart to change the timelines to reschedule execution.

6. Enter the following in the **Load Graph Basis** group box, to generate a load graph for resource.

7. Use the **Work Center #** drop-down list box to specify the work center to find out the availability of resources. The system displays the active work centers defined in **Work Center** business component.

8. Use the **Resource Type** drop-down list box to specify the resource type. The system defaults this field to "Skills".

9. The name / description of the resource in the **Resource** field.

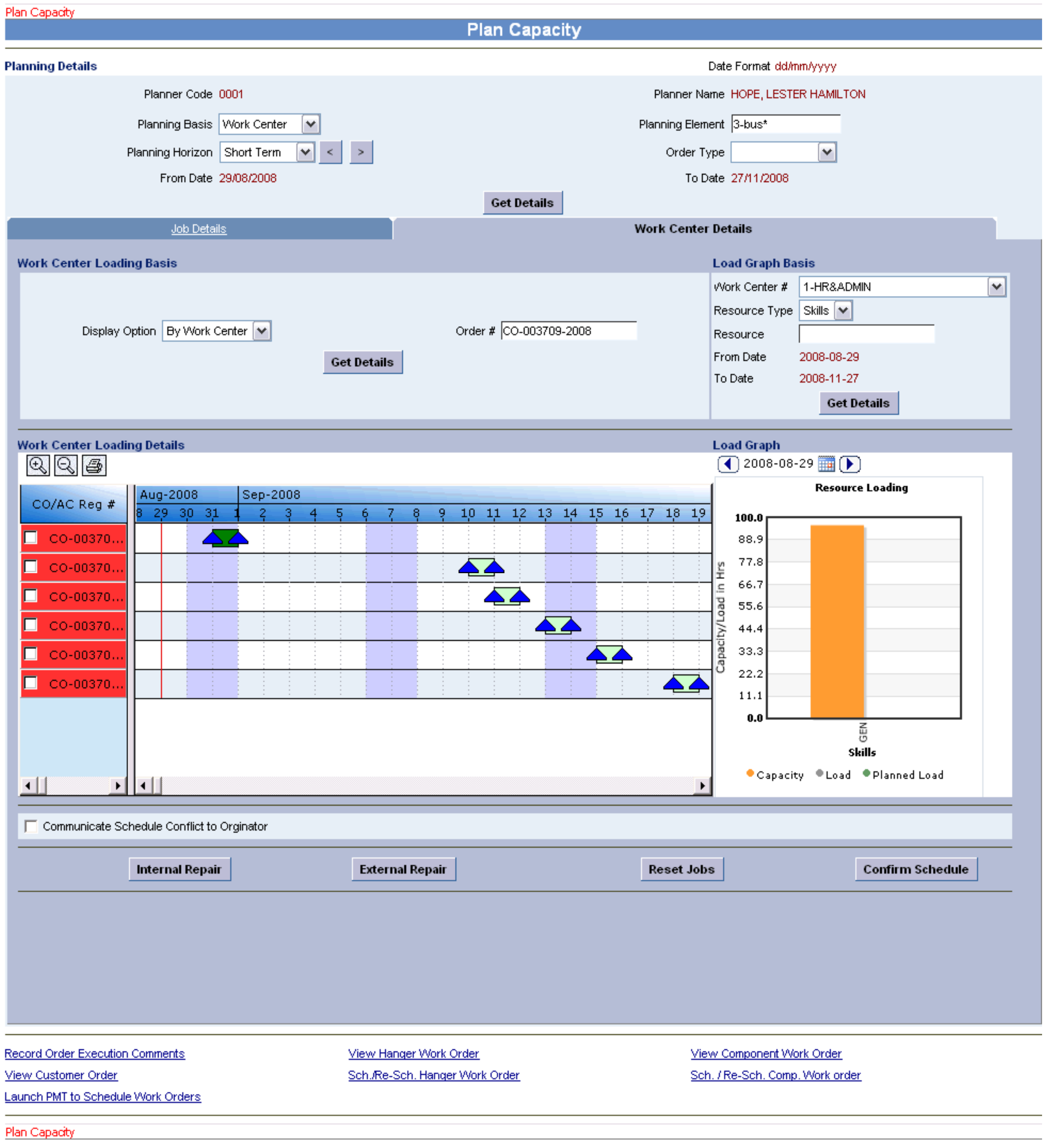


Figure 2.4 Work center details tab

10. Select the **Get Details** pushbutton. The **Load Graph** multiline displays a graph that depicts the following.

    - The **Available Hours** field shown in. This represents total hours of skill available for allocation to customer orders / maintenance objects.
    - The **Firm Booking Hrs** field shown in total estimated hours of tasks to be executed in the work center.
    - The **Plan Booking Hrs** field shown in Total estimated hours of tasks for the customer orders that are not yet processed / confirmed.

10. Select the **External Repair**” pushbutton to execute the task in an external repair shop.

11. Select the **Internal Repair** pushbutton to release the task from an external repair shop.

12. Select the **Reset Jobs** pushbutton to reset the jobs to previous values.

13. Select the **Confirm Schedule** pushbutton to save the schedule details of the customer order.

If the **Plan End Date** of a task is modified in the **Work Center Details** Gantt chart, the **Plan End Date** in the **Job Details** Gantt chart is updated automatically in the current business component.

If the **Plan Start Date** of a task is modified in the **Work Center Details** chart, the **Plan Start Date** in the **Job Details** Gantt chart is updated automatically in the current business component.

Identifying and resolving resource bottleneck

This page shows the available quantity of skills day-wise and work-center-wise, in hours. It also displays the quantity of the skill allocated to confirmed orders as well as planned orders. This enables the planners to make the required adjustment to overcome the resource shortage.

Planners can find the availability of skills required for execution of maintenance jobs in a specified employee, work center and / or organization unit for a planning horizon.

1. Select the **Identify and Resolve Resource Bottleneck** hyperlink in the Resources column in the **Job Conflict** traffic light for the required record. The **Identify and Resolve Resource Bottleneck** page appears. *See Figure 2.5*.

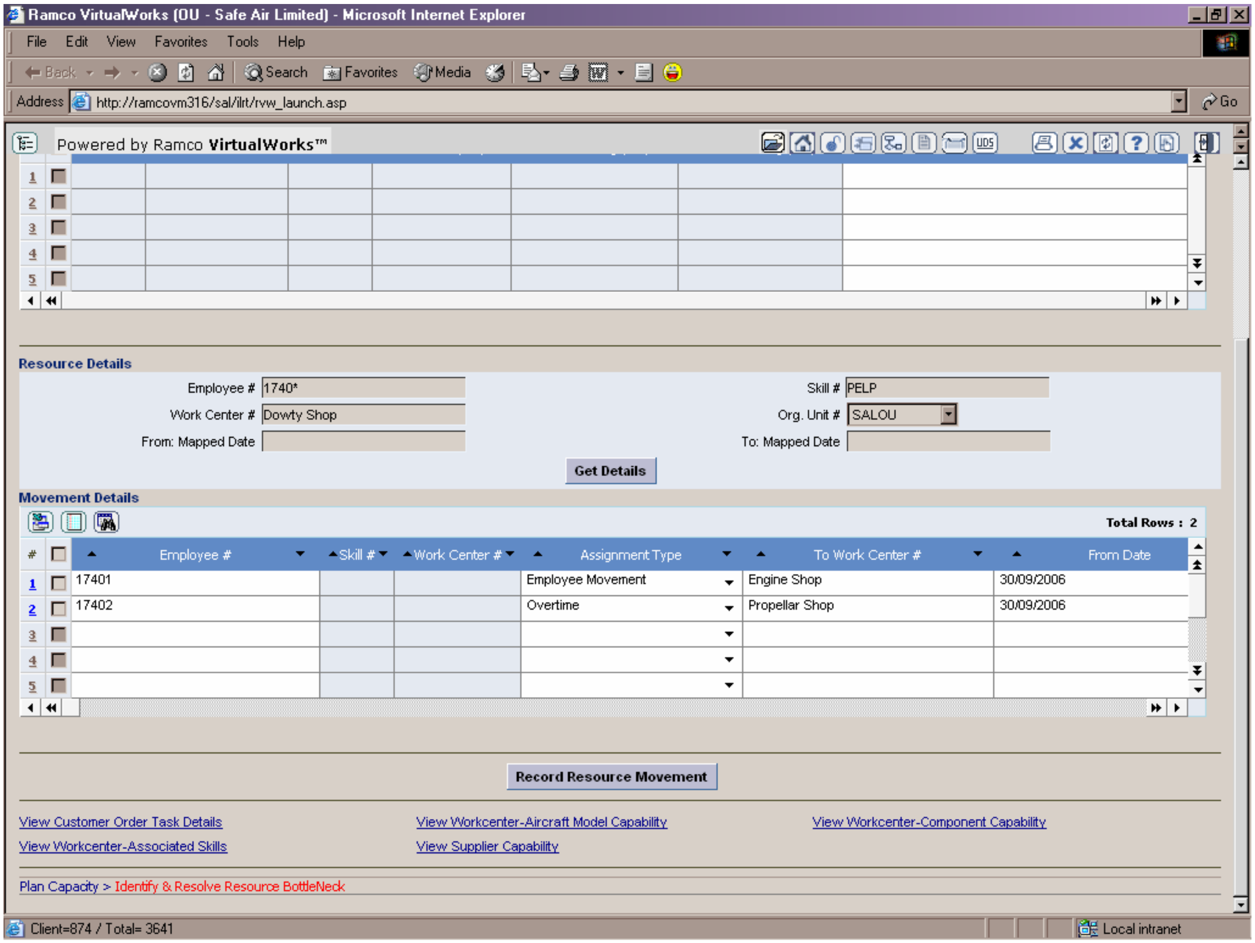


Figure 2.5 Identify and resolve resource bottleneck

The **Planning Details** group box displays the following.

- The employee code of the login user in the **Planner Code** field.
- The name of the login user in the **Planner Name** field.
- The start-date of a specified period, as specified in the **Plan Capacity** page in the **From Date** field.
- The end-date of a specified period, as specified in the **Plan Capacity** page in the **To Date** field.
- The **Resource Bottleneck Details** multiline displays the following.
- The date in the planning horizon in the **Date** field.
- The identification number of the work center in the **Work Center #** field.
- The identification number of the skill in the **Skill #** field.
- The quantity of the resource / skill available on hand, in hours in the **Available (Hrs)** field.

- The quantity of the resource / skill already allocated to orders for which execution document has already been generated, in hours in the **Firm Booking (Hrs)** field.
- The quantity of the resource / skill tentatively set aside for orders for which execution document is not yet generated, in hours in the **Plan Booking (Hrs)** field.

Enter the following in the **Resource Bottleneck Details** multiline.

2. Any remarks or narration on the execution of the customer order / maintenance of the aircraft, component or part in the **Execution Comments**.
3. Enter the following in the **Resource Details** group box to find the available quantity of skills in order to resolve the resource bottleneck.
4. The identification number of the employee with the required skill in the **Employee #** field. Specify this field to display details of the employee alone for the period between From: Mapped Date and To: Mapped Date.
5. The identification number of the skill in the **Skill #** field. Specify this field to display details of all employees with the required skill.
6. The identification number of the work center in the **Work Center #** field. Specify this field to display details of all employees associated with the specified work center for the period between From: Mapped Date and To: Mapped Date.
7. Use the drop-down list box to specify the organization unit in the **Org. Unit #** field. Specify this field to display details of all employees associated with the specified organization unit for the period between From: Mapped Date and To: Mapped Date.
8. The start-date of the specified period for which you want the skill details in the **From: Mapped Date** field. The system defaults the From Date specified in the Plan Capacity page, which you can change.
9. The end-date of the specified period for which you want the skill details in the **To: Mapped Date** field. The system defaults the To Date specified in the Plan Capacity page, which you can change.
10. Select the **Get Details** pushbutton.

Enter the following in the Movement details group box.

11. The identification number of the employee in the **Employee #** field.
12. Use the **Assignment Type** drop-down list box to specify the strategy for resolving the resource bottleneck. The system displays the following values: Employee Movement and Overtime.

13. The identification number of the work center to which the employee needs to be moved to resolve the resource bottleneck, in the **To Work Center #** field. This field is applicable if the Assignment Type is “Employee Movement”.

14. The start-date of the specified period for which the employee / skill is available. This field is mandatory, in the **From Date** field.

15. The end-date of the specified period for which the employee / skill is available, in the **To Date** field.

16. The overtime hours of work required from the employee in the **OT (Hrs)** field.

17. Select the **Record Resource Movement** pushbutton to resolve the resource bottleneck.

Recording order execution comments

You can use this page to record your comments or facts pertinent to the execution of the customer order or maintenance object that you selected in the **Plan Capacity** page. This gives a valuable insight into the actual execution of the maintenance job and helps in future planning and scheduling.

1. Select the **Record Order Execution Comments** link under the **Capacity Planning** business component. The Record Order Execution Comments page appears.

Enter the following in the **Execution Comments** group box.

2. Use the **Conflict Resolution Type** drop-down list box to specify the execution strategy for customer order / maintenance object as selected in the **Plan Capacity** page.

3. Use the **Planning Status** drop-down list box to specify the planning status of the customer order / maintenance object as selected in the **Plan Capacity** page.

4. Use the **Execution Strategy** drop-down list box to specify the execution strategy for customer order / maintenance object as selected in the **Plan Capacity** page.

5. Any additional or detailed information on the schedule for execution of the customer order / maintenance object, in the **Scheduling** field.

6. Any additional or detailed information on the availability of parts for execution of the customer order / maintenance object, in the **Material Availability** field.

7. Any remarks or additional information on schedule / plan of the maintenance job, in the **Assignment Planning Comments** field.

8. Any remarks or additional information on execution of the maintenance job, in the **Execution Planning Comments** field.

9. Enter the following in the **Document Attachment Details** group box.
10. Th**e** name of the document pertinent to the customer order execution, in the **File Name** field.
11. Select the **Record Order Execution Comments** pushbutton.

Viewing availability of parts

The **View Material Availability** page provides key information on the parts, which have bottlenecks for the customer order / maintenance object for a specified planning horizon.

This page helps central planners to monitor the availability, allocation, requirement, procurement, bottleneck, and sourcing method of the required parts for a specified period. This leads to prompt resolution of material bottlenecks and enhanced operational efficiency.

1. Select the **View Material Availability** hyperlink in the Parts column of the required record in the **Job Conflict** multiline. The **View Material Availability** page appears.

Enter the following in the **Search Criteria** group box to find the stock details of the required parts for a specified customer order or maintenance object.

2. Use the **Display Option** drop-down list box to specify the option to display records in the multiline.
3. The identification number of the customer order in the **Customer Order #** field.
4. The start-date of the period for which you want to find the availability of parts. This field is mandatory, in the **From Date** field.
5. The end-date of the period for which you want to find the availability of parts. This field is mandatory, in the **To Date** field.
6. Use the **Maintenance Object** drop-down list box to specify if the maintenance object is an aircraft or component. Enter the **Aircraft Reg #** or the **Component #** in the field beside as per your selection in the drop-down list box.
7. Select the **Get Details** pushbutton.

The **Search Results** multiline displays the following information about parts required for the execution of the customer order / maintenance job of aircraft / component.

- The identification number of the part, in the Part # field.
- The name / description of the part, in the Part Description field.
- The unit of measurement for the part, in the Stock UOM field. For example, litre, kilogram, number or piece.

- The stock status as required for the customer order or maintenance object, in the Stock Status field.
- The quantity available on hand / in the warehouse, in the Available Qty field.
- The quantity required for the execution of the maintenance job, in the Reqd Qty field.
- The quantity that is already ordered and yet to be received, in the On Order Qty field.
- The quantity allocated for the execution of the maintenance job, in the Allocated Qty field.
- The identification number of the warehouse from where the parts are sourced, in the Warehouse # field.
- The time required for the procurement of the ordered quantity, in the Lead Time field.
- The unit of measurement of the lead-time, in the Stock UOM field. For example, hours, days or months.
- The stock status as required for the customer order or maintenance object, in the Stock Status field.
- The quantity available on hand / in the warehouse, in the Available Qty field.
- The quantity required for the execution of the maintenance job, in the Reqd Qty field.
- The quantity that is already ordered and yet to be received, in the On Order Qty field.
- The quantity allocated for the execution of the maintenance job, in the Allocated Qty field.
- The identification number of the warehouse from where the parts are sourced, in the Warehouse # field.
- The time required for the procurement of the ordered quantity, in the Lead Time field.
- The unit of measurement of the lead-time, in the Lead Time Unit field. For example, hours, days or months.
- The identification number of the customer order, in the Customer Order # field.
- The date when the execution of the customer order begins, in the Customer Order St. Date field.
- The date of receipt of ordered parts, in the Expected Date of Arrival field.

- The planning type as defined for the part in Part Administration business component, in the Planning Type field.
- The quantity on hand when reorder must be done, in the Reorder Qty field.
- The sourcing strategy for resolving bottleneck / shortage, in the **Sourcing Strategy** field.

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