OpenAir

Performance Tuning

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Table of Contents

OpenAir Performance Tuning Overview

OpenAir performance tuning refers to the steps a user can take to improve the responsiveness of OpenAir to their specific requests.

There are several factors a user can alter to improve the speed of responses from OpenAir:

1. Speed of Web Browser / Client
2. Speed of Internet Connection and Setup
3. Volume of data transferred
4. Amount of processing required

This guide is organized around the different types of issues that can impact performance. The three main types of issues are hardware and network-related issues, general performance issues, and application specific issues (for example, issues with the Reports module, or the Invoices module). You should attempt to troubleshoot the performance problems using the guidelines in this guide before you contact OpenAir Customer Support.

- First, identify the type of issue you are experiencing. See Identifying Performance Issues.
- For information about diagnosing whether your hardware is slowing performance, see Hardware- and Network-Related Issues. This help topic describes common hardware- and network- related issues.
- For guidelines about changes that can be made in OpenAir to improve performance, see Performance Issue Scenarios and Best Practice Guidelines. After you have ruled out hardware or network issues, this help topic gives some best practice advice to optimize OpenAir performance.
- If the solutions in this guide do not improve your performance, you can contact OpenAir Customer Support for further assistance with diagnosing and correcting the issue. When contacting OpenAir Customer Support, you must provide as much information as possible about the issue you are experiencing. For information about the steps you should follow before contacting OpenAir Customer Support, see Performance Troubleshooting. For information about contacting OpenAir Customer Support, see Creating a Support Case.

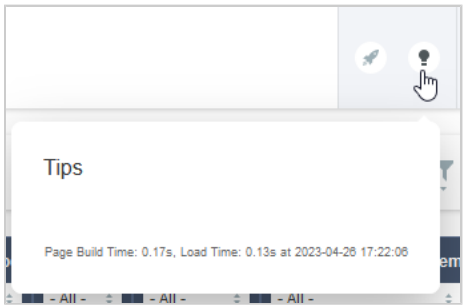
Identifying Performance Issues

The following processes can help you identify the kind of performance issue you are experiencing:

- Using Page Build and Load Times
- Using a Trace Route
- Identifying Client Performance Issues

Using Page Build and Load Times

The first step in identifying performance issues is to find out how long it takes a page to build and load. To find this information, click the Tips button on the page which is loading slowly, and note the **Page Build Time** and **Load Time** at the bottom of the window.



- The **Page Build Time** measures the time taken for OpenAir to process the request. A long page build time indicate extensive application processing and / or database activity. See Amount of processing required.
- **Load Time** — Measures the time taken for data to travel across the Internet and be displayed in the browser. A long load time indicate a large page size, a slow network or a slow browser. See Using a Trace Route, Identifying Client Performance Issues, and Volume of data transferred.
- **at** — Shows the exact time the request was processed by OpenAir. This is an important detail required should you need to report the problem to OpenAir Customer Support.

Excessively long build times indicate an issue with the OpenAir application itself. If this is the case, see Performance Issue Scenarios and Best Practice Guidelines for ways to potentially improve build times.

Due to asynchronous components, the page build time and load time for certain pages may not reflect the time it takes for all the page content to load. If this occurs, please make a note of the time it took to load all page content (roughly) and report the discrepancy to OpenAir Customer Support.

Using a Trace Route

The next piece of information you should gather comes from running a trace route. You can run a TCP traceroute to determine if the performance issues you are experiencing are due to your Internet connection. See Running a TCP Traceroute on Windows or Running a TCP Traceroute on macOS.

The TCP traceroute command line output shows every step taken to reach OpenAir from your computer. If a line reads “Request timed out” or a value over 100 ms indicates that there may be a connection problem.

- If the first problematic line is **within the first three lines**, this usually indicates a connectivity issue within your own network. Contact your network administrator, and provide the results of your trace route.
- If the first problematic line appears **after the first three lines and before the last three result lines**, this indicates there may be a problem with a router you travel through prior to reaching OpenAir servers. Contact your Internet Service Provider (ISP) with the results of the trace route so they can further investigate any connection problems.
- If you are getting timed out **within the last three result lines**, this may point to a performance problem with OpenAir network providers. Contact OpenAir Customer Support for assistance.

Note: ICMP-based traceroute is not supported on the OpenAir network. You must use a third-party TCP-based traceroute utility instead of the native tracert command on Windows and macOS.

Running a TCP Traceroute on Windows

Windows does not have a native utility to run TCP traceroute. To run it on Windows, you will need to install third-party software. The following steps use the Npcap library and the tracetcp utility.

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To run a TCP traceroute on Windows:

1. Download the latest supported version of the Npcap library installer.
2. Double-click the downloaded executable file to launch the installation wizard and follow the on-screen instructions.
3. Download the latest supported version of the tracetcp utility.
4. Extract the files from the downloaded .zip archive and move the extracted files to `C:\Windows\System32\`. Do not move the folder, open the folder and move the files instead.
5. Press Win + R, then type `cmd` and click **OK**. The Command prompt window appears.
6. In the Command prompt, enter the following command.

```
tracetcp <company-id>.app.openair.com
```

Note: Replace `<company-id>` with the unique identifier for your account, typically based on your OpenAir Company ID.

If you are running a TCP traceroute for a sandbox account, use `<company-id>.app.sandbox.openair.com`.

The TCP traceroute output will be displayed in the command prompt.

Running a TCP Traceroute on macOS

macOS does not have a native utility to run TCP traceroute. To run it on macOS, you will need to install third-party software. The following steps use the Homebrew library and the tcptraceroute utility.

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To run a TCP traceroute on macOS:

1. Press Cmd + Space, then enter `Terminal`. The Terminal window appears.
2. Enter the following command.

```
ruby -e "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/master/install)" < /dev/null 2> /dev/null
```

   This will install the Homebrew package manager on your computer. Let the installation complete.
3. Enter the following command.

```
brew install tcptraceroute
```

   This will install the Homebrew package manager on your computer. Let the installation complete.
4. Enter the following command.

```
sudo tracetcp <company-id>.app.openair.com
```

   Note: Replace `<company-id>` with the unique identifier for your account, typically based on your OpenAir Company ID.

   If you are running a TCP traceroute for a sandbox account, use `<company-id>.app.sandbox.openair.com`.

   The TCP traceroute output will be displayed in the terminal.

Identifying Client Performance Issues

There are no universal requirements for the amount of Random Access Memory (RAM) or how fast a computer must be to run OpenAir. The requirements depend on the way your computer is being used and on the other applications running on your computer.

To troubleshoot client performance issues:

1. Close all the applications you are not using. If you need to run more than one application consider increasing your computer resources.
2. Check your firewall application. Some of these applications check the page before loading it in your browser, which can cause a delay.
3. Update and run your anti-virus and anti-malware software to ensure that your computer is free of viruses, malware, or spyware.
4. Test on different browsers. You can install the Mozilla Firefox browser on your computer for free. Load the page using Mozilla Firefox, then load the page using Google Chrome. Use the browser which displays the page faster.
5. Determine whether there are add-ons running on your browser, like anti-virus or anti-phishing software, or anti-spam filters. Eliminate browser add-ons, one by one, to identify the cause of the issue.

Hardware- and Network-Related Issues

This help topic describes common hardware- and network- related issues.

Client

After a response has been received from OpenAir, your computer needs to parse and display the page. If you experience any of the following, your hardware may not be able to process the response and you may need to upgrade some or all of your hardware components:

- Your hard disk is making loud noise while loading the page
- Your hard disk is silent, but pages take a long time to load
- Your computer's temperature is higher than normal when working within OpenAir, or your computer's fans sound like they are working harder to control the temperature

Possible upgrades to boost your computer's performance include:

- Faster processor
- More memory
- Faster hard disk
- Faster graphics card

For information about identifying client-related issues, see Identifying Client Performance Issues.

Note: Running other applications on your computer at the same time as accessing OpenAir may result in a noticeable reduction in performance.

You should refer to your computer documentation or IT Helpdesk for details on tuning your computer.

Web Browser

Your web browser is a critical component in working with OpenAir. The selection and correct configuration of your web browser will have a major influence on the performance and user experience with OpenAir.

- Use the newest version of your browser — For information about supported browsers, see the help topic General Security Principles.
- Use a minimum screen resolution of 1280px x 800px for the best experience
- Remove any unnecessary extensions and plugins.
- Avoid excessive use of tabs.
- Caching — Ensure the browser checks for newer versions of the cached pages automatically.
- Cache size — Set the cache size to a high value (250MB, for example).
  - To increase the cache size for Google Chrome, you can append `-disk-cache-size-<size in bytes>` to the Shortcut **Target** value in the Properties for the Google Chrome shortcut.

  - To increase the cache size for Firefox, you can change the configuration settings `browser.cache.disk.max_entry_size` and `browser.cache.disk.capacity` on the browser configuration. Enter `about:config` in the address bar and accept the warning to access the configuration page.
- Safe Browsing — Most supported browsers let users select a Safe Browsing protection level. Never turn Safe Browsing off. If you use an enhanced protection level, you may need to enter the URL for your OpenAir account in the list of allowed sites.
- Popups — If popups are blocked, ensure you add an exception for OpenAir. Use the URL for your OpenAir account.

For information about identifying client-related issues, see Identifying Client Performance Issues.

Clearing Browser Cache

Sometimes you may experience temporary performance issues due to the contents of your browser cache (temporary internet files).

If you have never cleared cache before, it may take five minutes or longer. Subsequent attempts to clear cache should take less than one minute if done on a regular basis. You may want to clear cache whenever you notice slow performance while working in OpenAir.

For detailed instructions on how to clear your browser cache, visit www.wikihow.com/Clear-Your-Browser's-Cache.

Internet Connection and Setup

The speed of your Internet connection is a significant factor for performance. The faster the connection the better.

The smaller the volume of data you need to exchange with OpenAir the faster will be the response. See Volume of data transferred.

Tip: Be aware that other applications running on your computer can also use your Internet connection and impact performance.

For information about troubleshooting Internet connection problems, see Using a Trace Route.

Firewalls

A firewall is generally set up to protect your network or computer from unwanted Internet traffic. The primary function of a firewall is to let good traffic pass through while bad traffic is blocked. If your company uses a firewall to monitor Internet traffic, your network administrator may need to modify the firewall to use OpenAir successfully.

If you are experiencing performance issues, pages that load slowly, or frequent time-outs, try accessing OpenAir from a location outside of the firewall. If you determine that the firewall may be a problem, contact your network administrator.

Proxy Servers

You should not use a proxy server with OpenAir.

When your company uses a proxy server for Internet traffic, and you visit a Web page from your work station, a request is sent to the proxy server for that page. The proxy server retrieves the page from the Internet and forwards the page to your computer. The page is then cached, or saved, on the proxy server's disk drive for future use. For subsequent requests of the same page, the proxy server returns the cached version of the page stored on its drive instead of accessing a current version of the page from the Internet.

Cached pages returned by a proxy server can cause problems when using OpenAir, because you need to view accurate and up to date information about your company, but the proxy server shows cached pages with stale data.

Volume of data transferred

Reducing the volume of data requested from OpenAir will have a dramatic affect on performance. Filter Sets are the primary means of limiting data. You should also be aware of drop-down lists containing thousands of entries. Several large drop-down lists on a page will have a noticeable impact on performance.

For specific scenarios and best practice guidelines, see Performance Issue Scenarios and Best Practice Guidelines.

Tip: Rather than navigating through a series of forms, use the **global create list** to get straight to the form you need.

Amount of processing required

Reducing the amount of processing required by OpenAir will also improve performance. You can, for example, batch a set of API requests into a single request, avoid creating excessive processing load from frequently running reports, or avoid creating complex dashboard displays.

Tip: If you discover that a report takes a long time to return results, you can schedule the report to run during a quieter period and to automatically send the report by email to yourself (and other recipients).

For specific scenarios and best practice guidelines, see Performance Issue Scenarios and Best Practice Guidelines.

Performance Issue Scenarios and Best Practice Guidelines

The following table lists common performance issue scenarios you may encounter in OpenAir per area and the best practice guidelines you can use to resolve them.

Area	Scenario	Best Practice
General	OpenAir shows 'Script running too long – want to stop script?' errors, and pages with large dropdown lists load slowly.	This may occur when dropdown lists in the page include several thousands of options. You should limit the number of options in dropdown lists that are populated dynamically based on OpenAir records and use the search feature to ensure best performance. To do so, change the **Number of entries to display in <record type> dropdowns** to anything other than **All** in Personal Settings under Display Options. For more information, see the help topic Personal Settings.
General	Lists, including project lists, booking lists, or time entry lists, return large amounts of data, resulting in slow performance.	Lists such as the projects, bookings, or time entries lists, for example, can include a large number of records. For best performance, you should use advanced filters to reduce your list view data and only include the data directly relevant to your task. See the help topic Advanced Filters. Advanced filters are server-side filters. When applied to a list, the OpenAir server returns the list data already filtered, and reduces amount of information that your browser needs to process. Column filters are client-side and do not give the same performance boost as advanced filters.
General	Administrators and other All Access users experience slow performance in an OpenAir account with large amounts of data, especially when loading lists.	When the `All Access` filter set, or another filter set returning large amounts of data is assigned to an employee, you should assign multiple filter sets and include filter sets that return significantly less data on lists. See the help topic Filters Hierarchy Overview. If you have multiple filter sets assigned to your user account and you want to speed up loading times and improve the performance of list views, you should change the active filter set to one that returns significantly less data. To do so go to User Center > Change filter set. See the help topic User Center.
General	Data growth is degrading performance as the number of completed or inactive projects increases.	You should create an "Archived" project stage for completed or inactive projects, and exclude this "Archived" project stage from all filter sets except the “All Access” filter set (project stage access control type). If employees have access to a large amount of completed or inactive projects, restricting access to these projects significantly reduces the amount of data processed and may improve performance. For more information about creating a project stage, see the help topic Project Stages. For more information about using filter sets to control data access, see the help topic Filter Sets Overview.

Area	Scenario	Best Practice
General	A list with a large number of columns does not load or produces script errors in the browser.	For best performance, you should reduce your list view data to include only the data directly relevant to your task. To do so: 1. Change the active filter set to one that returns significantly less data for this list. To do so go to User Center > Change filter set. See the help topic User Center. 2. Use advanced filters to reduce your list view data and only include the data directly relevant to your task. See the help topic Advanced Filters. 3. Change the list view configuration and include only the columns directly relevant to your task. See the help topics Selecting List View Columns and Saving and Using Custom List View Configurations.
General	The Home screen takes a long time to load and the My Status or Company Status show a high number of incomplete tasks.	If you are using tasks mainly to manage access to timesheets and expenses, you may accumulate a high number of open or incomplete tasks over time. Showing a high number of incomplete tasks in the My Status and Company Status portlets impacts the performance of the Home screen. Excluding this information should improve Home screen loading time. To remove the number of incomplete tasks from the My Status and Company Status portlets, contact OpenAir Customer Support and ask for the following switch to be disabled: "Display incomplete tasks on dashboard".
Projects	The projects list loads slowly when it includes an Internal or PTO project and various Hours columns.	If your employees record internal time or PTO against one or more primary projects in OpenAir, the number of time entries and hours recorded against these projects grows large over the years. When the number of hours recorded against an Internal time or PTO project reaches 1 million hours, you should archive or deactivate the project, and create a new project to continue tracking internal time or PTO. See the help topic Replace Internal or PTO Projects with Time Entries Totaling Over 1 Million Hours.
Projects	Many or all users need access to many or all projects or tasks for time and expense entry.	Assignment groups are a convenient way to manage assignments for sets of users. However, excessive usage of assignment groups will lead to performance issues. See the help topic Assignment Groups Best Practice Guidelines under Assignment Groups.
Projects	The project outline or Gantt view loads slowly, especially after modifying tasks and phases on projects with hundreds/ thousands of tasks.	OpenAir has several features which let you optimize project recalculation when adding or modifying tasks to projects. The optimization improves loading time for task list, outline and Gantt views after creating, duplicating, deleting, or modifying a task associated with the project you are viewing, or after moving or copying a task to another project. See the help topic Project Recalculation Optimization.
Projects	Auto-billing and auto-recognition are delayed, or project recalculation slows down your system usage substantially.	Automated billing and revenue recognition runs may be delayed when too many are scheduled to run at the same time. Project recalculation on completed projects which are still marked as active in OpenAir can also use substantial system resources. Configure the performance console and review the conditions under which these processes should

Area	Scenario	Best Practice
		no longer run or run less frequently. See the help topic Performance.
Resources	When creating or editing bookings using the Advanced Booking Worksheet, performance is slow and the worksheet does not the changes recently made.	Enable the Restrict Utilization Recalculation to Resources Impacted by the Changes on the Advanced Booking Worksheet optional feature. See the help topic Restrict Utilization Recalculation to Resources Impacted by the Changes on the Advanced Booking Worksheet.
Timesheets	Timesheet entry or approval is slow when particular projects, especially internal tracking projects with many or all users assigned, appear on the timesheet.	Skip task recalculation for timesheet approval. To do so, create a checkbox custom field associated with project records with **Field name**`skip_task_recalc`. You then check the box on the project properties form to skip calculation of daily hours and task duration when a task is modified. **Important:** This feature is useful if the project is used only internally for assignment or task-tracking purposes, and when task recalculation is not critical for project management. You should not use this feature if the project is used for utilization, planning, or billing.
Charge/Revenue Projections	Global charge projection transaction generation takes several hours to run no matter when it is scheduled to take place.	Do one of the following: - Use a project stage filter and a date range for global charge projections – See the help topic Charge Projections. - Exclude selected projects from charge and recognition projections – See the help topic Exclude Project from Charge Projections.
Reports	A report runs for a long time due to its size, the browser times out and the connection is reset before the run completes.	Run reports in the background. To do so, edit the report and check the **Run the report in the background** box in the report form. If you are using the Report Management and Editor feature, the **Run the report in the background** box is located in the Settings subtab. When you run the report, a message appears indicating that the report is running in the background. Click **OK** to continue working in OpenAir. You will receive a notification email with a link to the report results when the report run completes. **Note:** You must have an active OpenAir session in the same browser to go to the link provided in the email. You can also download the report directly from the list of saved reports or schedule the report to run automatically.
Reports	The Report form loads slowly when an account has many currencies enabled though not all of them are used for reporting. The extra values from the unused currencies slow OpenAir.	Reduce the number of currencies used in reporting. To do so: 1. Go to Reports > Options > Multiple Currencies. 2. Select only the currencies which you need to report on.

Area	Scenario	Best Practice
		You may only need to report on selected currencies even if you have a large number of currencies enabled on your account. Reducing the number of currencies can reduce load time for report forms, particularly if you are use many calculated fields based on monetary values. **Note:** Reporting options are user preferences. They do not impact other users running reports on your account. Monetary values in a specific currency do not show at all on reports if that currency is not selected as a currency you report on.
Reports	The Report form loads slowly due to many values being loaded for pickers.	Use Find instead of List in report filters. To do so, click the filter on the report form and change the display from 'List' to 'Find'. **Note:** Performance gains will be most noticeable in situations where you previously had multiple filters trying to load 20,000 or more records.
Reports	Scheduled reports in an account are delayed due to having too many scheduled reports at the same time.	OpenAir does not allow more than one scheduled report per account to run at the same time. Account administrators and users with the appropriate role permissions can go to Reports > Status, and perform the following maintenance tasks: ■ Check the frequency of scheduled reports, and delete a report, reschedule a report, remove a report from schedule, or change the owner of a report (Reports > Status > All). ■ Stop a running report (Reports > Status > Running). For more information, see the help topic Reports Status. **Note:** Cleaning up and rescheduling reports is not always straightforward and it is not a cure-all for this class of issue.
Reports	Multiple users running a large report at the same time causes it to run slowly.	When multiple users run the same report at the same time, all instances of the report compete with each other for locks in the database, and slow each other down. To avoid this, share the report with all stakeholders and schedule the report to run and send the report automatically to "All the employees who share the report". For more information, see the help topic Configuring OpenAir to Run and Deliver a Report Automatically.
Reports	Reports run slowly when tag group filters are used.	Using filters to filter by user tag groups can result in a long report runtime. If filtering by user tag groups cannot be avoided, you should enable the Optimize User Tag Group Filtering Algorithm feature. To do so, contact OpenAir Customer Support.

Area	Scenario	Best Practice
Reports	Reports take a long time to run when a large volume of data needs to be processed.	One way to speed up reports is to reduce the number of records which need to be processed. You should use filters to reduce the volume of data processed, and include only the information you need to report on. For example, you can exclude "Internal" project stages on a Billed/Billable hours report. Make a decision on what information to include, and what information to filter by, for each report.
Reports	Reports with large numbers of columns and subtotals take a long time to run.	You should include only the necessary columns and subtotals in reports. Adding columns and subtotals can increase the report runtime. For some reports, detail fields are a suitable replacement for a subtotal with the same detail, and have a lesser impact on performance.
Reports	Complex reports take a long time to run because they include many custom calculations.	Where possible, reduce the number of values used in custom calculations to the minimum necessary, and avoid using custom calculations as operand in other custom calculations. Custom calculations are generally more performance-expensive than standard reporting values and may increase report run times significantly. For more information, see the help topic Custom Calculations Overview.
Reports	You want to improve report run times for users.	Long-running reports can cause performance to degrade across the account. A long-running scheduled report can delay the start of other scheduled reports. OpenAir does not allow more than one scheduled report per account to run at the same time. To identify the longest running reports and take remedial action, go to Reports > Status. You can configure the list to show the number of runs, maximum and average run times for each report in the last 24 hours, 7 days, or month. For more information, see the help topic Reports Status.

Performance Troubleshooting

If you follow all performance improvement best practices in this guide and still experience slower performance, you can contact OpenAir Customer Support for help with diagnosing issues. To do so, create a support case and submit it through your OpenAir account — See Creating a Support Case.

Before you contact OpenAir Customer Support, use the following steps to gather as much information about the issue as possible. Remember that the more details you provide to OpenAir Customer Support, the more personalized and account-specific assistance you will receive.

Providing details for each of the items listed below will help our Customer Support teams to diagnose and improve your performance. This information, together with a properly tagged support case, will help our specialists to distinguish between different performance issue scenarios and focus our assistance.

1. Determine the frequency of the performance concern.
   - Is this a one-time performance issue, or does the performance issue repeat?
   - For repeat concerns, how often does the performance issue occur and does it occur in particular intervals (every hour or every month, for example)?
   - When was the first time you noted the performance issue? Please be as exact as possible, and include a date and time.
2. Note which product feature or area is affected.
   - Which module or modules are affected? Is it only with major OpenAir modules, for example, the Projects, Resources, or Reports module?
   - Did you notice any dependency between modules which impacted performance? For example, after you change an assignment for John Smith on project properties form for Project A (in the Projects module), your "Daily Burnout" saved report (in the Reports module) runs much slower.
3. Is this a global issue or one which affects a specific user?
   - Does this issue only occur for specific users or all users?
   - Can you reproduce the performance issue using different filter sets?
4. What are the steps to reproduce the performance issue?
   - Provide step-by-step instructions which directly relate to the performance issue. For example:
     a. We run a report called “Timesheet Compliance” each week which takes an average of 1 minute to run, according to Reports > Status > All.
     b. We modified the report and added a filter where we excluded a Project Stage called “Pending Go Live”.
     c. The report now takes 10 minutes to run.
5. Are there any network connectivity issues?
   - Try accessing OpenAir using a different Internet connection, for example, from home rather than the office. Do you get the same response times?
   - Check the page build and page load times for the impacted pages. Screenshots of the build and load times with a date and time stamp will help our Customer Support team with diagnosing the problem. For more information about where to find page build and page load times, see Using Page Build and Load Times.
   - If your page build time is several seconds, please make a copy of the URL for the page so that our Engineering team can debug the page and better understand why it is loading slowly.
   - If the page build time is reasonable, but the page load time is slow, there may be a network problem, do the following:
     a. Run a traceroute and paste the results into an email to OpenAir Customer Support. See Using a Trace Route.

b. Try loading the page using a different Internet connection, for example, from home but outside of the corporate network. If the issue does not occur from the alternate Internet connection, contact your IT department and request that they investigate the corporate connection.

Creating a Support Case

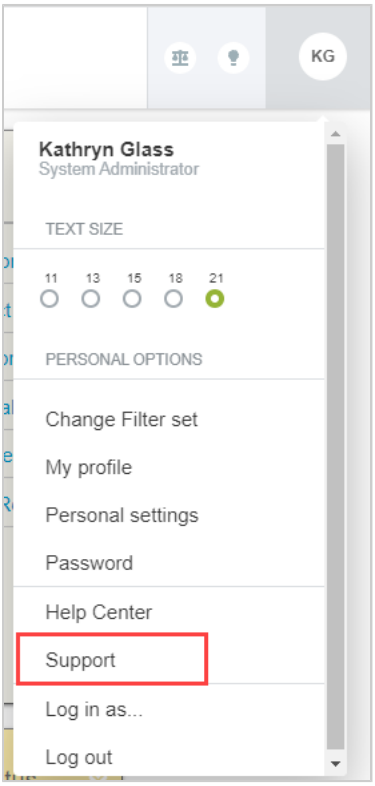
If you are experiencing difficulties with OpenAir or would like to enable an optional feature, go to SuiteAnswers through your OpenAir account and create a support case.

Our support staff and engineers will work with you to find a solution to your problem.

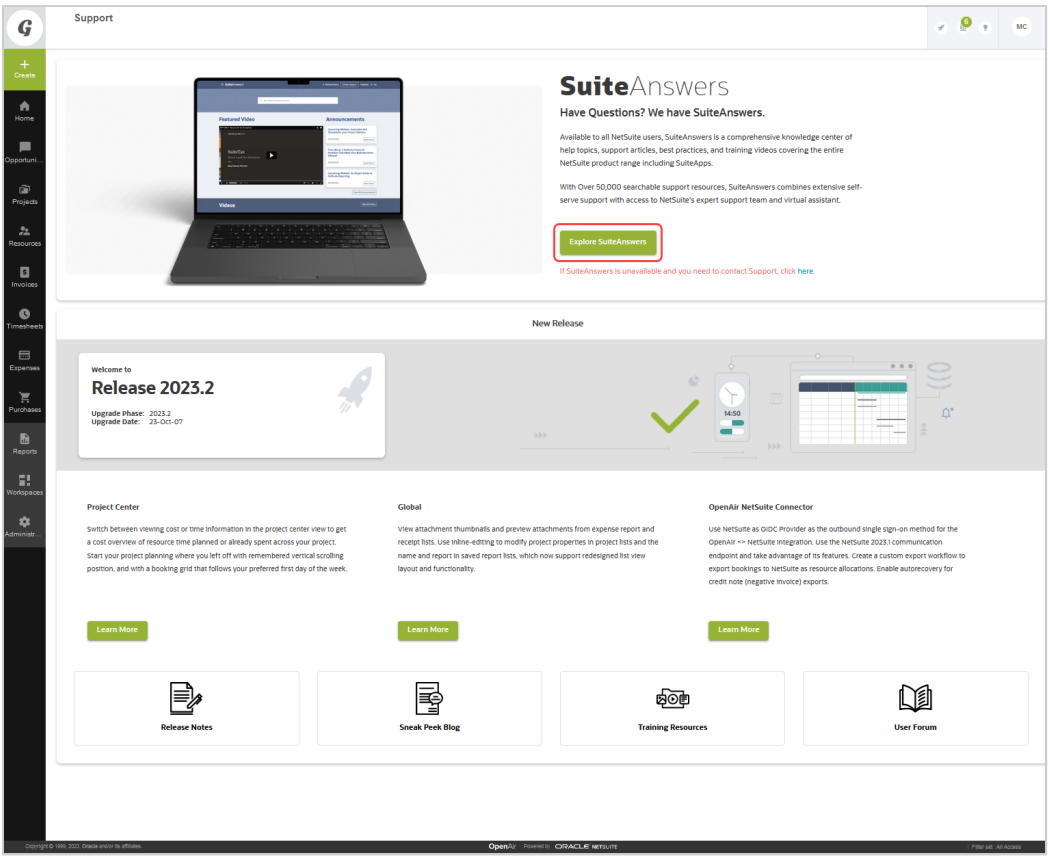
Important: As a part of the support case creation process you will be presented with existing answers that may solve your problem. Take a moment to view the available answers before proceeding to create a support case.

To create a support case:

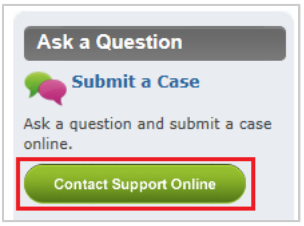
1. Log in to your OpenAir account and select **Support** from the User Center menu.



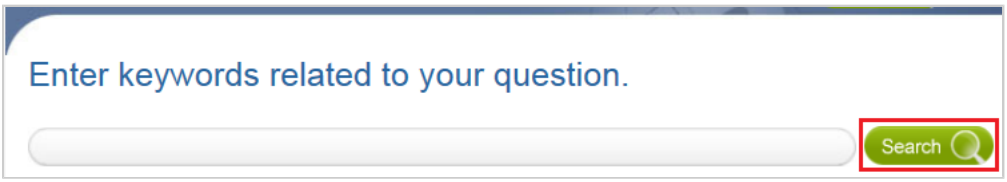
2. Click **Go to SuiteAnswers**.



3. On the OpenAir SuiteAnswers website, click **Contact Support Online**.

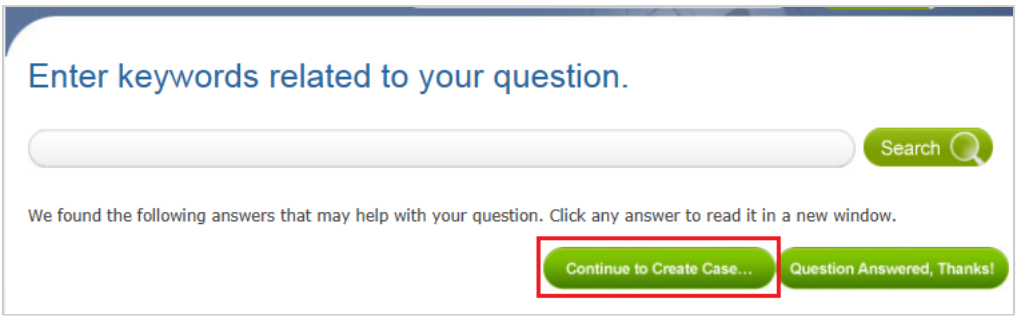


4. Enter keywords corresponding to the question or problem you want to resolve and click **Search**.



Note: If you do not have a question but need a feature enabled, for example, click **Search**.

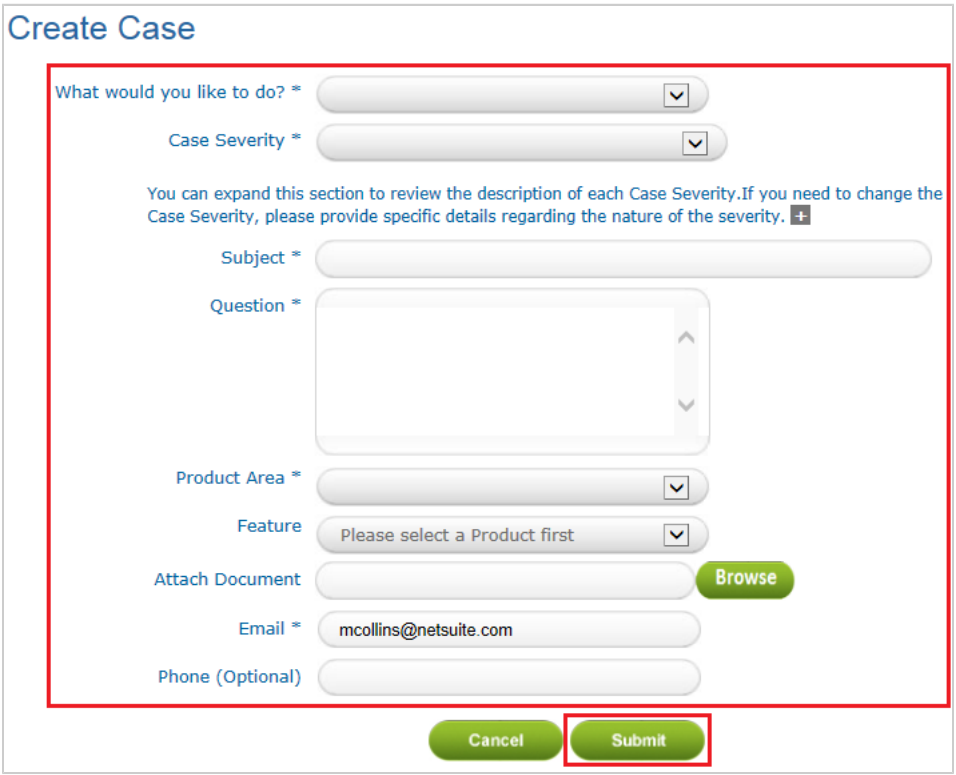
5. Oftentimes, the answer to your question will be displayed. If you still want to create a support case, click **Continue to Create Case**.



6. Fill out the **Create Case** form and then click **Submit**. You will receive an email confirmation with your support case reference (OpenAir Customer Care #).

Important: Review the **Case severity** definitions and always use the appropriate case severity when submitting a case. See Case Severity Definitions.

Using the appropriate case severity helps OpenAir Customer Support prioritize between cases. Otherwise, OpenAir Customer Support need to evaluate the true urgency of each case, which slows down the response time to all cases.



Note: An asterisk * indicates a required field.

Case Severity Definitions

Review the following Case severity definitions and always use the appropriate case severity when submitting a case.

Using the appropriate case severity helps OpenAir Customer Support prioritize between cases. Otherwise, OpenAir Customer Support need to evaluate the true urgency of each case, which slows down the response time to all cases.

- **C1 – Critical / Business Down**: Production use of the service is stopped or so severely impacted that the company cannot reasonably continue business operations.
- **C2 – Urgent**: One or more important functions of the service are unavailable with no acceptable alternative solution. Customer's implementation or production use of the service is continuing but there is a serious impact on business operations.
- **C3 – How-to / Non-urgent Questions**: Important service features are unavailable but an alternative solution is available, or less significant Service features are unavailable with no reasonable alternative solution. There is minor loss of business operation functionality or an impact on implementation resources.

  > **Note:** Use the case severity `C3 – How-to / Non-urgent Questions` when submitting a case to request a sandbox refresh.

- **C4 – Enhancement / Non-tech Support**: An incident that has a minimal impact on business operations or basic functionality of the service.