

# Field Service



## **Using Capacity Service**

F75112-06

Copyright © 2003, 2023, Oracle and/or its affiliates.

Authors: The Field Service Information Development Team

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display in any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software" or "commercial computer software documentation" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

The business names used in this documentation are fictitious, and are not intended to identify any real companies currently or previously in existence.

# Contents

<b>Preface</b>	<b>i</b>
<hr/>	
<b>1 Getting Started</b>	<b>1</b>
About Capacity-Based Quota Management	1
About Capacity Components	1
<b>2 Configuring Capacity</b>	<b>3</b>
Set Up or Configure for the First Time	3
About Work Skills and Work Skill Conditions	3
Work Skills	4
Work Skill Groups	6
About Work Skill Conditions	8
Capacity Categories	10
About Time Slots	13
About Enabling Quota Management	16
Configure Major and Critical Capacity Usage Settings	18
Define Units of Measurement for the Quota	18
Configure Quota Options	19
Booking Recommendations	24
Adjusting Available Capacity	26
<b>3 Using Capacity based Quota</b>	<b>29</b>
Overview of Capacity-Based Quota Management	29
How do I view the quota matrix?	29
Change the Quota View	29
What is Activity Booking?	30
View and Change Available Quota	39
Manage Quota Limits for Booking Intervals	41
Use Planned Capacity for Booking Activities	43
Quota View Parameters	45
Configure Capacity at Various Quota Levels	50

---

<b>4</b>	<b>Managing Capacity and Quota</b>	<b>55</b>
	About Capacity and Quota	55
	Compare Projected Quota with Actual Quota	55
	Identify the Changed Quota Values	55
	Close the Quota Manually	56
	Close the Booking Automatically	57
	Add Quota	57
<b>5</b>	<b>Calculating Capacity and Quota</b>	<b>67</b>
	Calculate Quota for Other Activities	67
	Segmentable Activities Behavior in Quota Management	67
	Calculate Quota Using the Historical Data	68
	About Travel Time Estimation	69
<b>6</b>	<b>Reporting Capacity and Quota</b>	<b>75</b>
	Reporting Capacity and Quota	75

# Preface

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

## Using Oracle Applications

To find guides for Oracle Applications, go to the [Oracle Help Center](#).

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the [Oracle Accessibility Program website](#).

Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

## Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we're working to remove insensitive terms from our products and documentation. We're also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

## Contacting Oracle

### Access to Oracle Support

Customers can access electronic support through Oracle Support. For information, visit [My Oracle Support](#) or visit [Accessible Oracle Support](#) if you are hearing impaired.

### Comments and Suggestions

Please give us feedback about Oracle Applications Help and guides. Please take one of the following surveys:

- For web-based user guide, [Web-based User Guide Survey](#)
- For tutorial feedback, [Tutorial Survey](#)



# 1 Getting Started

## About Capacity-Based Quota Management

Oracle Field Service Capacity lets you achieve an optimal resource utilization. Using this feature, you can plan the resource capacity in advance, forecast the resource allocation and identify where the quota is under-utilized or over-utilized.

**Capacity Management:** Manages the volume of your workforce. Capacity ensures that you have enough qualified resources to implement the expected amount and type of work.

**Quota Management:** Allocates work across the shifts and time slots for the available field resources.

In Oracle Field Service, you can manage quota and capacity in the capacity management matrix. The quota matrix is generated with the real-time data based upon your company's requirements.

You can update quota values to meet your business needs using either .time-slot based or time-interval based (availability-based) quota management.

## About Capacity Components

Oracle Field Service Capacity Service uses several core Oracle Field Service components. These components work together to provide efficient capacity management details.

Following are the important capacity components:

- **Workskills:** A client-specific set of skills assigned to the resources to determine their skill sets and the qualification level within each skill set.
- **Work Skill Conditions:** A set of rules defined to assign required work skills and work skill levels to the activities.
- **Capacity Categories:** A group of activities with similar work skill requirements. These are used for the quota management purpose.
- **Time Slots:** The amount of quota reserved for a capacity category at a specific time of the day. Time slots are associated with the buckets and individual capacity categories that are used to manage the capacity management grid. Time slots are also used to manage the activities.
- **Time Intervals:** Defines the configured time intervals for booking activities. This value is used to show available capacity, max available resources, and the value for Booking Status time intervals.

When all these components are configured correctly, you can define quota for various capacity categories and time slot combinations.





## 2 Configuring Capacity

### Set Up or Configure for the First Time

First time users must complete the tasks in this topic to configure or set up capacity. You must familiarize yourself with different user interfaces and the basic navigation. The structure of this guide helps you implement quickly by providing a direct link to each core setup task.

Use this procedure to access the setup tasks:

- **Create work skills:** A work skill is the common language to match activities with the qualified resources. See [Create a Work Skill](#) for details.
- **Assign work skills and work skill levels to the resources:** You must assign the work skills to the resources based upon their skill sets. Use work skill levels to define expertise level of the resource. For more information, see the Using Core Application Guide.
- **Create work skill conditions:** Work skill conditions are used to automatically assign work skills and work skill levels to the activities. See [Create a Work Skill Condition](#) for details.
- **Create capacity categories:** You can allocate quota to an activity type for a given time slot, using capacity categories. You need to create a capacity category for each activity type that the resource performs. For example, you can create a capacity category for Installation, one for un-installing, one for Upgrades, and one for Trouble Calls. See [Create a Capacity Category](#) for details.
- **Create time slots:** Control the amount of quota reserved for a certain capacity category at a particular time of the day. Time slots are also used for activity management. See [Create a Time Slot](#) for details.
- **Define Time Intervals:** See [Define Time Intervals for Booking Activities](#).
- **Enable Quota Management:** You must enable this feature on the buckets to manage the quota. See [Enable quota management at the bucket level](#) for details.
- **Configure Quota Options:** See [Configure Quota Options](#).
- **Configure major and critical capacity usage:** Manage the color schema settings whenever the used capacity reaches major or critical levels in the quota matrix. See [Configure Major and Critical Capacity Usage](#) for details.
- **Define the units of measurement for Quota:** Choose the units of measurement to display Quota/Used values. See [Define Units of Measurement for Quota](#) for details.
- **Adjust available capacity:** Recalculate the quota defined as a percentage of capacity regularly to manage resource allocation changes, work skills and other variables. See [Adjusting Available Capacity](#).

### About Work Skills and Work Skill Conditions

*Work skills and work skill conditions* lets Oracle Field Service Capacity to identify efficient resources that can perform the *activities* with the work skills as a common language. You can use this information to associate resources with the activities and assign the user-defined tasks to the appropriate person or group of people quickly and efficiently during the *routing* process.

## Work Skills

A work skill is the job-specific skill or competency that's necessary to perform an activity. Work skills are the defining criteria to match activities with the resources.

When you create a work skill, you can define the level of expertise required to perform the activity. For example, if you create Install as a work skill, you can have the required level of expertise as 90. Only the resources that have the expertise level of 90 percent or more are assigned to the activity. Further, you assign a work skill to a work skill condition and resource. You can also add work skills to Work Skill Groups.

## Create a Work Skill

Oracle Field Service associates resources with the activities through shared *work skills*.

### Before you start

You must create a work skill first and then assign it to the resources and the work skill conditions.

### Here's what to do

1. Open **Configuration > Business Rules** and select the **Work Skills Support** check box.  
The work skill option is enabled.
2. Click **Configuration > Work Skills**.  
The **Work Skills** screen displays.
3. Click **Add New**.  
The **Add Work Skill** window displays.
4. Configure the following values:
  - o **Name:** Type a descriptive name for the work skill. For example, New Install, Video, or Outage. Select at least one language.
  - o **Label:** Type a unique code that is a short version of the work skill name.  
**Note:** Use only alphabetical characters. Do not use numbers.
  - o **Sharing of the skill in teamwork:** Select the level of sharing allowed for the teamwork.  
**Note:** The Quota/Capacity calculations don't use effective work skills (sharing work skills in teamwork) and only uses the work skills that match the activities.
  - o **Active:** Select the status as **Active** by selecting this check box. Only the active work skills can be assigned to the resources and activities, or capacity categories. Oracle Field Service Routing process uses active work skills to match activities with the resources. Inactive work skills are not considered in any assignment decisions.
5. Click **Save**.  
The work skill is created.

## Delete, Activate, or Deactivate a Work Skill

You cannot delete a work skill that is currently assigned to at least one resource. You can set the active or de-active status at any time. Deactivated work skills are not deleted from the application and are unavailable for selection.

**1. Click Configuration, Work Skills.**

The **Work Skills** page appears.

**2. Select the check box next to the work skill that you want to delete, activate, or deactivate.**

**3. Click Delete, Activate, or Deactivate in the header.**

You cannot delete a work skill that is assigned to a resource.

**4. Click Delete, Activate, or Deactivate in the confirmation dialog box.**

## Example: Assigning Work Skills to the Activities

Activity assignment is the process of selecting a resource and processing the association with an activity.

Assigning activities are based upon:

- Identifying the work skills
- Identifying the work skill conditions
- Mapping/Routing activities with the resources

In the following example, we use a work skill condition with the following requirements to map an incoming activity with the resource.

### Work skills requirements:

- A work skill type 'Install': The activity must have a skill type 'Install' to receive the work skills in this work skill condition.
- A required level '50': The activity must have a minimum work skill level 50 for the work skill.
- A preferable level '70': Oracle Field Service prioritizes this activity to be routed early in the routing process so that the more experienced resources are available. Preferable levels are on a scale of 0 to 100.

### Work skill conditions:

- A condition that the activity has a work order type 'Install': The incoming activity must have a work order type 'Install'.
- A condition that the activity requires VIP service: The activity must have the "VIP" note in the activity notes sections.

### Mapping and Routing process:

1. The customer service representative schedules an installation activity in the activity booking system. The activity booking system assigns a work order type 'install' to the activity. It also adds an activity note 'VIP' because this customer is a preferred customer.
2. Oracle Field Service receives the activity from the activity booking system.
3. Oracle Field Service identifies the work order type and the activity note and then maps the activity with the work skill conditions.

4. Oracle Field Service reviews the rest of the work skill conditions for the apt resource assignment. In addition to the VIP requirement, this work skill condition also needs a required level '50' and a preferable level '70'.
5. During the routing process, Oracle Field Service routes this activity early because the preferable level is high. This ensures finding a highly skilled resource.
6. Oracle Field Service looks for the resources that have the work skill condition as 'VIP' and retrieves several resources.
7. Oracle Field Service checks the list of available VIP-qualified resources that has a minimum work skill level for the install work skill as '50'.
8. Oracle Field Service finds two available resources with a skill level of at least 50. Raul has a work skill level for Installs as '75' and Serena has a work skill level for installs as '55'.
9. Oracle Field Service assigns the activity to Raul as his skill level is the closest match to the preferable level. Raul also has the VIP qualification and is available during the service window. He is the best match for this activity.

## Modify an Existing Work Skill

Update the work skills of a resource along with the assignment periods and work skill ratios. You can also delete the work skills of a resource.

1. Click **Configuration > Work Skills**  
The **Work Skills** screen displays.
2. Click **Modify** next to the work skill you want to edit.  
The **Edit Work Skill** window displays with all fields pre-populated with existing information.
3. Update the necessary changes.
4. Click **Save**.

## Activate, Deactivate, or Delete a Work Skill

You cannot delete a work skill assigned to at least one resource. You can set the active/inactive status at any time.

1. Click **Configuration > Work Skills**.  
The **Work Skills** screen displays
2. Select the check box next to the work skills you wish to delete, activate, or deactivate.
3. Click **Delete**, **Activate**, or **Deactivate**.
4. Click **OK**.

## Work Skill Groups

### Create a Work Skill Group

You can bundle selected work skills into work skill groups to create greater ease and flexibility in assigning skills to the resources. You can continue to assign individual work skills along with work skill groups, creating a more accurate

resource work skill record. Work skill groups must also be defined to be used for capacity categories, if different work skills must consume quota from a single capacity category.

1. Click **Configuration > Work Skills**.

2. Click **Work skill groups**.

The **Work skill groups** screen appears.

3. Click **Add new**.

The **Add work skill group** window appears.

4. Complete the following fields:

**: Work skill groups fields**

Field	Description
Name	Enter the work skill group name. If you have set multiple languages for the application, input boxes appear for the different languages.
Label	Enter a unique identifier for this work skill group.
Active	Select the check box to make this work skill group active.
Can be assigned to a resource	Select the check box if you want the work skill group to be able to be assigned to a resource record. If a group is assigned to a resource, then that the resource obtains all the work skills defined for the group.
Can be added to a capacity category	Select the check box if you want the work skill group to be able to be assigned to a capacity category. If a capacity category contains a group of work skills, then an activity is considered a match to the category if it 'requires' at least one of work skills from the group.

5. Click **Save**.

The **Work skill groups** screen appears.

6. Click the pencil icon in the **Work Skills** cell to add work skills and their qualification level.

The **Edit work skill** window appears.

7. Click to select the work skill and activate the Qualification Level field.

8. Click **Save** when done.

9. To modify a work skill group, click the **Name** cell.

The **Edit work skill group: [Work skill group name]** window appears, which is similar to the **Add work skill group** window.

## Delete a Work Skill Group

You can delete a work skill group which is not in use anymore.

1. Click **Configuration > Work Skills**.

2. Click **Work skill groups**.

The **Work skill groups** screen appears.

3. Select the check box next to the work skill group that you want to delete.
4. Click **Delete**.
5. Click **OK**.

## About Work Skill Conditions

To ensure that a resource is able to perform the activities assigned, a correlation is made between incoming activity's skill requirements and the skill set of the resource. The Work skill functionality is what that correlation is based on. Work skills are set up first, and then are assigned to resource records, with the appropriate levels of qualification set.

Work Skill Conditions defines which work skills are assigned to the activities. Each work skill has at least one condition that refers to a specific field and value in the incoming activity record.

### Related Topics

- [Create a Work Skill Condition](#)
- [Modify a Work Skill Condition](#)
- [Delete a Work Skill Condition](#)

## Create a Work Skill Condition

Oracle Field Service uses the work skill conditions to assign work skills to the activities and then maps these activities with the qualified resources.

1. Click **Configuration > Work Skill** and then click the **Work Skill Conditions** tab.  
The **Work skill conditions** page displays.
2. Click **Add New**.  
The **Add work skill condition** window displays.
3. Enter the appropriate information in the following fields:

Option	Description
Work skill name	Select the work skill name that is easy to understand and that differentiates it from other work skills.
Required Level	<p>Enter the minimum work skill level required.</p> <p>Valid values: 0 to 100</p> <p>The value 0 indicates that there is no minimum work skill level required for such a work skill.</p> <p>Resources must have the work skill levels equal or greater than the required level to be considered for the activity assignment. Oracle Field Service uses this value to eliminate resources that do not have the required work skill level to perform an activity.</p>
Preferable Level	<p>Enter the routing priority.</p> <p>Valid values: 1 to 100</p>

Option	Description
	Activities that have a work skill condition with a higher preferable level are routed first so that a resource with higher work skill level is matched. For best results, assign a higher preferable level to an activity that requires advanced skills or skills that are difficult to find. This strategy ensures that the activity is staffed from a large pool of resources.
Add New Condition	Click this button to add additional conditions to the work skill.

Once you create a work skill, you must assign it to the resources and work skill conditions.

## Modify a Work Skill Condition

Update the work skill conditions as and when you want.

1. Click **Configuration > Work Skill** and then click the **Work Skill Conditions** tab.  
The **Work skill conditions** screen displays.
2. Click **Modify**.  
The **Edit work skill condition** window opens.
3. Edit the work skill condition.

**Note:** Once you create, modify, or delete a work skill condition, Oracle Field Service recalculates the activities automatically. Recalculation is done asynchronously and when the recalculation is in progress, the system displays a message as Applying changes.

4. Click **Save**.  
The work skill condition is updated with the changes.

## Delete a Work Skill Condition

When you no longer need a work skill condition, delete it.

1. Click **Configuration > Work Skill** and then click the **Work Skill Conditions** tab.  
The **Work skill conditions** screen appears.
2. Select the work skill check box and click **Delete**.  
A **Confirm** message appears asking if you wish to proceed.
3. Click **OK**.  
A message appears that the work skill condition is deleted.

# Capacity Categories

A Capacity Category is a predefined set of work skills and/or work skill groups and time slots visible to a user who is booking the activities for customers.

Based on the number of minutes available (Capacity = Initial Quota allocation minus used minutes), the user decides if enough time is available within a time slot to realistically promise a specific service window to the customer. This information is sent to the CSR via Capacity API. Capacity Categories are visible only if you are using the Oracle Field Service Capacity Service module.

**Note:** The **Used Minutes** value is calculated based on the exact time (in minutes) from start to end of a working day.

You must enable the Capacity Categories visibility profile permission for each user to access the Capacity Categories window:

- **Read-Only:** Select this option to display capacity categories in a view only mode.
- **Read/Write:** Select this option to let the user manage Capacity Categories in Oracle Field Service.

If the permissions are not configured for a user type, the activity types will not be visible to the users. Oracle Field Service maps the work skills to assign incoming activities to the resources. In general, many companies define quota for a work skill group rather than for an individual work skill. For example, separate skills are required for installation, un-installing and maintenance of modems, but from a scheduling perspective, quota is defined for all the modem-related works group.

A capacity category can also consist of a single work skill and the minimum required level of the skill level. For example, a category can be created for all the customer-oriented work and a separate group for VIP customers or for highly difficult tasks. The two categories would contain the same work skills but the minimal qualification level in the VIP group is higher. Because of the categories and the multi-skill functionality, the same activity can match several rows in the Quota table and can be added to the Used capacity several times. The duration of this activity will be taken into account for all the capacity categories it matches.

## How do I create a capacity category?

You can create a capacity category to configure work skills, work skill groups, and time slots.

1. Click **Configuration > Capacity Categories**.

The **Capacity categories** page appears.

2. Click **Add New**.

The **Add Capacity Category** dialog box appears.

3. Enter the appropriate information in the following fields:

The following table describes the fields available on the **Add Capacity Category** dialog box.

Option	Description
Name	Enter the name of the capacity category. The name is displayed in the list and in the quota matrix. If the application is configured for multiple languages, input boxes will appear for each language.



Option	Description
Label	Specify a label. It is used in the context of APIs and it must conform to a standard naming convention.
Active	Select the <b>Active</b> check box to mark this capacity category as active. Only active capacity categories are used in the quota matrix.

4. Click **Save**.

Once you create the capacity category, you must add work skills, work skill groups and time slots to the category.

## Modify a Capacity Category

Edit an existing capacity category to change the status, name, label, work skills, or time slots.

1. Click **Configuration > Capacity Categories**.

The **Capacity categories** page appears.

2. Select the check box next to the capacity category that you want to change.

3. Click the pencil icon in the **Name** column.

The **Edit Capacity Category** dialog box appears.

4. Change the Name, Label, or Active field. Similarly, click the pencil icon in the Work Skills or Time slots columns and change the required values.

5. Click **Save**.

## Delete a Capacity Category

You can delete a capacity category when you no longer need it.

1. Click **Configuration > Capacity Categories**.

The **Capacity categories** page appears.

2. Select the check boxes next to the capacity categories that you want to delete.

3. Click **Delete**.

4. Click **OK**.

The selected capacity categories are deleted.

## Add Work Skills and Work Skill Groups to a Capacity Category

Once you create the capacity category, assign the work skills and work skill groups to it.

1. Click **Configuration > Capacity Categories**.

The **Capacity categories** page opens.

2. Click the pencil icon to open the **Edit work skills** dialog box.

3. Select the work skills and work skill groups that you want to include in the category.  
The work skill groups will have square brackets [ ] around the names.
4. Optionally, type the work skill levels in the right-hand side field.  
Work skill levels assigned are used to limit the capacity categories to the activities that require a certain work skill level. For example, you might create two capacity categories for installations, one for simple installation and one for complex installation. Both the capacity categories requires the installation work skill, but the work skill level for the installation work skill will be lower for simple installation than it would be for the complex installation.
5. Click **Save**.

**Note:** When you create multiple capacity categories that share some of the same work skills, then Oracle Field Service treats all of those work skills as one. When an activity is assigned to the work skills, Oracle Field Service consumes the minutes used from all the capacity categories sharing that work skill.

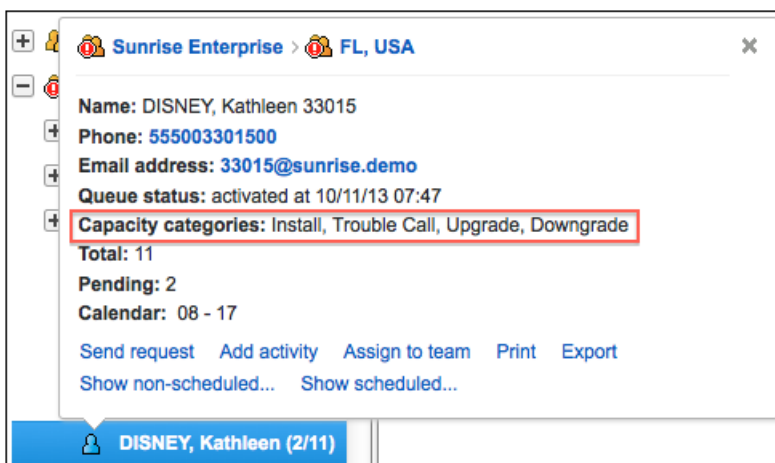
## Define Capacity Categories for a Resource

Define capacity categories for a resource to calculate the maximum available capacity at a capacity category level.

Resources are assigned with certain work skills at a respective level. Capacity categories includes the work skills or work skill groups to which the minimum required level is defined. A resource is then matched with a capacity category if their work skills are equal or greater than those defined for the capacity category. If a capacity category is assigned with the work skill groups, a resource with at least one of the work skills matching with the group is allotted.

When no work skills are assigned, a capacity category includes all the activities with no specific work skills. Such activities can be assigned to any resource having any work skills, therefore, to all resources in the system. Resources with no work skills defined (effectively, having all work skills at the highest level) is matched with all the capacity categories in the system.

Resource work skills can be viewed in the **Resource Info** screen or resource hint.



Capacity categories of a resource is recalculated automatically when the:

- Application server starts
- Resource cache reloads

- Resource work skill is modified

## About Time Slots

A *time slot* is a fixed time interval specified in the activity management to perform activities.

Time slot of an activity type denotes its starting time. Time slots assigned to a bucket in the capacity management defines the time frame to assign quota and calculate capacity.

Time slots are found under **Configuration** in the **Resources, Activities and Inventories** section in the **Configuration** menu.

### Related Topics

- [Create a Time Slot](#)
- [Modify a Time Slot](#)
- [Activate or Deactivate Time Slots](#)

## Create a Time Slot

Time slot is a fixed time interval with start and end time of an activity.

### 1. Click **Configuration > Time Slots**

The **Time slots** page opens.

### 2. Click **Add New**.

The **Add time slot** window opens.

### 3. Complete each field as needed using the following list:

- **Name:** Using start time – end time format (for example 8-10), name the time slot.
- **Time slot label:** Enter the specific label name for the time slot.
- **Status:** Select **Active** or **Inactive** status from the drop-down list. Oracle Field Service assigns activities, and capacity management to active time slots only. A check mark indicates that the time slot is active.
- **All-day time slot:** Select the check box if you want the time slot to last for the entire day.
- **Time from:** Enter the time to indicate when the time slot begins.
- **Time to:** Enter the time when the time slot ends.

**Note:** An overnight time slot is considered for these cases:

- If the value in the **Time To** field is equal to the value in the **Time From** field (for example, 11am -11am).
- If the value in the **Time To** field is less than the value in the **Time From** field (for example, 11am - 9am).

- **Capacity Categories:** Use the check boxes to add activity types and work skill types.

### 4. Click **Add**.

## Modify a Time Slot

You can add or remove the activities and work skill types from a time slot.

1. Click **Configuration > Time Slots**  
The **Time slots** page opens.
2. Click **Modify** in the row of the time slot that you want to modify.  
The **Edit time slot** screen displays.
3. Change the values and then click **Update**.

## Activate or Deactivate Time Slots

Activate a *time slot* to make it available for use in other areas of the system. You can also deactivate a time slot to hide it from all other areas in the system.

1. Click **Configuration > Time Slots**  
The **Time slots** page opens.
2. Check the box next to the time slot or that you want to activate.
3. Click either **Activate** or **Deactivate**.  
The selected action is performed.

## Define Time Intervals for Booking Activities

The **Time Intervals** field in the **Business Rules, Quota Management** section lets you configure time intervals for booking activities. For example, instead of having a fixed timeslot from 8.00 am to 10 am, you can define a timeslot from 8.15 am to 10.30 am.

Time intervals let you overcome the following problems related to activity timeslots:

- **Overlapping timeslots:** Effectively manage quota relative to the available capacity when there are overlapping time-slots. For example, consider the timeslots, 8 to 5 PM and 8 to 12 AM for the capacity category, Install and assume that there are many bookings in the respective timeslots. This caused addition of excessive quota relative to the available capacity.
- **Available quota relative to the activity duration:** Quota is unused because the available quota is not enough to book an activity. For example, the activity duration is 45 minutes and there is 30 minutes left in the 8-10 time-slot.
- **Manage quota and capacity for SLA and time-slot based activities:** For example, you can schedule an Install activity for a day on a time-slot basis. However, a Troubleshooting activity is a SLA-based activity and can span across multiple days.

The time interval set consists of time intervals delimited with a comma (","). Time intervals within the time interval set cannot have a common time period but can have a "point-in-time" time interval (that is, exactly at hh (hours) mm (minutes)).

By default, the following time intervals are set:

- **Before 08 am** represents the period of time from start of the day (12 am) till 08 am.
- **08 am** represents point in time (that is, exactly at 08 am).
- **08 am-12 pm** represents the period of time from 08 am till 12 pm.
- **12 pm-6pm** represents the period of time from 12 pm till 6pm.
- **After 06 pm** represents the period of time from 06 pm till the end of the day.

**Note:** The field defaults to **All Day** if no value is entered in the **Business Rules, Quota Management** section. Also, you can define intervals for overnight settings (represents the time interval from midnight or ending after midnight). For example, the time interval, 06 pm – 1 am +1 represents the time after 6 pm in the evening till 1 am in the morning of the next day.

To define a time interval:

1. Add a company time interval:
  - a. Select **Configuration, Business Rules**.
  - b. Scroll down to the **Quota management** section.
  - c. Click the **Edit** icon.
  - d. Click the **Plus** icon in the Time Intervals window.
  - e. Select **Hours** and **Minutes** from the **From** and **To** drop-down lists in the **Add New Time Interval** window.
  - f. Click **Add**.  
The selected time intervals display in the **Time Intervals** section.
  - g. Click **Save**.  
The time intervals display in the **Configuration, Available Capacity**, and **Booking Status** pages.
2. Modify a bucket level time interval to configure time intervals at the bucket level:
  - a. Select **Quota, Configuration** from the **View** drop-down list.  
The **Quota Settings** section displays.
  - b. Select the bucket that you want to modify.
  - c. Repeat steps c to f from Step 1 to define time intervals.
  - d. Click **Save**.

## Add Time Slots to a Capacity Category

Once you create a capacity category, define the time slots in which it needs to be used.

1. Click **Configuration > Capacity Categories**.  
The **Capacity Categories** page opens.

2. Hover over the **Time Slot** column of the capacity category.  
The Pencil icon appears.
3. Click the Pencil icon to open the **Edit time slot** screen.
4. Select the time slots that you want to assign it to this capacity category.
5. Click **Save**.

## About Enabling Quota Management

You must enable quota management in every bucket in Oracle Field Service to calculate the capacity.

Enabling quota lets you to manually or automatically adjust quota for a current day, a future date or a range of days, based on the available time and resources in a bucket.

If a bucket is not enabled for quota management, the bucket items are not included in the quota matrix.

**Note:** Forecasted data is available only for the quota enabled bucket. If the user clicks a group/parent resource, the following message is shown: Select a Quota Management enabled Bucket. By default, the first available bucket in the tree is loaded.

Tracking only a selected group of available and active work skills and work skill groups does not affect the ability to book all the activity types.

## Enable Quota Management at a Bucket Level

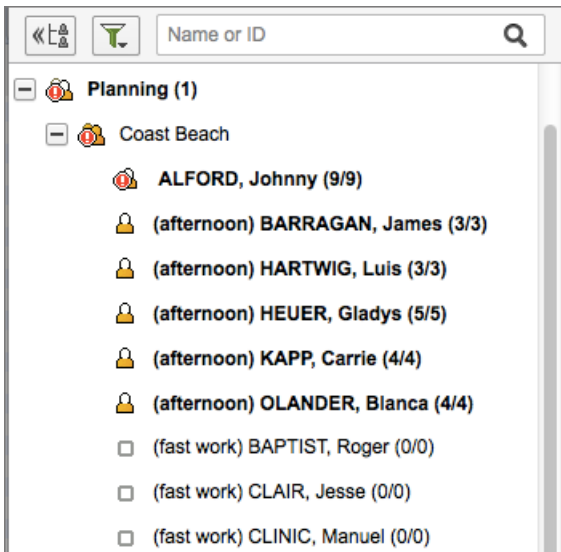
Quota management can only be enabled at a bucket level.

**Note:** Forecasted data is available only for the quota enabled bucket. If the user clicks a group/parent resource, the following message is shown: Select a Quota Management enabled Bucket. By default, the first available bucket in the tree is loaded.

You can manage quota for a:

- **Region:** Create a group for all the resources of a specific region and then create a bucket inside that group to use it for the quota management.
- **Workforce:** Create a single bucket for the entire workforce and then divide the workforce into various groups within the bucket.

The bucket structure looks like this:



Quota of a group or a bucket with the “child” capacity areas display the sum of quota of all the child buckets. You cannot edit quota at the aggregate level.

To enable quota management at a bucket level:

1. Select **Quota**.
2. Select a capacity area.
3. Select **Resource Info**.

The **Resource Info** page for the selected area displays.

4. Select the **Use as Capacity Area** check box.

**Note:** It is recommended to select this check box for the bucket or Group resource types and not for resources.

The quota Management feature is enabled for this bucket. You can now add the management information to your quota matrix.

5. Under **Quota Management** section, configure the following features:
  - o **Time Slots:** Click the Pencil icon and add time slots to this bucket.

**Note:** If you have configured time-interval (availability) based booking, then you do not need to add time-slots.

- o **Capacity Categories:** Click the Pencil icon to define the capacity category types.

6. Click **OK**.

## Configure Major and Critical Capacity Usage Settings

When the used capacity reaches major or critical usage levels, it displays in a different color code on the quota matrix. Using this feature, you can change the major and critical capacity settings.

1. Navigate to **Configuration > Display**.
2. Go to **Quota Settings** section.

The screenshot shows a configuration window titled "Quota settings". It contains the following fields:

- Major Capacity Usage**: Expected duration comprises  % of quota
- Critical Capacity Usage**: Expected duration comprises  % of quota
- Enable Plan column that shows data set in Forecasting**:

3. Enter the **Major Capacity Usage** and **Critical Capacity Usage** values.
4. Select the **Enable Plan column that shows data set in Forecasting** check box if you wish to display plan column with the quota set up in the forecasting.

### Results:

The default color settings:

- If the used capacity is less than the major capacity usage, capacity is shown in green color.
- If the used capacity is more than the major capacity usage but less than the critical capacity usage, capacity is shown in brown color.
- If the used capacity is more than the critical capacity usage but less than the Quota value, capacity is shown in orange color.
- If the used capacity is more than the Quota value, capacity is shown in red color.

## Define Units of Measurement for the Quota

You can choose the units of measurement to display the quota and capacity values.



The three possible options are:

- Hours
- Man-days
- Minutes

Internally, all the values are calculated in minutes only, and are converted to the selected unit and the corresponding value is displayed in the **Quota View**.

When man-days is selected as the unit of measurement, the **Number of hours per man day is** field appears where the correlation between man-days and hours can be defined. This parameter is used to convert man-hours into minutes.

To define units of measurement for quota and capacity values:

1. Go to **Configuration > Business Rules**
2. Go to the **Quota management** section.
3. Select the **Quota and available capacity are defined in** option from the drop-down list. There are three possible options – hours, man-days and minutes.
4. Enter the values for **the Max available and Other activities parameters are automatically recalculated every in minutes** and select the **Corresponding quota values are automatically adjusted starting from** option from the drop-down list.
5. Click **Save**.

## Configure Quota Options

The Configuration page lets you configure the quota management settings.

Select the **Time slot based quota** check box to view the Time slot based quota settings section and configure the required settings.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
- 3.

Click the **Configuration**  icon.

The Configuration page for the selected bucket displays.

The following configuration parameters display on the Configuration page:

Name	Description
<b>Booking</b>	
Use Direct assignment	Specifies that the activities are booked directly on technicians' routes. If you have configured a Capacity Area for booking using direct assignment, the activity is created (or reassigned) in a technician's route. The activity is created, only if the technician meets the activity requirements and has enough time to complete it. For more information, see the Activity Booking topic.
Use Quota management - Based on booking intervals	Specifies that the activities are booked based on the booking intervals selected on this page. When you select this option, the activity is created on a bucket that is associated with the Capacity Area. For more information, see the Activity Booking topic.

Use Quota management - Based on time slots	Specifies that the activities are booked based on the time slots that are selected on this page. When you select this option, the activity is created on a bucket that is associated with the Capacity Area. For more information, see the Activity Booking topic.
Available Time Slots	Defines the time-slots during which resources can book activities.  <b>Note:</b> The list is automatically synchronized between the connected capacity area and capacity area using the Resource Info page.
Allow to close booking on work zone level	Defines whether booking can be closed on a particular work zone level.
Show recommendations in activity booking screen	Defines whether you want to show the booking recommendations. When you select this check box, the Book Activity page might show a time slot with a special icon, indicating a recommendation. The recommendation is a time slot that has a bigger probability of decreased overall travel expenses. For more information, see the Booking Recommendations topic.
<b>Capacity management</b>	
Capacity category	Defines a list of capacity categories that you want to use for the capacity area (that is, capacity area).  <b>Note:</b> The list is automatically synchronized between the connected capacity category and capacity area using the Resource Info page.
Working Time Unit	Select one of the following options to define the column in which you want to display the planned values in the Available Capacity screen: <ul style="list-style-type: none"> <li>hours: The planned amount of working time is displayed in hours in the Capacity column.</li> </ul> <b>Note:</b> The Hours, Minutes, or Man-days option displays based on the option selected from the <b>Measurement units for Quota and Available Capacity</b> drop-down list in the Business Rules page. <ul style="list-style-type: none"> <li>resources: The planned amount of resources are displayed in the Resources column.</li> </ul>
Start of day travel time is included in the Used time	Select the check box to include the resource's first travel time for calculating the Used Quota parameter. The first travel time in a technician route is defined as the time required to travel from the technician's start location to the first activity location. See <i>Calculation of Travel Time for the Used Quota Parameter</i> .  <b>Note:</b> By default, the check box is enabled to maintain backward compatibility with all capacity areas.
End of day travel time is included in the Used time	Select the check box to include the resource's final travel time for calculating the Used Quota parameter. The final travel time in a technician route is defined as the time required to travel from the technician's final activity location to the technician's end location configured in the application. See <i>Calculation of Travel Time for the Used Quota Parameter</i> .
<b>Quota management</b>	
Booking Interval based	Defines a list of time intervals to be used to manage booking.

	<p><b>Note:</b> The default values are automatically synchronized with the Business Rules time intervals. You can adjust the values for the individual bucket.</p>
	<p><b>Note:</b> During upgrade, if you select available capacity based quota management, then the application migrates to Booking Intervals based quota with either quota in absolute time units or quota in percent of available capacity (depends on the quota by day settings). To change the number of hours per day (used to recalculate working time plans (or number of resources) to Max Available (hours/minutes) or vice versa), navigate to Business Rules page, select "man-days" in the <b>Measurement units for Quota and Available Capacity</b> field and change the value of number of hours per man-day.</p>
<b>Quota by Day</b> section	The following options are displayed when you select the Booking Interval based option:
Enter quota as % of capacity available by calendar for next days and switch to the plans	Select the <b>Enter quota as % of capacity available by calendar</b> and enter the number of days in the <b>next days and switch to the plans</b> field to use the available capacity for a specified number of days and switch to planned capacity after the specified days.
Quota is entered as % of capacity available by calendar	Select this option to use available capacity for booking.
Quota is entered as % of working time plans	Select this option to use planned capacity for booking.
Quota is entered in minutes	Select this option to enter quota values in minutes.
Reduce quota by volume of activities not assigned to any capacity category	Select this option to reduce quota by volume of activities not assigned to any capacity category.
<b>Quota by Capacity Category</b> section	
Quota is entered as % of maximum capacity available in this category	If this option is enabled, the quota is defined as % of capacity available by calendar in this capacity category.
Quota is entered in minutes	If this option is enabled, the quota is defined as a number of minutes available for a day.
<b>Time slot based</b>	<p>This enables or disables the time-slot based quota functionality for a given capacity area.</p> <p><b>Note:</b> This option is enabled for all the capacity areas or areas that were configured prior to 17.2.</p>
<b>Quota management</b>	
Quota definition level	Defines how quota is managed.
Quota by day	<p>Defines how quota is entered by day.</p> <ul style="list-style-type: none"> <li>○ Quota is entered in minutes</li> <li>○ Quota is entered as % of capacity available by calendar including other activities</li> <li>○ Quota is entered as % of capacity available by calendar including other activities</li> </ul>

Quota by capacity category	<p>Defines how quota is entered by capacity category.</p> <ul style="list-style-type: none"> <li>○ Quota is entered in minutes</li> <li>○ Quota is entered as % of maximum capacity available in this category</li> <li>○ Quota is entered as % of quota defined on parent level</li> </ul>
<b>Quota by day</b>	
Quota is entered in minutes	If this option is enabled, the quota is defined as a number of minutes available for this day.
Quota is entered as % of capacity available by calendar	If this option is enabled, the quota is defined as % of daily capacity available by calendar.
Quota is entered as % of capacity available by calendar excluding other activities	<p>If this option is enabled, the quota is defined as % of daily capacity available by calendar excluding "Other activities".</p> <p><b>Note:</b> The system always calculates "Other activities". There is no a configuration that allows to disable this calculation. But these values are subtracted from the calendar capacity only when this option is enabled.</p>
<b>Quota by time slot</b>	This functionality is only available for time slot based quota.
Quota is entered in minutes	If this option is enabled, the quota is defined as a number of minutes available for this time slot.
Quota is entered as % of capacity available by calendar	If this option is enabled, the quota is defined as % of time slot capacity calculated by calendar.
Quota is entered as % of capacity available by calendar excluding other activities	<p>If this option is enabled, the quota is defined as % of time slot capacity calculated by calendar excluding "Other activities".</p> <p><b>Note:</b> The system always calculates "Other activities". There is no a configuration that allows to disable this calculation. But these values are subtracted from the calendar capacity only when this option is enabled.</p>
Quota is entered as % of quota defined on parent level	If this option is enabled, the quota is defined as % of quota defined on the day level.
Automatically adjust '% Quota' values to keep their total equal to 100%	<p>This parameter defines if the total sum of the '% Quota' values should always be equal to 100%. It is only visible when the quota is entered as % of quota defined on the parent level.</p> <p>This functionality is only available for the time slot based quota.</p>
<b>Quota by capacity category</b>	
Quota is entered in minutes	If this option is enabled, the quota is defined as a number of minutes available in this category for this day.
Quota is entered as % of the maximum capacity available in this category	If this option is enabled, the quota is defined as % of capacity available by calendar in this capacity category.

Quota is entered as % of quota defined on parent level	If this option is enabled, the quota is defined as % of quota defined on the day (time slot) level.
Automatically adjust % Quota values to keep their total equal to 100%	This parameter defines if the total sum of the '% Quota' values should always be equal to 100%.  It is only visible when the quota is entered as % of quota defined on the parent level. This functionality is only available for the time-slot based quota.
Estimate quota based on historical data	This parameter defines if the system should estimate the '% Quota' values based on the historical data.  It is only visible when the quota is entered as % of quota defined on the parent level. This functionality is only available for the time slot based quota.
Historical values to be used (Quota % or Used capacity %)	This parameter defines if the 'Quota %' or 'Used capacity %' values should be processed for the "estimate quota" functionality. It is only visible if the Estimate quota based on historical data option is selected. This functionality is only available for the time slot based quota.
Process historical data (same weekdays) for period of (one week, one month, two months)	This parameter defines a length of the historical period to be analyzed. It is only visible if the Estimate quota based on historical data option is selected. This functionality is only available for the time slot based quota.

*Related Topics*

## Calculation of Travel Time for the Used Quota Parameter

The settings in the Travel Allowance section in the Resource Type configuration determines the amount of travel time that is included in the Used Quota parameter. See the *Add a Resource Type for the Field Resource Role* section in the *Administering Oracle Field Service Guide*.

For example, the Start of Day Travel setting can have one of the following settings:

- Travel time to the first activity is not included from the Working Time Start
- Travel time to the first activity is included from the Working Time Start
- Resource is allotted up to [ NN ] minutes of travel time before the Working Time Start

Based on the settings, the travel time is used from the resource’s used quota as follows:

### **Used Quota calculation**

Resource Type settings	Capacity Management setting	How much time is added to the Used Quota parameter
Travel time to the first activity is not included from the Working Time Start	Start of day travel time is included in the Used time	0 minutes is used because the first travel time is not included in the Resource type settings.

Resource Type settings	Capacity Management setting	How much time is added to the Used Quota parameter
	Start of day travel time is not included in the Used time	0 minutes is used because the first travel time is not included in the Resource type settings.
Travel time to the first activity is included from the Working Time Start	Start of day travel time is included in the Used time	Estimated travel is used because of the configured Resource type and Capacity management settings.
	Start of day travel time is not included in the Used time	0 minutes is used because the setting is disabled in the Capacity management module.
Resource is allotted up to [ 30 ] minutes of travel time prior to the Working Time Start	Start of day travel time is included in the Used time	Estimated travel minus 30 minutes is used because the setting in Capacity management is enabled, but the resource type setting specifies how much travel time is allotted before the working time. For example, if the travel estimation is 45 minutes, then $45-30=15$ minutes is added to the Used Quota parameter.  0 minutes is used because the setting is disabled in the Capacity management module.
	Start of day travel time is not included in the Used time	0 minutes is used because the setting is disabled in the Capacity management module.

**Note:** The above logic is also used for the End of Day Travel time calculations.

## Booking Recommendations

You can choose to include recommendations for booking activities for each Capacity Area independently. The application typically recommends time slots that reduce overall travel expenses.

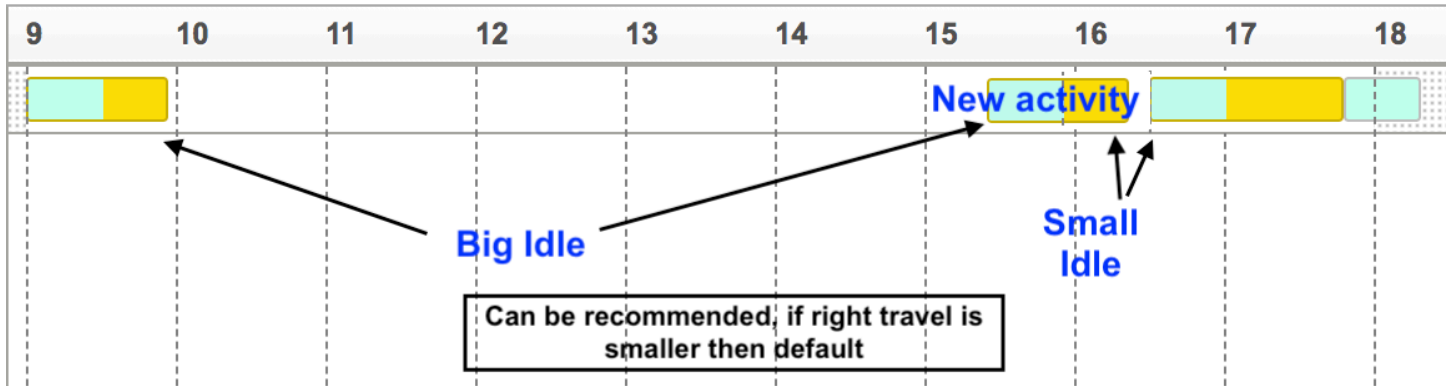
The application tries to optimize travel time, so if there are some booking options that allow better activity distribution, it marks those options as preferable or recommended. The application recommends a booking option if the travel time that appears after the booking is less than the default travel time for the activity type. The application provides recommendations in the same way for both, direct assignment booking and for booking by Quota. However, for the direct assignment option, the application uses the travel time estimation (minutes). Whereas, for booking by Quota the application suggests the options by optimizing the distance to other existing activities in the bucket that are close by time and place.

The application considers these travels:

- Travel to the booked activity, if there is a preceding activity close enough with small or no idle time.
- Travel after the booked activity, when there is a following activity with small or no idle time.

- Average of travels "to" and "after," if a new activity is booked between two others with small or no idle time.

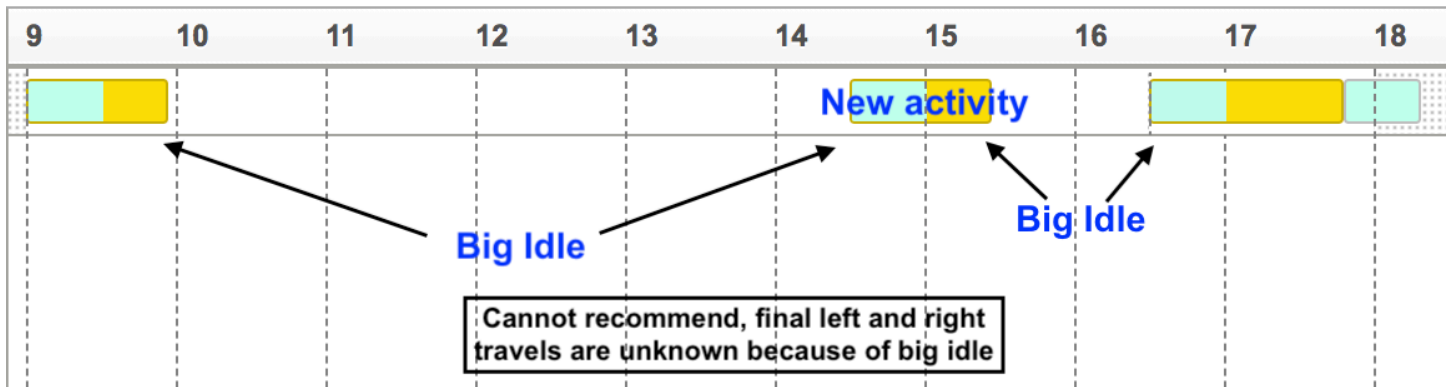
Example of a technician route when the application recommends the booking option. In the example, the option may be preferred, if the travel time after the booked activity is smaller than the default travel time:



Oracle Field Service does not mark the available options as recommended or preferred, if:

- The application cannot estimate any of the travels (before or after).
- The idle time before and after the activity is big, which means that later on another activity might be added and the travel might change.
- The estimated travel is bigger or equal to the default travel time.

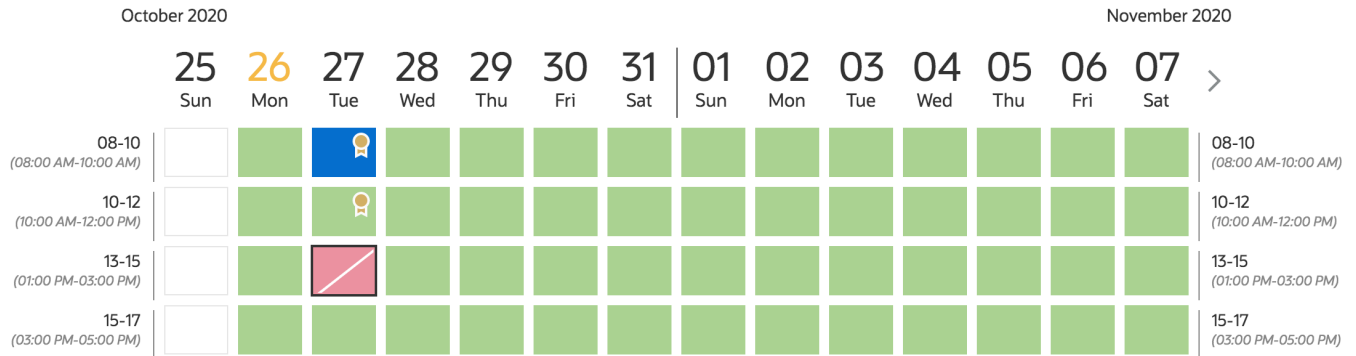
Example of a technician's route with a long idle time before and after the activity. This option may be used for booking, but the application cannot recommend it over the other booking options:



Example of the Book Activity page with some recommendations:

< Time Slot Q

Booking | Planning ▾



Show legend

**i** Please select a time to book a scheduled activity

The options marked with a special sign give a bigger probability of decreased overall travel expenses.

Assuming 100% as the number of all booking options shown on the page, then:

- Gold: Approximately 5% of all the booking options, which are the best from the possible travel reduction.
- Silver: Approximately 5 to 20 % of the options.

Let's say, a booking screen shows 80 cells for booking an activity, where there are many options for the activity to be booked close to an existing activity. Oracle Field Service recommends those options that optimize traveling expenses. Not more than 20% of all the options are shown as recommended ( $84 / 100 * 20 = 16$ ), giving 16 marks, 4 of which would be the gold recommendations ( $84 / 100 * 20 = 4.2$ ) and the remaining 12 would be silver recommendations.

However, the actual number of recommendations may vary and depend on the number activities with close coordinates. If there are equally good options, then the recommendations can become more than 5 or 20 percent of the options, because Oracle Field Service cannot choose which option to recommend. So, in the example, there could be more than 4 gold and more than 12 silver recommendations, if identical options are available.

## Adjusting Available Capacity

Quota defined as a percentage of capacity must be recalculated regularly to manage the changes in the resource allocation, work skills and other variables.

To perform the adjustment, system estimates the capacity available by calendar, processes the already booked activities, and recalculates the Quota in minutes using the defined percentage value. Quota recalculation is a complex operation therefore, it should be performed only once in a predefined time interval. The interval can be defined as the **Available capacity is automatically recalculated every \_\_ minutes** parameter under **Configuration > Business Rules**. The recalculation interval in minutes can be defined in the range of 1 to 1,440. By default, it is set to 10 minutes.



The quota and capacity are recalculated for a predefined future period. The period is defined as a number of days or calendar weeks. The maximum value is 99 days or 15 calendar weeks. The recalculation start day can be selected to current day, tomorrow, and day after tomorrow.

The calendar week option is processed according to the **Week starts on** parameter. If the recalculation period is set to 1 calendar week, the recalculation will be performed for all remaining days of the current week (unless the start day is the week start day) plus all the days of the following week. On the contrary, if the recalculation period is set to 7 days, the recalculation will be performed for exactly 7 days.

Quota recalculation is necessary when the:

- New technicians are created
- Technicians are moved in between the capacity areas (sub-buckets can also be moved)
- Technicians are activated/deactivated
- Resource tree is reorganized (directly in the database) during a product upgrade or when a implementation package is installed
- Technician's work skills changes
- Content of an already used work skill group changes
- Set of work skills within a capacity category changes



# 3 Using Capacity based Quota

## Overview of Capacity-Based Quota Management

Capacity Management ensures that a company has sufficient resources in the field to match with the anticipated volume and level of work. Quota Management allocates assignments based on the available work skills and time slots. Capacity-based Quota Management is a flexible tool to manage quota and respond to the changes in the available capacity.

Oracle Field Service automatically updates quota based on the resource changes as they affect quota at a day, time slot and/or capacity category level. Oracle Field Service Capacity defines quota as a percentage of capacity. This means that your quota updates automatically when the workforce changes. When the capacity is updated automatically, the time slots and capacity categories are added without user data entry, thus diminishing human errors such as over or under estimation of the available capacity.


Capacity-based Quota Management:

- Updates quota automatically whenever the workforce capacity changes.
- Manages the quota based on your choice such as at a day, time slot or capacity category level.
- Guides the users to a menu of configuration choices to meet their company's needs.

## How do I view the quota matrix?

Based on the resource changes, Oracle Field Service updates the quota periodically. Quota and capacity are displayed side by side in the Quota Management matrix.

The application updates quota automatically based on the resource changes as they affect quota at the Day, Time Slot and/or Capacity Category levels.

1. Select **Quota**.
2. Select a capacity area.
3. Click the **Quota**  icon.

The **Quota** page opens. It includes the Resource Tree and the Quota matrix. You must have the Read-only or Read-write permission on the Quota element (Configuration > User Types > Quota > Quota) to view this page.

## Change the Quota View

You can change the quota views to provide different representations of data.

You can choose the display that is most helpful for your daily work.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click **Quota** icon.  
The **Quota** screen displays.
4. Click the **View** button.
5. Select the view from the following options:
  - o Quota
  - o Time-Slot Based
    - Quota by day
    - Quota by Time slot
    - Quota by capacity categories
6. Click **Apply**.

**Note:** Time slot-based quota views are only available if the time slot-based quota is enabled for the bucket.

## What is Activity Booking?

When a technician performs an activity at the customer's premises, the customer may enquire about the possibility to perform another job for them on a different day. The technician must be able to collect the information about the new job, create an activity, and schedule it right away. To book an activity, the technician must also have the ability to check the available capacity for that specific date and time. This situation is handled by the **Activity Booking** option. You must configure the activity booking context properly to get the most accurate and precise capacity calculation. The **Book new activity** option is configured in the **Application screens** section of the **Screen Configuration** page.

**Note:** The activity booking functionality, Quota management page, and the Capacity Area configuration functionality are available only with the "Oracle Field Service Enterprise Cloud Service" subscription.

Technicians can book activities in three ways:

- Direct assignment booking
- Quota based booking:
  - o Time slot based
  - o Booking interval based (or availability based)

### Direct Assignment Booking

Activity booking uses the activity information and finds all the Capacity Areas that match the activity requirements. If a Capacity Area is configured for booking using direct assignment, the activity is created (or reassigned) in a technician's route, provided the technician meets the activity requirements and has enough time to complete it. When there are many available resources that can work on the activity for a particular date and time slot, Oracle Field Service assigns the activity to one of them. The application typically finds a technician that has a smaller set of working skills than a technician with a wider skillset. This way, resource selection is optimized, so that the following activities that require booking have more available options. With this feature, technicians can control the booking strategy that is used on a Capacity Area level. Technicians can also configure different capacity areas to use different booking strategies.

## Availability-Based Booking

Technicians can book activities for Capacity Areas with booking interval based quota configuration. They can use the booking interval based quota when the time slots overlap or, have a significant variation in the activity duration. When technicians choose the booking interval based quota, they must select the booking intervals on the Quota Configuration page. If they do not select the booking intervals, the application uses the default Capacity intervals that are configured on the **Business Rules** page.

When you configure a Capacity Area for booking using Quota (time slot based or availability based), then the activity is created (or reassigned) on the bucket that is associated with the Capacity Area. If there are multiple Capacity Areas, the technician must select a Capacity Area, select the day and time slot on which they want to perform the activity, and book it.

You can obtain the booking options from the application in two ways:

- Through the Activity Booking page.
- Through the new API function `showBookingGrid`. This API simplifies the process of integrating the Booking functionality with external applications.

Regardless of the method, the application uses the activity information you have entered and provides you the list of options where it may be booked.

As soon as you book an activity, Oracle Field Service subtracts the capacity required for its performance from the available capacity and adds it to the used capacity. It compares the used capacity to the quota values to make sure that orders for new activities are accepted only when the capacity is still available. As having capacity information up-to-date is crucial for the functionality, Activity Booking is available only in the online mode.


If you book an activity close to the end of a time-slot, it has a higher probability of late start. To eliminate risky activity bookings, the application does not provide a booking option for an activity for which the estimated start time appears in the last 20% of the time slot.

## Book Activities Using Available Capacity

You can book activities based on the available capacity for the required day or period. You can use the **Available Capacity** page to view the available capacity for a specific day, week, or month or for a specific number of days. Also, you can view the available capacity of a resource for different time intervals. Based on the available capacity of resources, you can adjust the booking of activities.

To book activities using available capacity:

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.

3. Click the **Available Capacity**  icon.  
The Available Capacity page displays.

Available capacity > Planning Tuesday, July 3rd, 2018

Capacity categories	Tuesday, July 3rd, 2018								
	Before 08 AM	08 AM - 12 PM		12 PM - 02 PM	02 PM - 04 PM	04 PM - 06 PM	After 06 PM	All day	
	Capacity, hours	Resources at 08 AM	Capacity, hours	Capacity, hours	Capacity, hours	Capacity, hours	Capacity, hours	Resources	Capacity, hours
Planning	0 / 0	92 / 92	368 / 368	194 / 194	194 / 194	97 / 97	0 / 0	97	853 / 853
Deinstall	0 / 0	86 / 86	344 / 344	182 / 182	182 / 182	91 / 91	0 / 0	91	799 / 799
Downgrade	0 / 0	86 / 86	344 / 344	182 / 182	182 / 182	91 / 91	0 / 0	91	799 / 799
Install	0 / 0	87 / 87	348 / 348	184 / 184	184 / 184	92 / 92	0 / 0	92	808 / 808
Non-Pay	0 / 0	86 / 86	344 / 344	182 / 182	182 / 182	91 / 91	0 / 0	91	799 / 799
Restart/Reconnect	0 / 0	86 / 86	344 / 344	182 / 182	182 / 182	91 / 91	0 / 0	91	799 / 799
Service Request Order	0 / 0	86 / 86	344 / 344	182 / 182	182 / 182	91 / 91	0 / 0	91	799 / 799
Trouble Call	0 / 0	86 / 86	344 / 344	182 / 182	182 / 182	91 / 91	0 / 0	91	799 / 799
Upgrade	0 / 0	91 / 91	364 / 364	192 / 192	192 / 192	96 / 96	0 / 0	96	844 / 844

**Note:** When you select a capacity group on the Available Capacity page and click Configuration, an error message is displayed.

The following information displays on the Available Capacity page:

- Resources

A value in the Resources column represents the number of available resources in a specific capacity category and working within a defined time interval against the count of maximum resources (having the same capacity category and working calendars). The value is calculated based on working calendars of a resource and availability. A resource is counted even if there is a one-minute intersection. The resource columns are only displayed when you configure a zero-length time interval (for example, 08am-08am). The

system shows the number of available resources in the Resources column along with the available capacity in the Available Capacity column.

- o Available Capacity

The Available Capacity column shows the capacity that is currently available against max available capacity. Available Capacity = Max available capacity - Used capacity. The Available Capacity is calculated on the "hour" level based on working calendars.

**Note:** "Used capacity" takes into account all existing activities, even if a capacity category is not configured on the page.

- o Time Intervals

Both the Resources and Available capacity values are shown using sets of configured time intervals. These time intervals are defined on the capacity area level.

- o Visual queues are added to the screen to indicate capacity usage. The number highlighted in green indicates the available capacity or resources and the number highlighted in black indicates the maximum capacity or resources at a particular time.

**Note:** The color of the number changes based on the available capacity and resources. For example, if only 70% capacity is available then the color changes to **Orange**. However, if only 10 resources are left then the color changes to **Red**.

Consider the capacity category, Install in the Available Capacity image. The following information displays:

- o 0/0 in Before 08 column: Indicates that no technicians are working.
- o 87/87 in Resources at 08 column: Indicates that 87 out of 92 resources as shown in the Planning row are available at 08:00 and no one is occupied with work.
- o 348/348 in Available capacity, h: Indicates maximum available capacity of 348 hours wherein 348 hours of capacity are available.

If an Install activity is booked at 8.00 am, then a technician consumes capacity from the Available Capacity column.

## View Activities and Resources Used for Available Capacity Calculations

You can download a list of resources and activities from the Available Capacity screen to analyze the resources and activities that are used to calculate available capacity per capacity area, per category, and per day.

Important information related to the feature:

- Capacity is recalculated regularly and you can change the recalculation period under the **Quota Management** setting in the **Configuration, Business Rules** page. During the recalculation, changes in activity distribution between resources might lead to changes in visible activity distribution between categories.
- The **Capacity categories** field is populated only when the list is downloaded from Capacity Area or Group level.

- Both resources and activities may be counted in more than one capacity category, if one of the following conditions occur:
  - Workskills of activities and/or resources corresponds to more than one capacity category.
  - When an activity is assigned to a resource whose workskills match to more than one capacity category.
- The amount of rows that can be downloaded is limited to 10,000 rows and the data over this limit is truncated.

To view activities and resources used for available capacity calculations:

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Available Capacity** icon.

The Available Capacity page displays.

Capacity categories	Wednesday, January 17th, 2018					
	Before 08 AM	08 AM	After 06 PM	All day		
	Capacity, hrs	Resources at 08 AM	Capacity, hrs	Resources	Capacity, hrs	
Planning	102.9 / 339.03	0 / 93	0 / 0	98	245.22 / 847.1	<a href="#">Download activities list</a>
Deinstall	95.72 / 317.37	0 / 87	0 / 0	92	230.2 / 796.82	
Downgrade	95.72 / 317.37	0 / 87	0 / 0	92	230.2 / 796.82	<a href="#">Download resources list</a>
Install	96.8 / 320.97	0 / 88	0 / 0	93	231.62 / 805.78	
Non-Pay	95.72 / 317.37	0 / 87	0 / 0	92	230.2 / 796.82	
Restart/Reconnect	95.72 / 317.37	0 / 87	0 / 0	92	230.2 / 796.82	
Service Request Order	95.72 / 317.37	0 / 87	0 / 0	92	230.2 / 796.82	
Trouble Call	95.72 / 317.37	0 / 87	0 / 0	92	230.2 / 796.82	
Upgrade	101.82 / 335.43	0 / 92	0 / 0	97	243.8 / 838.68	

4. Click on the used capacity number in the **All Day** column for the required capacity category and click **Download activities list**.

**Note:** Lists downloaded from aggregated screens might have many rows and might take longer time to download.



5. Save the file, open it with a text editor or a table processor, and review the following fields in the downloaded file:

**Note:** To configure the download file format, you can select the required option from the **Default Export Format** drop-down list in the **My Display** page. Also, to configure the date or time format, select the required options from the **Time Format** and **Date Format** drop-down lists in the **My Display** page.

- Activity ID
- Activity type label
- Activity type name
- Activity status
- Activity number
- Activity identifier
- ETA
- Activity duration
- Travel duration
- Service window start
- Service window end
- SLA window start
- SLA window end
- Time of assignment
- Access Hours
- Time zone
- Capacity categories
- Capacity Area

: The original capacity area of the activity. Empty value means that the capacity area of an activity and the capacity area to which the activity belongs are same.

- Assigned to

: The resource or capacity area of the activity.

**Note:** To identify temporary resources, you can download the **activity** list and search for non-empty values in the Capacity Area column. If a value displays in the Capacity Area column, it indicates that the activity belongs to another capacity area but consumes capacity from the capacity area that it belongs. The displayed value of the capacity area indicates that the temporary available resource is assigned to the capacity area.

6. Click on the resources number in the **All Day** column for the required capacity category and click **Download resources list**.

7. Save the file, open it with a text editor or a table processor, and review the following fields in the downloaded file:

- o External ID
- o Resource name
- o Working time
- o Duration of working time
- o Org unit
- o Organization
- o Capacity categories
- o Capacity Area

: The original capacity area of the resource. Empty value means that the capacity area of an resource and the capacity area to which the resource belongs are same.

- o Workzones

: The inherited or directly assigned workzones of a resource.

**Note:** Capacity Area and Assigned to fields are not populated for mass repeating activities (such as Lunch, Meetings). To identify temporary resources, you can download the **resources** list and search for non-empty values in the Capacity Area column. If a value displays in the Capacity Area column, it indicates that the resource belongs to another capacity area and is the temporary available resource assigned to the capacity area.

## Manage Working Time Plans on Available Capacity Page

You can use the Planned Capacity editor in Available Capacity screen to view and manage working time plans of resources for capacity areas and organization units on a day level.

### Before you start

The editor displays either on the Resources or Capacity column based on the option selected from the **Unit of working time plans** drop-down list. See [Configure Quota Options](#) for more details.

As a quota or capacity manager, you can perform the following actions:

- Enter the capacity plan either on resource basis (in resource units) or on capacity basis (in man-hours, days, minutes) to cater to the business needs.
- View previously entered plans for capacity area.

**Note:** The users who have access to the Available Capacity page can view and edit the working time plans.

To add, edit, or view working time plans:

### Here's what to do


1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Select the **Available Capacity** icon.  
The Available Capacity page displays.

- Click on the value that is displayed on the Capacity or the Resources column for the capacity area. The Planned Capacity editor displays an empty field for the capacity area and for each organization unit within the capacity area.

Also, these columns are displayed for both Capacity and Resources column:

- Available:** Represents the available capacity for the capacity area and its organization units.
- Planned:** Represents the working time plans that is defined for the capacity area and its organization units. You can enter or edit the values (must be whole numbers within the range of 0 to 65535) and the difference between planned and available capacity is recalculated automatically. When you click **Save planned values**, only the value of the Variance column for the capacity area is displayed on the Capacity or Resources column.
- Variance:** Represents the difference between the values of the Available and Planned columns.

For example, assume that the available capacity for a capacity area in the Available column is set as 853 hours. You estimate 850 hours for the capacity area and enter the planned value as 850 in the Planned column. Since the available capacity for the capacity area is more than the planned value, the Variance column displays +3 in orange color which means there is enough capacity available. If the planned value is entered as 856 hours, then the Variance column displays -3 in orange color which means there is not enough capacity available. If the values in the planned and available capacity are the same, then 0 is displayed in the Variance column.

Also, the above logic applies for all the organization units within the capacity area. If the planned and the available capacity are the same, then a green check mark  is displayed on the Capacity column.

Similarly, assume that the available capacity for a capacity area in the Resources column is set as 97. You estimate 96 resources for the capacity area and enter the planned value as 96 in the Planned column. Since the available resources for the capacity area is more than the planned value, the Variance column displays +1 in orange color which means there are enough resources for the capacity area. If a negative value displays in the Variance column then it means that there are not enough resources for the capacity area.

Also, the above logic applies for all the organization units within the capacity area. If the planned and the available capacity are the same, then a green check mark is displayed in the Resources column.

**Note:** The organization units within the capacity area are displayed as a plain list rather than a tree structure. Also, if you have opted for temporary assigned resources using the **Use resources outside the capacity area** check box, then the number of resources that are temporarily assigned to a capacity area is displayed on the editor. See [Using Temporary Assigned Resources in Quota and Capacity Calculations](#) for more details.

5. Select a previous date to view the previously entered plans for the capacity area.

**Note:** The planned capacity editor has the same functionality if you select multiple days.

Example 1:

The difference between the planned values for the capacity area and its organization units are displayed on the bottom of the editor. For example, consider the following scenario:

- The available capacity for the capacity area is 853 hours and you enter a value as 852 hours. The Variance column displays +1.
- The available capacity for the organizations units, for example, Organization A and Organization B is 351 and 279 hours respectively and you enter values of 350 and 278 hours respectively. The Variance column displays +1 for both the organization units.

However, a message “The difference between plans for capacity area and its Organization Units is -1” displays on the editor which means that there is not enough planned capacity for the organization units.

Example 2:

The difference between the planned values for the capacity area and its organization units are displayed on the bottom of the editor. For example, consider the following scenario:

- The available capacity for the capacity area is 97 resources and you enter a value as 96. The Variance column displays +1.
- The available capacity for the organizations units, for example, Organization A and Organization B is 75 and 65 resources respectively and you enter values of 74 and 64 respectively. The Variance column displays +1 for both the organization units.

However, a message “The difference between plans for capacity area and its Organization Units is -1” displays on the editor which means that there are not enough planned resources for the organization units.

## Using Temporary Assigned Resources in Quota and Capacity Calculations

You can use temporary assigned resources (that is, resources belonging to another capacity area but having compatible work zones) and use their available capacity to book activities for a particular capacity area. When you select the **Use resources outside the capacity area** check box from the Business Rules, Quota Management section, then the resources may contribute capacity to another capacity area, provided the capacity area workzones are compatible with the workzones of resources.

When resources contribute capacity to multiple capacity areas, then the arithmetical sum of available capacities for the capacity areas that are under the same capacity group may exceed the available capacity of the capacity group due to double counted hours. However, the hours of the used activities are accordingly calculated for all the compatible areas.

The additional capacity of the resources is added to available capacity values on the Available Capacity screen and to the Max Available value on the Quota screen for multiple capacity areas.

Also, if the quota is configured as a percentage of Max Available value, then the additional capacity is added to the quota calculations on the Booking screen and the booking APIs (GET AvailableBookingOptions and get\_capacity operations) use the quota to determine the activity booking preferences.

Review the following points:

- To use temporary resources in quota calculations, you must assign the work zone(s) directly to the resources because inherited work zones of the resources is not used in calculations.
- Capacity areas with both inherited and directly assigned workzones are matched with resources that have workzones that are compatible and are directly assigned to resources.
- When a resource has a temporary work zone assigned, all other work zones (directly assigned or inherited workzones) are ignored during the defined start and end date of the temporary work zone.
- Whether the temporary resources are used or not used, the resources that are not placed under the capacity area (either directly or indirectly) are not included in the quota calculations. For example, assume that a technician, Tech 1 is assigned to workzone A and B and belongs to the Area A (which has workzone A assigned to it). Assume that a technician, Tech 2 is assigned to workzone B and belongs to Area B (which has workzone B assigned to it). In this scenario, the availability of Tech 1 is counted in quota calculations for Area A and Area B.
- Temporary available resources are added to quota and capacity calculations for both time slot and time interval (available capacity based) quotas to support related routing capabilities. See the *Assigning Activities to Temporary Resources* section in the *Using Routing Service Guide* for more details.

When you select the **Use resources outside the capacity area** check box, any configuration changes or changes to directly assigned work zones of resources are applied as per the recalculation period in **Business Rules, Quota management** section. It might take more time if you want to apply the configuration changes to the capacity area where a temporary resource is assigned. To identify temporary resources, see [View Activities and Resources Used for Available Capacity Calculations](#) for more details.

## View and Change Available Quota


The **Quota** page lets you view and manage quota for up to 100 days, including a specific day or week. It also lets you manage capacity categories.


You can change quota values in the **Quota%**, **Min Quota**, **Daily Quota %**, **Quota** and **Stop Booking at** columns for the present and future dates. Based on the edited values, the values in the **Quota** column is recalculated. Also, when you click the **Quota History** button after you edit the quota values for capacity categories and click **Save**, the edited quota values display in the **Quota History** window.





For example, if you enter **80%** in the **%Quota day** column for the category, Deinstall and select a date, then you can only use 38352 mins for performing Deinstall activities on the selected date. However, if you enter **95%** in the **Stop Booking at** column and select a date, then you can only book Deinstall activities that consume 45543 mins on the selected date.

To view and change available quota:

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.

3. Select the **Quota**  icon.  
The Quota page displays.

Quota > Planning < Wednesday, July 4th, 2018 > View 

Capacity categories	Wednesday, July 4th, 2018										
	Max Available	Planned Max Available	Other Activities	Quota, %	Daily quota, %	Min quota	Quota, hrs	Used quota, hrs	Used Quota, %	Stop booking at	Booked Activities
<b>Planning</b>	853										
Deinstall	799										
Downgrade	799										
Install	808			9%	8%	80	80		0%		
Non-Pay	799										
Restart/Reconnect	799										
Service Request Order	799				0%						
Trouble Call	799										
Upgrade	844										

Select a category from the **Category** drop-down list to view the quota information for the selected category. Also, you can select the required columns that you want to display on the Quota page.

The following columns display on the Quota page:

Column	Description
Max Available	The maximum capacity that is available according to working calendars of resources working in the capacity area. This column is available regardless of the configured capacity area.
Planned Max Available	The maximum planned capacity according to the values entered as working time plans in the capacity area. Displayed only if the quota is entered in percent of planned capacity.
Other Activities	This is the capacity consumed by activities that do not match any capacity category configured for the capacity area. This column is available regardless of the configured capacity area and calculated on the "day" level.
Quota	<p>If the column is read-only, then based on the configuration of the capacity area, the Quota value is calculated as:</p> $\langle \text{Quota} \rangle = \text{MAX} (\langle \% \text{ Quota} \rangle * \langle \text{Base} \rangle, \langle \text{Min Quota} \rangle)$ <p>Where depending on the capacity category and the configuration of the capacity area, the <math>\langle \text{Base} \rangle</math> value is a <math>\langle \text{Quota} \rangle</math> value from the day level or is the <math>\langle \text{Max available} \rangle</math> value for the same category or is calculated as <math>\langle \text{Max Available} \rangle - \langle \text{Other Activities} \rangle</math>.</p> <ul style="list-style-type: none"> <li>○ If Man-days is selected as a measurement unit for Quota from the <b>Business Rules</b> page, then quota is calculated as follows:                     <math display="block">\text{Quota} = (\text{hours of max available} / \text{Number of hours per man-day})</math> </li> <li>○ You can also enter a value in the <b>Quota</b> column to determine the quota for a specific capacity category.</li> <li>○ When the % Quota value is empty in the Quota by category screen and if the time slot based quota is enabled, then the Quota value is presented as a sum of quota values for each capacity category.</li> <li>○ If the Quota value is empty (for example, if quota % is not populated or if a negative value of quota is populated when value of Other Activities is more than the value of Max Available), then the Quota value is presented as a sum of all subsequent quota values for each capacity category.</li> </ul>

%Quota	<p>This is the % of Quota. Depending on the configuration of the capacity area, it can be read-write or read-only.</p> <ul style="list-style-type: none"> <li>Day level                     <p>If it is read-only, it is calculated as: <math>\text{&lt;Quota&gt; / (&lt;Max available&gt; - &lt;Other activities&gt;)</math></p> <p><b>Note:</b> Note that there is a option to not subtract the <math>\text{&lt;Other activities&gt;}</math> value.</p> </li> <li>Category level                     <p>If it is read-only, it is calculated as: <math>\text{&lt;Quota (category)&gt; / &lt;Max available (category)&gt;}</math></p> </li> </ul>
Category / % Quota (day)	Depending on configuration of the capacity area, it can be read-write or read-only. If it is read-only, it is calculated as: $\text{<Quota (category)> / <Quota (day)>}$ .
Min Quota	This value is to be used when the quota is defined as a percent. When a calculated quota value is below the minimum, the system uses this minimum value instead of the calculated one. Calculated as: $\text{<Quota> = MAX(<% Quota> * <Base>, <Min Quota>)}$ .
Used Quota	Quota used by activities that match capacity categories configured for the capacity area.
Used Quota %	Calculated as: $\text{<Used quota> / <Quota>}$
% to Stop Booking at	This is only available on the category level. It is used to stop booking of activities in a given category when $\text{<Used quota %>}$ on the day level exceeds the $\text{<% to stop booking value>}$ . It allows implementing a reservation of remaining quota in other categories.
Booked Activities	Indicates the number of booked activities.

## Manage Quota Limits for Booking Intervals

You can enter quota values manually on booking interval levels using the quota editor on the **Quota** page and control booking on a required booking interval level.

### Before you start

- Select the **Manage quota on booking interval level** check box from the **Configuration** page.
- Use planned capacity from day 0 or from some other day of the calendar. The numbers you enter for booking intervals when **Manage quota on the level of booking intervals** is selected only affects the capacity availability when the capacity is based on the planned capacity and not when it is based on the available capacity. If you have configured capacity to change to planned capacity after X number of days, the levels configured for booking interval are considered in the available capacity after the X days.

### Recommendations:

- Use available capacity based quota, if the calendars are accurate up to 3+ months period.

- Do not limit quota on booking intervals level, until it is ultimately necessary, because you need to manage quota manually through the user interface or API for all the booking intervals.

To manage quota limits for booking intervals:

**Here's what to do**

- Select **Quota**.
- Select a capacity area from the left-hand pane.
- Select the **Quota** icon.
- Click > to access the quota editor on the Quota column.  
The editor to manage quota for each booking interval is displayed.

Tuesday, July 10th, 2018						
Quota, hrs	Before 08 AM	08 AM - 12 PM	12 PM - 02 PM	02 PM - 04 PM	04 PM - 06 PM	After 06 PM
	0	0	0	0	0	0
	0	40	40	40	40	0
	0	50	50	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

- Enter the values in absolute time units (minutes/hours/days) as defined on the **Business Rules** page.

**Note:** If the **Manage quota on booking intervals level** check box is selected, then you must either manage all quota on the booking intervals level. That is, you must enter all the quota values for all the capacity categories and all the booking intervals. Any non-entered entry is considered as zero, that is, booking for such a combination of capacity category and booking interval is prohibited. By default, if no values are entered for quota on booking intervals level, all the values are set to 0, which means that the booking is prohibited for the entire area. Also, you can use the Quota API to enter the quota values. Currently, mass populate or autofill for quota values are not supported on the booking intervals level.



6. Click **Save** and select < to close the editor.

**Note:** Quota values on the booking intervals level editor is also accessible in Read-Only (RO) mode, if the **Manage quota on booking intervals level** check box is disabled. In this case, you can review the auto-populated values using the Read-Only editor. Even though the quota values on the booking intervals level editor is displayed in RO mode for all the days, the quota limits are not applied for the days when quota is not entered as percent of planned capacity.

The corresponding SOAP or REST booking functions uses the quota values on the booking intervals level as follows:

- If either the remaining daily level quota or capacity category level quota is less, then the estimated duration of the activity to be booked, the booking for given day/capacity category/capacity area is not possible. Else, all the combinations of time slots and booking intervals are checked.
- If there is a time slot where an activity can be started and the remaining quota for each booking interval (for either automatically calculated or manually defined quota values) is enough to handle the part of the activity, the booking function returns such a time slot as a possible time slot.

Assume that there are two possible time slots: (8-12) and (12-16), and two possible time intervals (8-12) and (12-16) and only one resource is available. For each time interval, the quotas for booking intervals for Install capacity category are entered as 4 hours and 4 hours. If an activity is booked in (8-12) time slot for 3 hours, the remaining quotas are 1 hour and 4 hours respectively. If you try to book an activity for 2 hours, then both (8-12) and (12-16) time slots are returned, since you can start the second activity because there is quota of 1 hour left in the 8-12 time slot. However, you can only book a third activity of the same length in the (12-16) time slot as the (8-12) time slot is exhausted.

## Use Planned Capacity for Booking Activities

You can book activities using planned capacity either from Day 1 of the calendar or use the planned or available capacity based booking approach for booking on a short term.

### Before you start

Ensure that you select the **Booking Interval based** option under the **Manage quota as** section to use planned capacity for booking.

Recommendations:

- If your calendars are accurate only for few days, use available capacity for this period and then switch to planned capacity.
- For planned capacity, use quota per capacity category to imitate distribution of your work force work skills.
- For planned capacity, close unneeded booking intervals in advance to imitate distribution of your work force schedules. If possible, maintain the total length of open booking intervals close to work day length to avoid unnecessary over or under booking.

**Note:** Quota based on working time plans is only supported, if quota is managed based on booking intervals and is not supported for time slot based quota. Planned capacity is an equivalent of the "working time plans", which you can set on the Available Capacity screen or through the API. Also, working time plans are accessible through the Admin interface.

To use planned capacity for booking activities:

### Here's what to do

1. Select the Enter quota as a percent of planned capacity option for daily quota configuration.
2. Select the **Enter quota as % of capacity available by calendar** and enter the number of days in the **next days and switch to the plans** field to use the available capacity for a specified number of days and switch to planned capacity after the specified days.

For example, if you enter 0 in the **next days and switch to the plans** field, then it means that you want to use the available capacity to book activities. If you enter 1, it means that during the first day (that is, today), the available capacity is used and the planned capacity is used from tomorrow. The logic is to use the planned capacity from the day after the specified number of days until the overnight time setting value is met. If the number of available resources is different from the working time plan resources, then the available capacity is used for booking and may lead to over or under booking of activities.

**Note:** If no working time plans are set, then the available capacity is used as planned capacity. Working time plans can be set in absolute time units (minutes/hours/days) or in number of resources. If resources are used for plans, the value, 'Number of hours per man-day' is used to convert the number of resources into hours (and then to minutes, if required).

3. Click **Save**.

**Results:**

The available capacity is distributed between capacity categories and booking intervals according to real schedules; whereas, the planned capacity is proportionally distributed between available booking intervals and copied for all the capacity categories.

For tomorrow, assume that there are plans for 10 resources. The following list of categories are available: Install, Uninstall, Trouble Calls. The booking intervals defined in the system are: [8-12], [13-17]. In this case, the total amount of planned working time is 80 man-hours (that is, 10 resources \* 8 hours working day). The planned working time distributes as follows:

Capacity Category	8 - 12	13 - 17
Install	40	40
Uninstall	40	40
Trouble Call	40	40

Note that the total working time plans are distributed proportionally on all intervals for which the booking is not closed on the interval level in advance. If the intervals [0-8] and [17-24] are included, then the planned working time distributes as follows:

Capacity Category	-8	8 - 12	13 - 17	17 -
Install	28	14	14	24
Uninstall	28	14	14	24
Trouble Call	28	14	14	24

Therefore, around two-third of the overall time is reserved for the morning and evening intervals even though there are probably no resources working (assuming that the overnight setting in the business rules page is set to 0). If the overnight settings are set to non-zero value, the -8 interval has a length of 8 hours (that is, starting at beginning of

day), but the 17- interval prolongs till overnight end, so the length of the interval is increased with the overnight settings value.

To overcome the issue from last example, you can use the following strategies:

- Delete the non-working intervals from the overall intervals list, if the companies/buckets have stable work hours.
- Close booking on the non-working intervals in advance (over the period defined for quota calculation in the business rules).

## Quota View Parameters

The visibility of the quota matrix is based on the settings you choose while configuring the capacity area.

Using **View** option, select the desired elements to filter the quota grid. The check boxes define which columns to display in the **Quota** grid. However, the list of the available columns depends on the quota definition and the capacity area settings. The filter contains only the columns relevant to the selected method and configuration.

**View**

Capacity category ▼

**Category**

\* ▼

**Time slot**

\* ▼

Max Available

Other Activities

Weight

Estimated Quota %

% Quota

Min Quota

Plan

Quota

Booked Activities

Used

Used Quota %

% to Stop Booking at

Status

Close Time

The Quota grid includes the following parameters:

Option	Description
<b>Max available</b>	<p>Denotes the maximum capacity available for a calendar period. It is calculated as the sum of the working time of all the technicians in a selected capacity area for a selected day, time slot and/or capacity category. This value serves as the base value when quota is defined as a percentage of the available capacity. The Max available value is recalculated on a periodical basis according to the settings configured in the <b>Business Rules</b>:</p> $\text{Max available \%} = \frac{\text{Max available (capacity category)}}{\text{Max available (time slot)}}$ <ul style="list-style-type: none"> <li>• <b>Day Quota table:</b> The Max available column is hidden when <b>Estimate maximum capacity for</b> is disabled at the day level in the capacity area configuration.</li> <li>• <b>Time Slot Quota table:</b> The Max available column is hidden when <b>Estimate maximum capacity for</b> is disabled both at the day and time slot level in the capacity area configuration. If this option is disabled at the time slot level only, then the <b>Max available</b> column is visible, but its values are not calculated.</li> </ul>

Option	Description
	<ul style="list-style-type: none"> <li>• <b>Capacity Category Quota table:</b> The Max available column is hidden when <b>Estimate maximum capacity for</b> is disabled both at the time slot and capacity category level in the capacity area configuration. If this option is disabled at the capacity category level only, then the Max available column is visible, but its values are not calculated.</li> </ul> <p>For more information, see the <a href="#">Configure Capacity at Various Quota Levels</a></p>
<b>Other activities</b>	<p>Other activities are the repeating, mass, and shift activities, and the activities without instances. You can estimate the capacity allocated to the activities that are not part of the capacity management (such as mass, repeating and shift activities). The Other activities value is recalculated periodically based on the <b>Business Rules</b> settings.</p> <ul style="list-style-type: none"> <li>• <b>Day Quota table:</b> The Other activities column is only shown when the <b>Estimate capacity used by activities that are not a part of the Quota Management</b> is set in the capacity area configuration.</li> <li>• <b>Time Slot Quota table:</b> The Other activities column is shown when the <b>Estimate capacity used by activities that might affect capacity in this time slot</b> is set at the day and time slot level in the capacity area configuration, otherwise it is hidden. However, if this option is disabled at only the time slot level, then the column is visible but its values are not calculated.</li> </ul>
<b>Weight</b>	<p>Weight of a selected capacity category is calculated from the historical data. This column is visible when the <b>Estimate quota based on historical data</b> option is enabled at the capacity category level. The weight value is represented as percentage. Depending on the capacity area configuration, the weight is calculated as % Quota or Used quota % from the Max available value on the same weekday(s) in the past for the selected period (one week, one month or two months). Weight is used as a prediction tool to calculate the <b>Estimated quota %</b> value based on the historical data. This column is visible only in the capacity category quota table.</p> <p><b>Weight = (Quota / Total quota) / Max available %</b> OR <b>Weight = (Used / Total used) / Max available %</b></p>
<b>Estimated Quota %</b>	<p>It is the percentage of the time slot quota available to book activities in a selected capacity category. This value is calculated as the product of Weight and the Max available value for the selected capacity category and time slot. Estimated quota % is a quota forecast calculated on the basis of historical data (quota used or set for the same weekday(s) in the historical period of one week, one month or two months). The Estimated quota % value is used as a reference to estimate quota for the future periods. This column is only visible in the capacity category quota table.</p>
<b>% Quota</b>	<p>Quota at various levels (day, time slot, capacity category) are used to calculate the quota percent for each day.</p> <p><b>Note:</b> The quota values above 999% aren't displayed on the Quota grid.</p> <p><b>% Quota = Avg. weight * Max available %</b></p> <ul style="list-style-type: none"> <li>• <b>Day Quota table:</b> Percentage of the maximum capacity available to book the activities. Enter the % Quota value manually. The <b>% Quota</b> column is visible only when the quota parameter is set as <b>% of capacity available by calendar</b> in the capacity area configuration. % Quota affects the value of the Quota column.</li> <li>• <b>Time Slot Quota table:</b> Percentage of the day or time slot quota available to book the activities in the selected time slot. When quota is entered in minutes, the % Quota value is non-editable and is calculated as a percentage of the total quota allocated to a time slot. The percentage is adjusted in proportion to the quota values, so that the total sum of all time slots is 100%. When quota is entered as <b>% of the maximum time slot capacity</b>, enter the % Quota value. This value affects the Quota value which is calculated as the percentage of the Max available value for the selected</li> </ul>

Option	Description
	<p>time slot. When quota is entered <b>as % of the daily quota</b>, enter the % Quota value. This value affects the Quota value which is calculated as the percentage of the Quota value for the day.</p> <ul style="list-style-type: none"> <li>• <b>Capacity Category Quota table:</b> Percentage of the time slot or capacity category quota available to book the activities in the selected capacity category. When quota is entered in minutes, the % Quota value is non-editable and is calculated as a percentage of the time slot quota allocated to a capacity category on the basis of the number of minutes entered in the Quota column. The percentage is adjusted in proportion to the quota values, so that the total sum of all the time slots is equal to 100%. When quota is entered <b>as % of the maximum capacity available in this category</b>, enter the % Quota value. This affects the Quota value calculated as the percentage of the Max available value for the selected capacity category and time slot. When quota is entered <b>as % of time slot quota</b>, enter the % Quota value. This value affects the Quota value which is calculated as the percentage of the Quota value of the time slot.</li> </ul>
<p><b>Min. Quota</b></p>	<p>Enter the minimum quota value allowed manually. The Min. quota parameter is used only when the quota is defined as a percentage of capacity necessary when the calculated quota value is less than the duration of a single activity. In this case, the Min. quota value is used instead of the calculated quota value.</p> <ul style="list-style-type: none"> <li>• <b>Day Quota table:</b> The Min. quota column is visible only when the quota parameter is set <b>as % of capacity available by calendar</b> in the capacity area configuration.</li> <li>• <b>Time Slot Quota table:</b> The Min. quota column is visible only when the quota parameter is set <b>as % of the maximum time slot capacity</b> or <b>as % of the daily quota</b> in the capacity area configuration.</li> <li>• <b>Capacity Category Quota table:</b> The Min. quota column is visible only when the quota parameter is set <b>as % of the maximum capacity available in this category</b> or <b>as % of time slot quota</b> in the capacity area configuration.</li> </ul>
<p><b>Plan</b></p>	<p>Plan denotes the quota value forecasted for future date. The plan values are taken from the <b>Forecasting</b> screen. When the plan is calculated in Forecasting and <b>Show Plan Column</b> is enabled in the <b>Display</b> screen, you can view it in the quota matrix. See the Oracle Field Service Forecasting user guide for more information about the Plan. This column only appears in the Capacity Category Quota table.</p> <p><b>Note:</b> You must enable the Forecasting service to use the Plan functionality. View the About screen to verify whether the service is enabled.</p>
<p><b>Quota</b></p>	<p>It is the planned usage of capacity allocated across different capacity categories and time slots.</p> <ul style="list-style-type: none"> <li>• <b>Day Quota table:</b> The quota available for the activity booking on a selected day which can be either entered manually or calculated as percentage of the available capacity. Depending on the <b>Quota is entered</b> parameter setting in the capacity area configuration, the Quota cell can be editable (if the quota is entered in minutes) or non-editable (if the quota is entered as % of capacity available by calendar). Depending on the method of quota definition, the following cases are possible <ul style="list-style-type: none"> <li><b>Quota entered in minutes</b> (manually): Quota cell is editable and Quota is entered in minutes. The Max available and Other activities values does not affect the Quota value directly.</li> <li>Quota entered as % of capacity available by calendar: In this case, enter the % Quota and the Quota value will be calculated automatically. The Quota cell is non-editable.</li> </ul> </li> <li>• <b>Time Slot Quota table:</b> Quota available to book the activities in a selected time slot. Depending on the <b>Quota is entered</b> parameter settings in the capacity area configuration, the Quota cell can be editable (if the quota is entered in minutes) or non-editable (if the quota is entered as % of the</li> </ul>

Option	Description
	<p>maximum time slot capacity, or as % of the daily quota). Depending on the quota definition, the following cases are possible:</p> <p><b>Quota entered in minutes</b> (manually): Quota cells are editable and quota is entered in minutes. The Max available and Other activities values do not affect the Quota values directly. The % Quota values are calculated automatically in proportion to the Quota values so the total value equals to 100%.</p> <p><b>Quota entered as % of the maximum time slot capacity:</b></p> <p>In this case, enter the % Quota, and the Quota value is calculated automatically on the basis of the Max available values of the corresponding time slots. Quota cells are non-editable.</p> <p><b>Quota entered as % of the daily quota:</b></p> <p>When this option is selected, enter the % Quota, and the Quota value is calculated automatically on the basis of the Quota value for the day. Quota cells for the time slots are non-editable.</p> <ul style="list-style-type: none"> <li>• <b>Capacity Category Quota table:</b> The quota for booking of activities having the selected capacity category. Depending on the settings of the <b>Quota is entered</b> parameter in the capacity area configuration, the Quota cell can be editable (when quota is entered in minutes) or non-editable (when quota is entered as % of the maximum capacity available in this category, or as % of the time slot quota). Depending on the methods of quota definition, the following cases are possible:           <p><b>Quota entered in minutes</b> (manually):</p> <p>Quota cells are editable and Quota is entered in minutes. The Max available values do not affect the Quota values directly. The % Quota values are calculated automatically in proportion to the Quota values so the total equals to 100%.</p> <p><b>Quota entered as % of the maximum capacity available in this category:</b></p> <p>In this case, enter the % Quota, and the Quota value is calculated automatically on the basis of the Max available values of the corresponding capacity categories. Quota cells are non-editable.</p> <p><b>Quota entered as % of time slot quota:</b></p> <p>When this option is selected, enter the % Quota, and the Quota value is calculated automatically on the basis of the Quota value of the time slot. Quota cells are non-editable.</p> <p>The Quota total value is the sum of the values shown for different capacity categories for a particular time slot in the Quota column for a capacity area.</p> <p>The Quota total value is in Read-Only mode in the Quota column of the <b>Quota by Capacity Category</b> screen, when the value is calculated from the capacity categories for a particular time slot.</p> <p>However, when the quota value is calculated from the application (that is when the <b>Time Slot</b> check box is selected from the <b>Quota Configuration</b> screen), the value from the capacity categories is not shown and the quota values are editable.</p> </li> </ul>
<b>Booked activities</b>	Denotes the number of activities already booked in the selected bucket for a selected day, time slot, or combination of time slot and capacity category. This value is recalculated immediately when any activity is added, rescheduled or canceled.
<b>Used</b>	Denotes the total duration of the activities already booked in the selected bucket for a selected day, time slot, or combination of time slot and capacity category. This value includes the activity duration and travel time and is recalculated immediately when any new activity is added, rescheduled or canceled.

Option	Description
<b>Used Quota %</b>	It is the percentage of the day, time slot, or capacity category quota used by the booked activities (the ratio of Used to Quota). The method of quota definition (manual or as percentage of capacity) has no effect on this value.
<b>% to stop booking at</b>	Denotes the percentage of the used day quota where no more activities can be booked for the selected time slot, or the percentage of the used time slot for the selected capacity category. Enter this value, manually. The value of this parameter does not change the Quota status. This parameter is used for the Capacity API – when the set percentage has been reached, the <code>get_capacity</code> function will no longer return quota for the capacity category in the selected time slot.

## Configure Capacity at Various Quota Levels

Based on the amount of information displayed for each capacity level, Oracle Field Service Capacity displays a separate easy-to-read tables at the day, time slot, and capacity category levels.

Select the appropriate level from one of the buttons displayed in the upper right corner of the data matrix.

### View quota by day level:

The day quota table gives an overview of capacity for a single day selected in the calendar. This table gives you the information necessary to restrict the **used** value so that it does not exceed the workforce available for that day.

### View quota by time slot level:

The time slot quota table gives an overview of capacity for a day to restrict the capacity for a particular time slot.

### View quota by capacity category level:

The capacity category table combines dates and time-slots. A bucket is assigned to the capacity categories for the Quota management purpose. Many customers employ this category to view quota.

#### Related Topics

- [Configure Quota By Day Level](#)
- [Configure Quota By Time Slot Level](#)
- [Configure Quota By Capacity Category Level](#)

## Configure Quota By Day Level

Configure the capacity area to calculate quota at a day level. This option is useful for the business with a fluctuating capacity on a daily basis of the week. For an example, increased number of installations on weekends and Mondays while the trouble calls increase on the rest of the days.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Configuration** icon.
4. Select the **day** check box and in the **Quota by Day** section, select the preferred unit to manage quota:



- **in minutes:** Select this option to manually enter quota as a number of minutes allowed to book the activities.
- **as % of capacity available by calendar:** Select this option to enter the total available capacity percentage that can be used to book the activities. When you enter quota as percentage, the quota value is automatically calculated in minutes
- **Reduce quota by volume of activities not assigned to any capacity category:**

5. Click **Save**.

The selected configuration is saved.

## Select a Date Range to View Quota

Select the date range in the calendar to display quota. The calendar offers four options to view the quota – Day, Week, Month, and Custom.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Quota** icon.
4. Select the calendar at the top of the screen.
5. Choose Day, Week or Month to display and manage Quota for the selected day, week or month, respectively, starting from the date selected in the calendar.

The Custom option allows you to select and view the quota for the individual days in the calendar. For example, if a company needs quota calculation on Mondays and Thursdays or for the first 10 days of a month only, use the **Custom** calendar option. When you select the Custom option, you can select the required days directly from the calendar.

The **Quota** screen displays the quota values at the selected level (day, time slot or capacity category).

The screenshot shows the 'Quota > Planning' interface. At the top, there's a navigation bar with 'Wednesday, July 4th, 2018' and a 'View' button. Below that, there are tabs for 'Day', 'Week', 'Month', and 'Custom'. The main area is a calendar grid showing June, July, and August. The 'Quota, hrs' column shows a value of 80 for the selected date. The 'Used quota, hrs' column shows 0, and the 'Used Quota, %' column shows 0%. The 'Stop booking at' and 'Booked Activities' columns are empty.

Capacity categories	Quota, hrs	Used quota, hrs	Used Quota, %	Stop booking at	Booked Activities
Planning	80	0	0%		
Deinstall					
Downgrade					
Install					
Non-Pay					
Restart/Reconnect					
Service Request Order					
Trouble Call	799				
Upgrade	844				

## Configure Quota By Time Slot Level

Configure the capacity area to calculate capacity at a time slot level. Use this option if your business allocates different work types at a different time of the day, such as focusing on customers waiting for service in the morning hours.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.

3. Click the **Configuration** icon.
4. Select the **time slot** check box and in the **Quota by Time Slot** section, select the preferred unit to manage quota:
  - **in minutes:** Select this option to manually enter quota in the number of minutes allowed to book the activities.
  - **as % capacity available by calendar:** Select this option to enter quota as a percentage of the maximum capacity at a time slot level. When you enter the value in percentage, quota is automatically calculated in minutes. This option is available only if the maximum capacity is estimated at this level.
  - **as % of quota defined on parent level:** Quota at the time slot level is used to calculate the quota percent for each day. Enter the required percentage, and the quota for each time slot is calculated automatically. This option is visible only when the **Day Level Quota** check box is selected while configuring the capacity area.
  - **Reduce quota by volume of activities not assigned to any capacity category:**
  - **Automatically adjust '% Quota' values to keep their total equal to 100%:** Select this check box to always make the sum of the % Quota value equal to 100%.

**Note:** This check box is visible only when the **as % of the daily quota** option is selected. If you select this option, a change in the **% Quota value** of a time slot will update the % Quota values in the remaining time slots, so that their sum is always equal to 100%.

5. Click **Save**.

The selected configuration is saved.

## Configure Quota By Capacity Category Level

A capacity area can be configured at capacity category level. This is the standard capacity configuration employed by most of the customers.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Configuration** icon.
4. Select the **capacity category** check box and in the **Quota by Capacity category** section, select the preferred unit to manage quota:
  - **in minutes:** Select this option to manually enter the quota value in the number of minutes allowed to book the activities.
  - **as % of the maximum capacity available in this category:** You can enter the quota value as a percentage of the maximum capacity at the capacity category level. Enter the required percentage, and the quota value is calculated automatically. Use this option only if you can estimate the maximum capacity allowed at this capacity category level.
  - **as % of quota defined on parent level:** Quota entered at a capacity category level is used to calculate as a percentage of the quota allowed for the time slots. Enter the required percentage, and the quota value for each time slot is calculated automatically. This option is visible only when the time slot level quota is in use.
5. **Estimate the quota based on the historical data:** Check this box to estimate quota from the historical data. This option is available only when the quota value is defined **as % of the time slot quota**.
  - Select the **Historical values to be used** to estimate quota. The available historical values are **Quota %** and **Used Quota %**.
  - Choose the length of the historical period to be analyzed. You can setup the period as **one week, one month, or two months**.

6. Select the **Automatically adjust % Quota values to keep their total equal to 100%** check box to always make the sum of the % Quota value equal to 100%.

This check box is visible only when the **as % of the time slot quota** option is selected. If you select this option, a change in the **% Quota value** of a time slot will update the % Quota values in the remaining time slots, so that their sum is always equal to 100%.

7. Click **Save**.



# 4 Managing Capacity and Quota

## About Capacity and Quota

In Oracle Field Service, you can manage **Quota** at a very granular level such as **Time Slots** and **Capacity Categories**.

In Oracle Field Service, the following formula defines the relationship between capacity and quota:

### Capacity = Quota – Used

- **Capacity:** Time available in man-minutes based on the availability of the resources in the capacity area. This value is reflected in the **Estimation** field in the quota matrix.
- **Quota:** Company's planned usage of capacity allocated across different capacity categories and time slots for the best and most economic scenario.
- **Used:** Time in minutes scheduled for any activity booked for that day.

## Compare Projected Quota with Actual Quota

You can review the actual quota used for a day against the projected quota. A color-coded display makes the data easier to interpret.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Quota** icon.  
The **Quota** page opens.
4. Select the day that you want to investigate.
5. Use the following keys to interpret the colors that you see:
  - **Green values:** Sufficient quota is available.
  - **Brown values:** Quota is above the major capacity usage but below the critical capacity usage values.
  - **Orange values:** Quota is above the critical capacity usage but below the 100% of your projected quota.
  - **Red values:** The actual quota is above 100% of your projected quota.

**Note:** The quota levels for the different color codes are defined on the **Display** screen under **Configuration**.

## Identify the Changed Quota Values

When you make changes to the quota matrix, Oracle Field Service identifies the changes and displays an orange triangle in the upper right corner of each modified field.

You can also view the changes in the **Quota History** report. See [How do I view the quota matrix?](#)

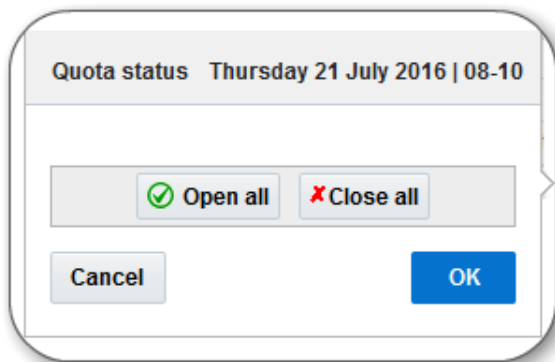
1. Click **Dispatch** and then select **Quota** from the drop-down list.  
The quota matrix appears.
2. Hover over the triangle in the matrix.  
The original value displays in a small context menu.

## Close the Quota Manually

When you close quota for a capacity category, you prevent activity booking in that category, even if the capacity is available.

A green checkmark and circle indicates quota is open for all workzones. A green checkmark indicates quota is open for some workzones but not all. A red X indicates quota is closed.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Booking status** icon.  
The Booking Status screen displays.
4. Click on the cell of a capacity category for a particular time-slot or time-interval.  
The **Quota Status** screen appears.



5. To close the quota for all the work zones, click **Close All**.
6. To close the quota for some of the work zones, select the required work zones.
7. Click **OK**.
8. In the **Quota** screen, click **Save**.  
If you are unable to close quota for a selected work zone, check:
  - o If a work zone which was auto-closed at a set time is reopened and then attempted to be closed again.
  - o If the work zone has close time earlier than the current time.

## Close the Booking Automatically

When you close the booking for a capacity category, you prevent activity booking in that category, even if the capacity is available.

You might use this feature to automatically block the activities in a dangerous area of the town late at nights, or to automatically block the activities during the morning and afternoon hours in an area where there are lot of schools.

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Click the **Booking status** icon.  
The Booking Status screen displays.
4. Click on the cell of a capacity category for a particular time-slot or time-interval.  
The **Close Time** screen displays.
5. To close the quota simultaneously for all the work zones, select the time in the **Close quota automatically** field.
6. To close the quota for some of the work zones or to close the quota at different times for different work zones, select the times in the fields next to the desired areas and click **OK**.
7. Click **Save** in the **Quota** screen  
The selected quota will close at the time selected. The cell displays the date and time.

## Add Quota

You can adjust the quota values manually as well as automatically.

**Adding Quota Manually:** You can add quota to the quota matrix by typing it directly into the matrix. OFSC automatically updates the fields or the linked fields that you have updated.

**Automatic Quota Adjustments:** Oracle Field Service automatically updates the fields or the linked fields that you have updated. The way that it calculates the values to update the matrix depends upon the situation. The following scenarios describe the actions when the quota needs to be updated and the result of the each action:

When you update the quota for an Individual capacity category:

- The quota value of the individual capacity category is updated.
- The total quota value of the time slot is updated.

When you update the quota for an entire time slot:

- The total quota value of the time slot is updated.
- The individual capacity categories in the time slot is updated. The new quota is divided among the capacity categories as per the Percent Quota value.

When you add the quota to an empty time slot:

- The total quota value of the time slot is updated.
- The individual capacity categories in the time slot is updated. The quota is divided evenly among the individual capacity categories in the time slot.

When you add the quota to an empty capacity category:

- The individual capacity category quota is updated.
- The total quota value is updated.

**Adding Quota Automatically:** The Mass populate feature enables you to use the historical data to create a future quota. You can either use the application projected quota value or the actually used quota for this purpose. The date on which the historical data copied is called the source date and the future date that you want to copy the data to is called the target date.

#### *Related Topics*

- [Add Quota Manually](#)
- [Mass Populate](#)

## Add Quota Manually

If the quota is configured to enter as minutes, you can add quota to the quota matrix by typing it directly into the matrix.

You can type the values into any field in the Quota column. These fields contains the quota value for the individual capacity categories and the total quota for the entire time slot. Oracle Field Service updates all the other fields.

## Manage Activity Booking Status

The Booking Status page lets you manage activity booking for a specific category and close quota at a particular time and for a specific work zone.


The time-slot based booking status information displays on the left-hand side of the screen and the time-interval based booking information displays on the right-hand side of the screen.

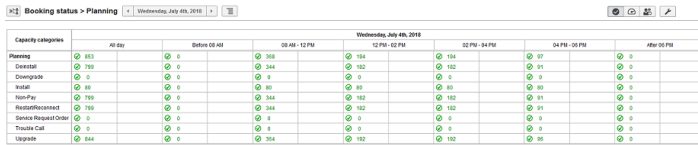
The below screen displays the time slot-based booking status only if the time-slot based quota is enabled for the bucket.

To view the Booking Status icon:

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.



- Click the **Booking status**  icon.  
The Booking Status screen displays.



Capacity categories	All day	Wednesday, July 26, 2018						
		Before 08:00	08:00 - 12:00 PM	12:00 PM - 02:00 PM	02:00 PM - 04:00 PM	04:00 PM - 08:00 PM	After 08:00 PM	
Planning	0	0	0	0	0	0	0	
Operational	0	0	0	0	0	0	0	
Convertible	0	0	0	0	0	0	0	
Travel	0	0	0	0	0	0	0	
Repair	0	0	0	0	0	0	0	
Repair/Replacement	0	0	0	0	0	0	0	
Service Request Order	0	0	0	0	0	0	0	
Service Call	0	0	0	0	0	0	0	
Urgent	0	0	0	0	0	0	0	

**Note:** All capacity categories are always displayed for the Booking time interval based screen.

*Related Topics*

## View Work Zones on Booking Status Page

The **Map** view displays the work zones defined in the system and their quota status. This feature enhances the usability and visual clarity of the Quota data.

Quota management screen shows the configured work zone shapes.






When user zooms the map, work zone areas are refreshed depending on the zoom value.


Work zones with different status have different colors.

- Select **Quota**.
- Select a capacity area from the left-hand pane.
- Click the **Booking Status** icon.

**Note:** The map display only if the time slot based quota is enabled and if a single day is selected.

Map displays with various color coded work zones. The color codes are based on the following criteria:

Color of the work zone	Description
Light grey 	Closed with no activities
Grey 	Closed with activities
Light green 	Open with no activities
Green 	Open less than 90%
Yellow 	Open more than 90%

Color of the work zone	Description
Red 	Open with more than 100%

**Note:** Work zones with undefined or wrong status are not displayed in the map.


#### 4. Click a work zone in the map.

A hint appears with name and ID of the work zone.

## Mass Populate

The Mass populate feature lets you copy the values of the quota parameters to a future date. For example, you can copy values of the editable Quota% and Min Quota columns from a past or current date to the Quota% and Min Quota columns of a future date in the Quota page.

Also, you can use the Mass Populate on Booking Status page for time-slot and availability (time-interval) based quotas to simultaneously change booking statuses for multiple levels (that is, day, time slot or time interval, or capacity category).

**Note:** The Mass populate feature has replaced the **Automatic fill** functionality on the Quota page and the time-slot based Quota pages. The Autofill functionality does not work on the Booking Status page. Also, during Field Service installation, a unnamed group is created and the Mass Populate action link is moved under the unnamed group. You can navigate to the User Types page and add the Mass Populate action link to the group so that it displays under the  icon for the required user type.

You can access the **Mass Populate** functionality from the **Quota** and **Booking Status** pages. The Mass populate page is available for the following pages:

- Availability (time-interval) based Quota page

**Note:** For availability based quota, you can mass populate all categories simultaneously and if you do not want to change the values in some categories then you need to manually reset their values after mass populate.

- Booking Status pages for time-slot based and availability (time-interval) based quota
- Time-slot based Quota pages (that is Quota by day, Quota by time slot, or Quota by capacity category pages)

For example, the following page displays in a time-slot based Quota page:

**Mass populate** [X]

Field: % to Stop Booking at [v]

Operation:

- copy day-to-day
- copy week-to-week
- shift forward by one day
- shift backward by one day
- next day value = previous day value \* percent
- estimate future values based on past data (day-to-day)
- estimate future values based on past data (week-to-week)

Target dates: Fri, Jul 22nd

Source date: Fri, Jul 22nd

Source: % to Stop Booking at

[Close] [Apply]

The following fields display on the Mass Populate page:

- **Field:** Indicates the editable quota fields and the fields that are locked.
- **Source date:** Indicates the date from which the values are copied.
- **Target dates:** Indicates the future dates to which the values are copied.
- **Operation:** See *Mass Populate Fields*.
- **Source:** Indicates the values that you want to copy. For example, if you want to use the values in the **Min Quota** column as the quota for the future dates, then you can select the Min Quota option to copy the values from the Min Quota column to the **Quota** column.

## Recurring Autofill Enabled option

The **Recurring Autofill Enabled** option lets you schedule the autofill operations (that is, automatically copy the values of the quota parameters without using the Mass Populate button) to a future or today's date. For example, you can use the autofill option for the following tasks:

- Copy 'Min quota' values from a current day to future days.
- Copy 'Quota' values from a current day to future days.
- Copy 'Daily quota, %' values from a current day to future days.
- Copy 'Quota, %' values from a current day to future days.


- Shift the '% to stop booking at' parameter values by one day forward.


Click a cell from anyone of the following columns in the Availability (time-interval) based Quota and Time-slot based Quota pages to view the **Recurring Autofill Enabled** option:




- Quota, %
- Min quota
- Quota
- Daily quota, %
- % to stop booking at

## Mass Populate Fields

The fields available in the **Field** drop-down list depends on the capacity area configuration at a specific quota level. Availability of a particular operation depends on the selected field.

Operation	Fields	Parameters	Description
Copy day-to-day	All	Date to be copied	<p>Lets you to copy the values of a given field from one day to another day or for multiple days. You can use a past or a future date as a source date.</p> <p>For example, to perform Trouble Call activities on April 26, 2017, assume that you only have 75 mins in the 10-12 time-slot, 60 mins in the 13-15 time-slot, 50 mins in the 15-17 time-slot.</p> <p>Assume that you are expecting more trouble calls for the next three days in the above mentioned time-slots.</p> <p>Therefore, you want to use the same quota values (that is, 75, 60, 50 mins) in the Quota column in the Quota by Capacity Categories screen for the next three days for the same above mentioned time-slots. Use the Copy day-to-day operation as follows:</p> <ol style="list-style-type: none"> <li>1. Select the date in the Quota by Capacity Categories screen to which you want to copy the quota values. For example, select April 27, 2017.</li> <li>2. Click the  icon and select <b>Mass Populate</b>.</li> <li>3. Click <b>copy day-to-day</b> option.</li> </ol> <p><b>Note:</b> The date, April 26 displays on the <b>Source Date</b> field and the date, April 27 displays on the <b>Target Dates</b> field.</p> <ol style="list-style-type: none"> <li>4. Click <b>Apply</b>.</li> <li>5. Click <b>Save</b>.</li> </ol> <p>The quota values are copied to the specified date in the <b>Target Dates</b> field.</p>
Copy week-to-week	All	Week to be copied	<p>Allows you to copy the values of a given field from one week to another or to the multiple weeks. The values are copied between same days of the week (Monday to Monday, Tuesday to Tuesday, etc.). There is no restriction on the week that can be used as a source of data for this operation. It can be from past or from the future date. The corresponding calendar control allows you to select the week by clicking on any day of this week. The week is represented by its first day.</p>
Shift forward by one day	All	None	<p>Shifts the value of a given field forward by one day. The corresponding option is available only if a continuous interval of days are selected on the <b>Quota</b> view. Please note that there is a common rule that the Mass-populate operation should update all the dates that are currently selected in the <b>Quota</b> view. Therefore, when you perform the shift forward operation, the value for the first selected/visible date is updated with a</p>

Operation	Fields	Parameters	Description
			value from the previous day (which is invisible). If the view contains both past and future days, the future date will be the first one to get updated. It is updated with a value from the latest past date.
Shift backward by one day	All	None	Shifts the values of a given field backward by one day. Please note that it is mainly intended to rollback the results of a previous forward shift. This option is available only if a continuous interval of days are selected on the <b>Quota</b> view. Please note that there is a common rule that the Mass-populate operation should update all the dates that are currently selected on the <b>Quota</b> view. Therefore, when you perform the shift backward operation, the value of the last selected/visible date is updated with the value from the next day (which is invisible).
Next day value = previous day value * percent	<ul style="list-style-type: none"> <li>• % to stop booking at</li> <li>• Quota</li> <li>• Min. quota</li> <li>• % Quota</li> <li>• Daily Quota, % (for availability based quota)</li> </ul>	Percent	Available only when a continuous interval of days are selected in the timeslot or time-interval Quota view. In this case, the value of a given field is calculated from the value of the day before and the values of the current is used to derive the values of all the other next days. A value for a next day is calculated as a value for a previous one multiplied by a specified percentage.
Use estimation	% Quota	None	Copies the values from the <b>Estimated % quota</b> field to the <b>% Quota</b> field. Available only in the Quota by Capacity Categories screen.
Estimate future values based on past data (day-to-day)	Quota	<ul style="list-style-type: none"> <li>• Number of previous days</li> <li>• Field to be used: Quota or Used</li> </ul>	Lets you to estimate the values of a given field for one or several future days using the linear extrapolation algorithm. Only available in timeslot or time-interval Quota view.
Estimate future values based on past data (week-to-week)	Quota	<ul style="list-style-type: none"> <li>• Number of previous weeks</li> <li>• Field to be used: Quota or Used</li> </ul>	Allows you to estimate the values of a given field for one or several future weeks using the linear extrapolation algorithm. A separate extrapolation trend is created for each day of the week (Monday, Tuesday, etc.).
close work zone	values matching the filter criteria	None	<p>Lets you close booking statuses for a particular work zone in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can close bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option.</p> <p>Use the Close Work Zone operation as follows:</p> <ol style="list-style-type: none"> <li>1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option.</li> <li>2. Click the  icon and select <b>Mass Populate</b>.</li> <li>3. Click <b>close work zone</b> option.</li> </ol> <p><b>Note:</b> The selected dates from the Calendar option displays on the <b>Target Dates</b> field.</p> <ol style="list-style-type: none"> <li>4. Select a work zone from the drop-down list.</li> <li>5. Click <b>Apply</b>.</li> <li>6. Click <b>Save</b>.</li> </ol> <p>The values matching the filter criteria are updated on the Booking Status screen.</p>

Operation	Fields	Parameters	Description
open work zone	values matching the filter criteria	None	<p>Lets you open booking statuses for a particular work zone in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can open bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option.</p> <p>Use the Open Work Zone operation as follows:</p> <ol style="list-style-type: none"> <li>1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option.</li> <li>2. Click the  icon and select <b>Mass Populate</b>.</li> <li>3. Click <b>open work zone</b> option.</li> </ol> <p><b>Note:</b> The selected dates from the Calendar option displays on the <b>Target Dates</b> field.</p> <ol style="list-style-type: none"> <li>4. Select a work zone from the drop-down list.</li> <li>5. Click <b>Apply</b>.</li> <li>6. Click <b>Save</b>.</li> </ol> <p>The values matching the filter criteria are updated on the Booking Status screen.</p>
close all	values matching the filter criteria	None	<p>Lets you close all booking statuses in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can close bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option.</p> <p>Use the Close All operation as follows:</p> <ol style="list-style-type: none"> <li>1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option.</li> <li>2. Click the  icon and select <b>Mass Populate</b>.</li> <li>3. Click <b>Close All</b> option.</li> </ol> <p><b>Note:</b> The selected dates from the Calendar option displays on the <b>Target Dates</b> field.</p> <ol style="list-style-type: none"> <li>4. Click <b>Apply</b>.</li> <li>5. Click <b>Save</b>.</li> </ol> <p>The values matching the filter criteria are updated on the Booking Status screen.</p>
open all	values matching the filter criteria	None	<p>Lets you open all booking statuses in the Booking Status screen for time-slot and time-interval (availability) based quotas. You can close bookings for a particular day, for a particular week, for a particular month or you can select a set of dates from the Calendar option.</p> <p>Use the Open All operation as follows:</p> <ol style="list-style-type: none"> <li>1. Select a day, a particular week, a particular month, or a set of dates from the Calendar option.</li> <li>2. Click the  icon and select <b>Mass Populate</b>.</li> <li>3. Click <b>Open All</b> option.</li> </ol> <p><b>Note:</b> The selected dates from the Calendar option displays on the <b>Target Dates</b> field.</p> <ol style="list-style-type: none"> <li>4. Click <b>Apply</b>.</li> </ol>

Operation	Fields	Parameters	Description
			<p>5. Click <b>Save</b>.</p> <p>The values matching the filter criteria are updated on the Booking Status screen.</p>

**Note:** Please also note that all these operations ignore the locked flags. To apply locked flag, select the **Locked Flag** option in from the **Field** drop-down list. You can use the **Locked Flag** option only in the time-slot based Quota screens.





# 5 Calculating Capacity and Quota

## Calculate Quota for Other Activities

Other activities are regular booked activities that don't belong to a capacity category for the selected capacity area. Other activities can be repeating activities (such as lunch breaks) or bulk activities (such as meetings) or shift activities (that are automatically created for different working-time patterns in your org). The Max available and Quota values for repeating, bulk, and shift activities aren't updated immediately because such activities are recalculated periodically.

The minutes used to estimate other activities when service SLA window starts/ends with a given hour:

- If an activity has a **service/SLA window end** value within a given hour, the system tries to use all the remaining minutes from the "window end" till the end of this hour.
- If an activity has a **service/SLA window start** value within a given hour, the number of minutes that can be used in this hour is calculated so as to not exceed the time remaining from the "window start" till the end of this hour.

The 'Other activities' parameter is used in the following calculation:

`Maximum capacity - Other activities = Activities that can be booked within this time slot`

The calculated value includes the activities that:

- Are not part of the capacity management
- Belongs to the other time slots

The algorithm performs the following actions for the selected capacity time slot and activity:

- It determines the interval of the working hours (including overnight) affected by the capacity time slot. The interval is equal to the value used for calculating the maximum capacity.
- On the other hand, the algorithm calculates the expected used capacity of an activity for a particular hour is assumed to have started within such hour. The result of this step is the expected used capacity calculated on an hourly basis.
- The resulting Other activities value is calculated as the sum of the expected used capacity values for the hours affected by this time slot.
- If working day is started within a given hour, the number minutes that can be used within this hour is calculated to not exceed the time remaining from the "start" value till the end of the given hour.
- If working day is ended within a given hour, the system tries to use all the remaining minutes from the "end" value till the end of the given hour.

## Segmentable Activities Behavior in Quota Management

Segmentable activities are not included in capacity and quota calculation. However, segments of segmentable activities are added to the Other Activities value, therefore, the capacity is still consumed from the overall system. Also,

segmentable activities are included in the start-time statistics. You can manually assign segmentable activities only through Oracle Field Service Core Application. These rules apply for Quota Management:

- Segmentable activities are handled as internal activities.
- Segmentable activities cannot be booked with the `get_capacity` method and the method does not calculate capacity categories for such activities. For more information on the `get_capacity` function, see the *Integrating with Capacity Management API Guide*.
- Segmentable activities are not included in the Used Quota values on the Quota view and are added to the Other Activities column on the Quota view.

## Calculate Quota Using the Historical Data

Calculate quota on the basis of the historical data to generate weight and the estimated quota %. These values are displayed on the timeslot based Quota view for the present day or for a future date.

Estimation is performed based upon the:

- Capacity category
- Weight coefficients
- Available workforce

Weight coefficient is calculated from the workforce available in the historical data. The weight coefficients from the current available workforce is used to estimate the Quota % values. Application server processes the historical data periodically and checks whether a recalculation is required once every minute. Recalculation of the historical data produces the capacity category weight coefficients.

These coefficients are calculated every day for last eight full weeks and for each valid combination of the capacity area, time slot, and capacity category. For each such combination, the application calculates two coefficients, % Quota and Used quota %. These calculations are performed irrespective of the **Historical values to be used** and **Process historical data (same weekdays) for period of** parameters defined for a bucket. The **Estimate quota based on historical data** and **Quota is entered** options are not taken into account for the calculation. Such approach allows to Oracle Field Service to enable this functionality, change the interval of analysis (one week, one month, two months), or switch between coefficient types (% Quota or Used quota %) for the existing capacity area without having to reprocess the historical data.

### Formula for calculating weight:

```
Weight = (Quota / Total quota) / Max available %  
OR  
Weight = (Used / Total used) / Max available %
```

where Max available % = Max available (capacity category) / Max available (time slot)

When quota is calculated on the basis of the historical data, it produces two fields, **Weight** and **Estimated quota %**. These fields are displayed on the **Quota view** for the current or a future date. The application server periodically recalculates the Max available values and, as a result, adjusts the Weight coefficients daily. To adjust the coefficients, an aggregate of the weight coefficients for the number of days is defined using the **Historical values to be used** parameter. A particular day is only included if it belongs to the same week day.

### Formula:

```
% Quota = Avg. weight * Max available %
```

If the **Automatically adjust '% Quota' values to keep their total equal to 100%** option is enabled, the calculated Quota % values are normalized.

## About Travel Time Estimation

A correct estimation of the average travel time is important to prevent over-booking and under-booking the activities. The travel time is estimated based on the actual activity records (started activities).

There are several cases when Capacity/Quota Management uses the travel time estimation for:

- The booking of a new activity (get\_capacity function)
- The calculation of “Used” value
- The Calculation of “Other activities” value

The application implements one approach to estimate time for the ordered activities in the technicians' routes and another approach for an unknown location where it is necessary to estimate an average travel time value for different kind of activities such as:

- Activities that needs to be booked (get\_capacity function)
- Activities in buckets
- Not-scheduled activities
- Not-ordered activities

### Travel Time Estimation Algorithm:

Let's say you have a bucket for which no 'from' location is available and only the 'to' location is available. Travel estimation for the activities that are assigned to this bucket is based on the reported durations of technicians belonging to this bucket alone, if enough reported data exists. This method of travel estimation is independent of the configured Travel areas and depends only on these:

- Travel key (based on configured Activity travel stats fields)
- Bucket to which the activity is assigned

This improves the travel estimations when multiple buckets operate in the same area and reduces the dependency on the configured Travel areas. This reduction of dependency is beneficial when the Travel areas cover a very large area with high variation in reported travel durations within it.

The logic to estimating travel when there is no 'from' location, typically when activities are assigned to a bucket, is as follows:

- If enough data is present, travel estimation is based on the bucket and travel key combination. Only data reported for the activities under that particular bucket and with the same travel key is used to estimate travel. This estimate is arrived at, only if there are at least seven such valid reported travel durations.
- If not enough data is present for that bucket and travel key, reported durations for activities with that travel key within the parent bucket of the assigned bucket is used. If there are at least seven reported durations at the parent bucket level for the travel key, the travel is estimated based on those reported travels. If not, then this process continues by going further up in the bucket hierarchy, till the level where enough data exists. Only parent buckets are considered in such cases and not organization units.
- If still not enough data is present at the parent bucket levels for activities with the same travel key, the travel estimation is based on all the reported travel durations for the activities under the original bucket, irrespective

of the travel keys of those activities. Here too, if there isn't enough data within a particular bucket, the reported durations of its parent bucket are used, if it has enough reported durations.

- If enough data is not present even then, the default travel duration configured is used.
- For all of the above cases, only the durations reported by field resources for whom **Use data reported to enhance company-wide estimations** is selected at the Resource Type level, is used as input data. Only valid reported data that look realistic based on the distance and speed is considered. Data from external data sources, or those based on location services are not used. This is done so that only real travels completed are used for estimations at the bucket level.
- The same logic is followed for estimating travel for not-ordered activities in the field resource's queue. Here, the same data calculated for the bucket to which the field resource belongs, is used.

Examples: Let's say an activity with a Travel key value '12345' is assigned to Bucket A. Assume that the parent of Bucket 'A' is Bucket 'B' and the parent of bucket 'B' is an Org Unit (which does not have a parent).

Case 1: Enough data is present within the bucket for the activities with the same travel key.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> </ul>	10
Learned Estimation: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> </ul>	18 minutes
<b>Estimated travel for the activity in Bucket 'A'</b>	<b>18 minutes</b>

Use Learned estimation of Bucket 'A' for Travel key '12345'.

Case 2: Not enough data is present within the bucket for the activities with the same travel key.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> <li>• Bucket 'B' (parent of 'A') for Travel key '12345'</li> </ul>	<ul style="list-style-type: none"> <li>• 3</li> <li>• 15</li> </ul>
Learned Estimation: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> <li>• Bucket 'B' for Travel key '12345'</li> </ul>	<ul style="list-style-type: none"> <li>• 18 minutes</li> <li>• 16 minutes</li> </ul>

Element	Value
<b>Estimated travel for the activity in Bucket 'A'</b>	<b>16 minutes</b>

Use Learned estimation of Bucket 'B' for Travel key '12345'.

Case 3: Not enough data is present for the activities with the same travel key even at higher bucket levels.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> <li>• Bucket 'B' (parent of 'A') for Travel key '12345'</li> <li>• Org Unit (parent of 'B') for Travel key '12345'</li> <li>• Bucket 'A' without considering value of Travel key</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> <li>• 2</li> <li>• 10</li> <li>• 23</li> </ul>
Learned Estimation: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> <li>• Bucket 'B' for Travel key '12345'</li> <li>• Bucket 'A' without considering value of Travel key</li> </ul>	<ul style="list-style-type: none"> <li>• 18 minutes</li> <li>• 16 minutes</li> <li>• 23 minutes</li> </ul>
<b>Estimated travel for the activity in Bucket 'A'</b>	<b>22 minutes</b>

Use Learned estimation of Bucket 'A' without considering the value of Travel key.

Case 4: Not enough data is present for activities with the same travel key even at higher bucket levels and not enough data at bucket level as well.

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: <ul style="list-style-type: none"> <li>• Bucket 'A' for Travel key '12345'</li> <li>• Bucket 'B' (parent of 'A') for Travel key '12345'</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> <li>• 2</li> <li>• 10</li> <li>• 4</li> </ul>

Element	Value
<ul style="list-style-type: none"> <li>Org Unit (parent of 'B') for Travel key '12345'</li> <li>Bucket 'A' without considering value of Travel key</li> <li>Bucket 'B' without considering value of Travel key</li> </ul>	<ul style="list-style-type: none"> <li>32</li> </ul>
Learned Estimation: <ul style="list-style-type: none"> <li>Bucket 'A' for Travel key '12345'</li> <li>Bucket 'B' for Travel key '12345'</li> <li>Bucket 'A' without considering value of Travel key</li> <li>Bucket 'B' without considering value of Travel key</li> </ul>	<ul style="list-style-type: none"> <li>18 minutes</li> <li>16 minutes</li> <li>22 minutes</li> <li>24 minutes</li> </ul>
<b>Estimated travel for the activity in Bucket 'A'</b>	<b>24 minutes</b>

Use Learned estimation Bucket 'B' without considering value of Travel key.

Case 5: Not enough data is present at any level (typically a new Org or a new customer).

Element	Value
Travel key	12345
Bucket	A
No. of valid reported durations within: <ul style="list-style-type: none"> <li>Bucket 'A' for Travel key '12345'</li> <li>Bucket 'B' (parent of 'A') for Travel key '12345'</li> <li>Org Unit (parent of 'B') for Travel key '12345'</li> <li>Bucket 'A' without considering value of Travel key</li> <li>Bucket 'B' without considering value of Travel key</li> </ul>	<ul style="list-style-type: none"> <li>1</li> <li>2</li> <li>10</li> <li>3</li> <li>5</li> </ul>
Learned Estimation: <ul style="list-style-type: none"> <li>Bucket 'A' for Travel key '12345'</li> <li>Bucket 'B' for Travel key '12345'</li> <li>Bucket 'A' without considering value of Travel key</li> <li>Bucket 'B' without considering value of Travel key</li> </ul>	<ul style="list-style-type: none"> <li>18 minutes</li> <li>16 minutes</li> <li>22 minutes</li> <li>24 minutes</li> </ul>
Configured default travel duration	28 minutes

Element	Value
Estimated travel for the activity in Bucket 'A'	28 minutes

Use the configured default travel duration.





# 6 Reporting Capacity and Quota


## Reporting Capacity and Quota

You can change the documentation of the Quota history and close time history.

You can export the information in these reports as comma separated values (csv), as an Excel spreadsheet (xlsx), or as an XML file.

### Viewing Quota History

Quota history stores the data related to the changes you perform on the time slot based Quota pages (for example, Quota by day, Quota by time slot, and Quota by Capacity Categories). You can view quota history using the filter options. You can also export quota history in the default export file format setup in the **My Display** settings under your user profile.

**Note:** During implementation, an unnamed group is created and the Quota History action link is moved under the unnamed group. You can navigate to the User Types screen and add the Quota History action link to the group so that it displays under the  icon for the required user type.

To view the quota history for a bucket:

1. Click the **Quota** icon on the navigation panel.
2. Open the **Quota** page.
3. In the resource tree, select the bucket for which you want to view the quota history.
4. Click **Actions > Quota history**.


Quota history includes the following information:

- **Date:** Date of the action.
- **Time Slot:** Time slots that are updated. Filter the values in the Time Slot column by selecting or deselecting some or all the time slots used in the Quota Management.
- **Capacity Category:** Capacity categories that are updated. Filter the values in the **Capacity Category** column by selecting or deselecting some or all the capacity categories used in the Quota Management.
- **Work zone:** Work zones that are updated.
- **Action:** Actions performed in the Quota Management screen. Filter the values in the **Action** column using the following options:
  - **Change:** Changes made to the values in the Quota, % Quota, Min. quota, and % to stop booking at cells at a Quota level.
  - **Close:** Quota closed for a day, time slot, capacity category or work zone.
  - **Open:** The opening Quota for a day, time slot, capacity category or work zone.
  - **Remove work zone specific settings:** Displays only if the close time is updated and the following conditions are met:

- Quota for all work zones for a particular capacity category that belongs to a particular time-slot or time-interval is closed using the **Close All** option. A red cross mark displays on the cell when the quota for all work zones is closed.
  - Quota for all work zones is opened using the **Open All** option for the same capacity category for which the quota for all work zones was closed.
- **Action time:** Time of the action performed in the Quota Management screen. The values in the **Action time** column are shown in the time zone of the selected capacity area. Filter the values in the Action time column to display the actions performed within the last 4 hours, last 8 hours, last day or last 2 days. Additionally, it's possible to sort the data in ascending or descending orders.
  - **% Quota, Min. quota:** These columns are only shown when the Quota is defined as a percentage of the available capacity according to the configuration of the capacity area. They show the corresponding values.
  - **Quota:** Changes made to the to the Quota values.
  - **% to stop booking at:** This column is shown only when the **% to stop booking at** option is enabled at the Time Slot or Capacity Category level during the capacity area configuration.
  - **User:** User who updated the quota. When a change is performed automatically, the **User** column doesn't contain any value.
- **Note:** Quota history isn't available in the multi-bucket mode.


## View Close Time History

The **Close Time History** report displays the changes performed to the booking status close time values. Using various filters, you can view the close time history and export the Close Time History in the default file export format selected in the **My Display** settings under your user profile.

■ **Note:** During Field Service installation, a unnamed group is created and the Close Time History action link is moved under the unnamed group. You can navigate to the User Types screen and add the Close Time History action link to the group so that it displays under the  icon for the required user type.

The **Close Time History** button is available in the Booking Status screen for time-slot and time-interval (availability) based quotas.

To view the changes to the booking status close time values:

1. Select **Quota**.
2. Select a capacity area from the left-hand pane.
3. Select the Booking Status icon.
4. Edit the booking status values for a capacity category for a particular time slot or time interval.
5. Click the  icon and select the **Close Time History** button.

The edited booking status values for a particular time slot or for a particular time interval display in the **By time slots** and **By time intervals** tabs respectively on the **Close Time History for <bucket\_name>** screen.

6. Review the following information on the **Close Time History for <bucket\_name>** screen:
  - **Date:** Displays the date on which you want to close the booking status values.
  - **By Time Slots:** Displays the time slots for which the booking status values are edited.

- **By Time Intervals:** Displays the time intervals for which the booking status values are edited.
- **Capacity Category:** Displays the capacity categories for which the booking status values are edited.
- **Work zone:** Displays the work zones for which you want to close the booking status.
- **Action:** Type of action performed to the close time. Filter the **Action** column using the Open, Close, Change close time, Remove Work Zone Specific Settings, Change close time for work zone, Close Automatically options.
- **Action time:** Time when the action is performed to the close time. The values in the **Action time** column are shown in the time zone of the selected capacity area. Filter the values in the **Action time** column to display the actions performed within the last 4 hours, last 8 hours, last day or last 2 days. Additionally, it is possible to sort the data in the ascending or descending order.
- **Close Time:** Displays the scheduled closed time. Select one of the options from the **Close time** filter to view the changes made within the selected filter. Additionally, it is possible to sort data in the ascending or descending order.
- **User:** User who updated the booking status values. Additionally, it is possible to sort the data alphabetically in the ascending or descending orders. When a change is performed automatically, the **User** column does not contain any value.



# Revision History

This document will continue to evolve as existing sections change and new information is added.

Date	What's Changed	Notes
November 2022	This topic is updated: <ul style="list-style-type: none"><li>• Travel Time Estimation</li></ul>	
February 2021	These topics are added: <ul style="list-style-type: none"><li>• Booking Recommendations</li></ul> These topics are updated: <ul style="list-style-type: none"><li>• Configure Quota Options</li></ul>	

