Oracle
Field Service Cloud
Using Forecasting Cloud Service

Release August 2016
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About sharing capacity and forecasting data

Revision History
Preface

This preface introduces information sources that can help you use the application and this guide.

Oracle Applications Guides

To find guides for Oracle Applications, go to the Oracle Help Center at http://docs.oracle.com/.

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If you find an error or want to suggest enhancements to our documentation, please take one of the following surveys:


Thank you for helping us improve our documentation.
1 Getting Started

Overview of Forecasting

Forecasting is an advanced tool that enables you to analyze the historical data, forecast workload and plan capacity based on the historical data analysis.

Forecasting can be essential in planning performance and capacity by anticipating certain events and following the trends. Companies use forecasting to estimate whether their workforce is sufficient to meet the anticipated demand and prepare for spikes in the demand based on various events, such as marketing campaigns and even natural disasters.

While natural disasters are admittedly difficult to predict, a company can use their past experience of handling similar situations to plan sufficient standby personnel. Advertising campaigns, on the other hand, are planned in advance and Forecasting can be an important part of that planning.

For example, if a cable television company offered a special Christmas package last year, the historical data reflects a spike in the connecting activities in the last December. When a similar campaign is planned, forecasting can indicate the estimated workforce needed to cover the increased demand. The company can use that data to evaluate in-house capacity and, if necessary, engage contractors to cover that period. The company can also use forecasting to predict a lull in demand over the summer months and schedule vacations for its own personnel over that same period.

In addition to forecasting, Oracle Field Service Cloud Forecasting provides a centralized location with permission-based access for gap analysis information across the mobile workforce in your organization. A forecast, plan, or capacity can be viewed and compared at specific time durations or by specific working areas by the managers with local focus while at the same time rolled up for viewing at a corporate level, across an entire company. It is a single source of information regardless of who accesses it.

About the Oracle Field Service Cloud Forecasting interface

The Oracle Field Service Cloud Forecasting interface is used for all forecasting- and planning-related activities, including importing and exporting data and modifying plans.

To access Forecasting from Oracle Field Service Core Manage Cloud Service, click Dispatch and select Forecasting from the drop-down list. The Oracle Field Service Cloud Forecasting interface displays the following options:

<table>
<thead>
<tr>
<th>Interface Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resource Tree</td>
<td>Provides a hierarchical view of the organization’s resources, typically sorted by geographical region. Resources are grouped into Buckets and Groups.</td>
</tr>
<tr>
<td>Bucket</td>
<td>Denotes a resource tree entity, which is assigned with activities. Select a bucket to manipulate data in the forecast plan.</td>
</tr>
</tbody>
</table>
### Interface Component | Description
--- | ---
**Resource Tree Filters / Resource Search** | Filter the resources within the resource tree.
**Calendar** | View the forecast data for a selected date range.
**View** | Restrict the data display for specific capacity categories and/or time slots using the filters.
**Set Plan** | Adjust the forecasted plan by a fixed percentage. The percentage can be adjusted with a constant percentage or by Week/Month/Year.
**Export** | Export the forecasted data from Oracle Field Service Cloud in CSV format. The exported data is useful if you want to perform further calculations on the data or if you want to use the data in another system.
**Import** | Import the CSV formatted data into the Oracle Field Service Cloud Forecasting.
**Available Resources** | Indicates the number of man-minutes available for the specified date and bucket. The Available Resources line is always shown in orange. This line is displayed only at the bucket level and not at the capacity category or time slot level.
**Actual Workload** | Indicates the number of man-minutes used for a specified date, capacity category and time slot in the past. The Actual Workload line is always shown in green.
**Forecasted Workload** | The number of man-minutes predicted for a specified date, capacity category and time slot. The Forecasted Workload line is always shown in yellow.
**Forecasted Min. Workload** | Minimum forecasted workload that needs to be completed each day, in case there are SLA based activities. The Forecasted Min. Workload is always shown in yellow.
**Forecasted Max. Workload** | Maximum forecasted workload that can be completed each day, in case there are SLA based activities. The Forecasted Max. Workload is always shown in brown.
**Booked Workload** | The number of man-minutes booked for the future dates in the Quota screen. The Booked Workload is always shown in blue.
**Service Planner View** | Displays the data in a cumulative form starting from the current date.
**Demand Forecaster View** | Displays the data in non-cumulative form. Data for both past and future dates are displayed.
**Plan** | This is plotted as per the value set using Set Plan over the Forecasted Workload.
2 Using the Forecasting interface

Access forecasting interface

The Oracle Field Service Cloud Forecasting interface allows you to select a date range, filter the data, and view it in chart or table format.

This section provides an overview of the Oracle Field Service Cloud Forecasting screen, and features that you can use in forecasting.

Related Topics

- About the resource tree
- About the forecasting tool bar
- View the data by calendar
- About the View tab
- Setup forecasting plan
About the resource tree

The resource tree provides a hierarchical view of an organization’s resources, typically sorted by the geographical regions.

It is displayed to the left side of the screen.

There are three types of items in the resource tree:

- Groups
- Buckets
- Resources

Note: You must select a bucket from the resource tree in order to manipulate data in the forecast.

About the forecasting tool bar

The forecasting tool bar contains all the options to import and manipulate data to produce a forecast, and to export forecasted data to other systems.

From the tool bar, you can access the following features:

- Calendar
- View
- Set Plan
- Export
Using Forecasting Cloud Service
Chapter 2

View the data by calendar

Use the calendar to choose the date range and the time period unit for requested data.

The date is displayed next to the bucket name.

Steps

1. Click Dispatch - Forecasting
   The Forecasting window opens.
2. Using the forward and back arrows on the calendar, select the time period you wish to request data.
3. Click the dates shown in the field to open a calendar that provides five time-interval options:
   - 1 Week
   - 2 weeks
   - 1 Month
   - 3 months
   - 6 months
4. Select a time interval, and then click the start date on the calendar to display the data for that period.
   The left and right arrows in the date field move the calendar to the selected period of time.
5. Select either Day or Month depending on the unit of time period that the data is to be displayed.
About the View tab

The View tab allows you to fine-tune the information you see in the forecast display. Use the options in the drop-down lists to select the filters and restrict the data display to specific capacity categories and/or time slots.

Setup forecasting plan

The Set Plan tab allows you to modify the plan above or below the forecast by a given percentage. This lets analysts make incremental changes to the plan in response to new information, such as severe weather predictions.

Use this feature to set the plan for the capacity bucket that you have selected.

Steps

1. Click Dispatch - Forecasting
   The Forecasting window opens.
2. Click Set Plan to set the plan for the desired bucket and date range.
3. Choose the time interval that corresponds to the one you chose in the calendar.
   The Set Plan dialog is displayed.
4. Enter a percent to set the desired difference between forecasting and planned values. The available range is from -100% to 100%.

For example, if you set the percent to -5, you are setting your plan to 5% less than the forecast. Setting 5% sets the plan to 5% more than the forecast.

5. Select a progressive mode to define how the planned values progress over time. Four mode options are available:
   - **Constant**: Plan values are calculated as the fixed difference from the forecasting values for the entire period
   - **Weekly**: Plan values increase by the specified percent on a weekly basis
   - **Monthly**: Plan values increase by the specified percent on a monthly basis
   - **Yearly**: Plan values increase by the percent annually

6. Click **OK** to create or update the plan.

### About the available resources

View the **Available Resources** trend line when you select a particular capacity category or time-slot from the **View** drop-down options.

A Resource can be associated with multiple capacity categories and time slots. In such scenario, the **Available Resources** for a particular capacity category or time slot depends on the time shared with other capacity categories and time-slots. Based on this information, Available Resources is displayed as three different values for each day:

- **Min. Available Resources**: Denotes the minimum available resources for a particular view, assuming that the resources shared with another view, are not included in this view. This value is calculated based on the worst case scenario, where only resources that do not share their time with other capacity categories or time slots are included.
• **Max. Available Resources:** Denotes the maximum available resources for a particular view, assuming that all the shared and not-shared resources are available in this view. This value is calculated based on the best case scenario, where the entire time of all resources in that view are included.

• **Average Available Resources:** Denotes the actual number of resources available, assuming that the resource time is divided equally among each capacity category and time slot that the resource is associated with. This represents the most realistic quantity of resources available for that particular view.

**Example to calculate available resource values:**

A resource have the following associated time slots and capacity categories:

- **Time slots:** 11-1, 1-3
- **Capacity Categories:** Install, Uninstall

**Min. Available Resources:** Only the undivided resource time is considered

**Average Available Resources:** Overlapping time is split proportionately
**Max. Available Resources:** Maximum availability of the resources

<table>
<thead>
<tr>
<th>Time slot/Capacity Category</th>
<th>11-1</th>
<th>1-3</th>
<th>^</th>
</tr>
</thead>
<tbody>
<tr>
<td>Install</td>
<td>120</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>Uninstall</td>
<td>120</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>*</td>
<td>120</td>
<td>120</td>
<td>240</td>
</tr>
</tbody>
</table>

The resultant available resource details are plotted as a graph:

In the graph, select a particular capacity category or time slot, the Available Resources are plotted based on the values of Min. and Max. Available Resources. The **Average Available Resources** trend is displayed as a separate line. All three trend values (Min., Max. and Available Resources) are displayed in the grid below the graph. Overrides can be added only to the Available Resources trend line.

> **Note:** The three values of the **Available Resources** is run as a script once a day. Any changes made to the resource calendar will be reflected only on the next day.
About importing and exporting data

Oracle Field Service Cloud supports data import and export in CSV format. Exporting lets you to process the data in the external applications.

For example, a company might choose to use Oracle Field Service Cloud’s forecast “as is” (with only slight Set Plan changes) for the time duration between 4 months and 12 months. However, a company’s forecasting analyst may find that planning in a tighter time frame (maybe less than 4-6 months) requires additional information from outside sources.

A marketing campaign may be planned for certain areas of the country or this year’s weather patterns over the Pacific Ocean indicate a greater amount of rain in certain months over certain areas. Oracle Field Service Cloud provides a robust import and export tool that supports an analyst making changes to the plan in an outside system using Excel, Access, Google Spreadsheet or some other tool and then uploading the updates into Oracle Field Service Cloud.

About importing data

Oracle Field Service Cloud supports data import in CSV format.

The following data types can be imported:

- **History**: Historical capacity data
- **Forecast**: Forecasted data
- **Plan**: Plan data
- **Custom line**: Additional data that can be added to a chart or table. For example, data from another bucket can be added for comparison and analysis

The lines in the CSV file contains the following format:

- **Bucket’s external ID**: The external ID of the bucket selected on the Technician/Bucket Info screen.
- **Data type**: The type of data imported (History, Forecast, sla_start, sla_end, Plan or Custom Line).
- **Name**: The name of the data defined as custom line. This parameter is used to differentiate between custom lines when several custom lines are used in the same chart. For History, Forecast, sla_start, sla_end, and Plan data types the Name column will contain Actual Workload, Forecasted Workload, Forecasted Max. Workload, Forecasted Min. Workload, and Plan depending on the data.
- **Date**: The date of the data which is imported in ISO format.
- **Time Slot**: The time slot of the data which is imported. Time slot labels are set under Time Slots on the Company Settings menu.
- **Capacity category**: The capacity category of the data which is imported. Capacity category labels are set under Capacity Categories on the Configurations menu.
• **Minutes**: The man-minutes needed for the specified date, capacity category, time slot and work zone. Depending on the type of data, this value can be historical, forecasted, planned or custom value.

Things to keep in mind when importing data:

• Data imported into Oracle Field Service Cloud from a CSV file must contain whole numbers (no decimals) only.

  ![Note](image)

  *Note:* You cannot upload data in the excel format. Use a text editor to create the CSV file.

• If you wish to format the data fields, you should first export the template, make necessary changes and import the updated template into the application.

• The size limitation to import your file in a single upload is 1.5 MB. If your data set is larger than 1.5 MB, upload it multiple times.

• The error message appears when you load a file that is too large: **error occurred during file uploading.**

### About exporting data

You can export CSV-formatted data from Oracle Field Service Cloud Forecasting. The exported data doesn't show in excel format as this feature doesn't support Excel.

![Exported Data Table](image)

You can export the following type of data:

• Actual Workload

• Forecasted Workload/ Forecasted Max. Workload/ Forecasted Min. Workload.

• Plan

• Custom line (Additional data that can be added to a chart or table. For example, data from another bucket can be added for comparison and analysis.)
The lines in the exported CSV file contains the following format:

- **Bucket’s external ID**: The external ID of the bucket selected in the Technician/Bucket Info screen.
- **Data type**: The type of data exported (History, Forecast, sla_start, sla_end, Plan or Custom Line).
- **Name**: The name of the data defined as custom line. This parameter is used to differentiate between custom lines when several custom lines are used in the same chart. For History, Forecast, sla_start, sla_end, and Plan data types the Name column will contain Actual Workload, Forecasted Workload, Forecasted Max. Workload, Forecasted Min. Workload, and Plan depending on the data.
- **Date**: The date of the data that is getting exported in ISO format.
- **Time slot**: The time slot of the data that is getting exported. Time slot labels are set under Time Slots on the Configurations menu.
- **Capacity category**: The label of the capacity category that is getting exported. Capacity category labels are set under Capacity Categories on the Configurations menu.
- **Minutes**: The man-minutes needed for the specified date, capacity category, time slot and work zone. Depending on the type of data this value can represent history, forecasted, planned or custom value.

### Export the forecasted data

You can export CSV-formatted forecast data.

**Steps**

1. In the Forecasting screen, click Export and then click OK to save the file.
2. Access the exported file and perform the following steps:
   a. Change the header in column A and remove the additional characters from the Bucket’s external ID. This includes question marks, quotation marks, and exclamation marks.
   b. Add the updated data, you wish to import, into this new file. Ensure that the Bucket’s external ID in column A does not have additional characters.
   c. Save the new file that you created as .csv file.

### Import the forecasting data

You can import the forecasting data in CSV file format.

**Steps**

1. In the Forecasting page, click Import.
2. Click Browse to select the file to import.
3. Click OK.

The new lines appear on the Forecasting screen, and the name of the new line is displayed in the legend.
Override the forecasted values

Override and publish the forecasted workload data and resources in the forecasted rows. You can also perform what-if analysis and share it with other resources.

The original 4 rows (5 in case of presence of SLA based activities) are not editable. Overrides can be added to only future values of Available Resources, Forecasted Workload/Forecasted Max. Workload/Forecasted Min. Workload or another override.

Steps

1. Click **Dispatch - Forecasting**.
   
The Forecasting UI opens.
2. Select a bucket from the resource tree in order to update.
3. Select a row from the Actual Workload, Forecasted Workload/Forecasted Max. Workload/Forecasted Min. Workload, or another override.
4. Click **Add Override**.
   
A new row appears with the values same as previous row for future dates.
5. Double-click the label.

   The **Update Trend Name** pop-up opens.
6. Rename the label and click **Update**.
   The trend name is saved.

7. Select a single cell or multiple cells from the row.
   The **Value** and **Comments** text fields appear.

8. Enter the overridden **Value** and a **Comment** if necessary.
   The comment is added as a triangular flag in the cell and opens as a hint pop-up on hover.

9. Click **Save**.
   The overrides are saved as your local copy only.

   ✉ **Note:** Rows in white background indicate that the row is published and will be visible to all the users. Rows in yellow background are not published and are only visible to the current user.

10. Click **Save and Publish**.
    The overrides are saved and published to all the users.

   ✉ **Note:** An alert pop-up opens if you switch between Cumulative and Non-cumulative without saving the overrides.
4 Viewing Charts and Tables

About chart and table views

You can view Actual Workload, Forecasted Workload, plan, and Available Resources data in two modes – line chart and table view. The table view is displayed below the chart view.

Related Topics

- About chart view
- About the table view

About chart view

You can view the Actual Workload, Forecasted Workload, plan, and Available Resources data in line-chart mode. The X-axis of the chart represents time (in days), the Y-axis represents workload (in man-minutes). The chart may contain up to 5 basic lines:

- **Available Resources**: The number of man-minutes that were available for the specified date and bucket. The Available Resources line is always shown in orange. This line is displayed only at the bucket level and not at the capacity category or time slot level.

- **Actual Workload**: The number of man-minutes used for the specified date, capacity category and time slot. The Actual Workload line is always shown in green.

- **Forecasted Workload**: The number of man-minutes predicted for the specified date, capacity category and time slot. The Forecasted Workload line is always shown in yellow.

- **Forecasted Min. Workload**: Shows the minimum forecasted workload that needs to be completed on each day in case, there are SLA based activities. The Forecasted Min. Workload is always shown in yellow.

- **Forecasted Max. Workload**: Shows the maximum forecasted workload that can be completed on each day in case, there are SLA based activities. The Forecasted Max. Workload is always shown in brown.

- **Booked Workload**: The number of man-minutes that have been booked for future dates in the Quota screen. The Booked Workload is always shown in blue.
Note: In case there are SLA based activities, the Forecasted Workload line is not displayed. However, Forecasted Min. Workload and Forecasted Max. Workload are displayed.

You can select any or all of the check boxes located in the upper right to display the type of data to be shown in the line chart. When a check box is selected, the corresponding line in the diagram is highlighted. When any of the lines are shown or hidden, the chart is rescaled to fit all data, and the lines are dynamically redrawn according to the new scale.

Hovering over a line displays the line name and the time and values that correspond to the selected point in that line.
Service Planner

Click the cumulative view icon to display all data for future dates in a cumulative form, starting from the current date. Past data is not displayed in this view. Data in the table view is also updated accordingly.

The Service Planner gives a clearer picture about resource constraints and idle resource time.

- If the Available Resources line is above the Forecasted Max. Workload, it indicates that there is not enough workload for the available resources and hence, there will be some idle time. (Circled in black)

- If the Available Resources line is below the Forecasted Min. Workload/Forecasted Workload, it indicates that there is more work to be completed than available resources. Hence, there is a resource constraint and some activities may miss their SLA windows. (Circled in red)

- If the Available Resources line is above the Forecasted Min. Workload but below the Forecasted Max. Workload, there is no resource constraint or idle time. (Circled in green)

Using this information, users can reduce resources from certain dates and increase resources in certain other dates so that SLA’s are not missed and resources do not sit idle. Modifications and what-if analysis can be performed on the data using the Add Override feature. See Override Forecast Values.

Related Topics

- Override the forecasted values
About the table view

You can display forecasting, plan and capacity data in the table-view mode.

You can view **Actual Workload**, **Forecasted Workload**, **Plan** and **Available Resources** data in the table view mode below the chart view. The table view shows the same data that is displayed in the chart view. The table view also provides the ability to **Add Overrides** to the future data. Published data is shown in a white background and the non-published data, which is not visible to other users, is shown in a yellow background. Cells that have comments are highlighted with a green triangle. The green triangle and the comment appears when you hover over the cell.
5 Viewing the Plan Within OFSC Capacity

Forecasting in capacity

A primary input to Oracle Field Service Cloud Forecasting (from the Oracle Field Service Cloud Capacity modules) is the Max. Available time in the Capacity module. In the Oracle Field Service Cloud Forecasting module the Max available time is referred to as Available Resources.

Whether the plan is based solely on a relationship with the Forecast (using the Set Plan function) or on a file upload, the plan number is applicable by capacity category, day, and time slot and is read-only in the Oracle Field Service Cloud Capacity.

Note: A resource with specific user type in the Oracle Field Service Cloud Capacity module will have limited access to the Oracle Field Service Cloud Forecasting plan information.

Plans created in Oracle Field Service Cloud Forecasting can be viewed in the Quota Management as an additional column in the Quota table. In order to display Plan column in the Quota table, select Enable Plan column that shows data set in Forecasting under Display in the Configuration menu.

Click the Plan check box in the View drop-down list on the Quota screen. Show planning must be checked to display the Plan column.

The Plan column containing the planned values appears in the Quota table at the Capacity category level.

About sharing capacity and forecasting data

Oracle Field Service Cloud has many integrated modules that enable you to analyze and share data using the available tools.

The information exchange (inputs and outputs) denotes sharing data generated in Oracle Field Service Capacity Cloud Service and Oracle Field Service Cloud forecasting it in the Quota screen for a selected bucket.
Revision History

This document will continue to evolve as existing sections change and new information is added. All updates are logged in the following table, with the most recent updates at the bottom.

<table>
<thead>
<tr>
<th>Date</th>
<th>What's Changed</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>APR 2016</td>
<td>Minor changes for clarity and consistency</td>
<td></td>
</tr>
<tr>
<td>AUG 2016</td>
<td>• Added new information about the available resources • Revised information and images to more accurately reflect the Oracle Field Service Forecasting Cloud Service user interface.</td>
<td></td>
</tr>
<tr>
<td>SEP 2016</td>
<td>Minor changes for clarity and consistency</td>
<td></td>
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<tr>
<td>OCT 2016</td>
<td>Minor changes for clarity and consistency</td>
<td></td>
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<tr>
<td>NOV 2016</td>
<td>Minor changes for clarity and consistency</td>
<td></td>
</tr>
<tr>
<td>JAN 2017</td>
<td>Minor changes for clarity and consistency</td>
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