



ORACLE
NETSUITE

Application Performance Management Guide

2022.2

March 22, 2023



Copyright © 2005, 2022, Oracle and/or its affiliates.

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 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, software documentation, data (as defined in the Federal Acquisition Regulation), 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," "commercial computer software documentation," or "limited rights data" 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®, Java, and MySQL 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.

If this document is in public or private pre-General Availability status:

This documentation is in pre-General Availability status and is intended for demonstration and preliminary use only. It may not be specific to the hardware on which you are using the software. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to this documentation and will not be responsible for any loss, costs, or damages incurred due to the use of this documentation.

If this document is in private pre-General Availability status:

The information contained in this document is for informational sharing purposes only and should be considered in your capacity as a customer advisory board member or pursuant to your pre-General Availability trial agreement only. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described in this document may change and remains at the sole discretion of Oracle.

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of your Oracle Master Agreement, Oracle License and Services Agreement, Oracle PartnerNetwork Agreement, Oracle distribution agreement, or other license agreement which has been executed by you and Oracle and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced, or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <https://www.oracle.com/corporate/accessibility>.

Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Sample Code

Oracle may provide sample code in SuiteAnswers, the Help Center, User Guides, or elsewhere through help links. All such sample code is provided "as is" and "as available", for use only with an authorized NetSuite Service account, and is made available as a SuiteCloud Technology subject to the SuiteCloud Terms of Service at www.netsuite.com/tos.

Oracle may modify or remove sample code at any time without notice.

No Excessive Use of the Service

As the Service is a multi-tenant service offering on shared databases, Customer may not use the Service in excess of limits or thresholds that Oracle considers commercially reasonable for the Service. If Oracle reasonably concludes that a Customer's use is excessive and/or will cause immediate or ongoing performance issues for one or more of Oracle's other customers, Oracle may slow down or throttle Customer's excess use until such time that Customer's use stays within reasonable limits. If Customer's particular usage pattern requires a higher limit or threshold, then the Customer should procure a subscription to the Service that accommodates a higher limit and/or threshold that more effectively aligns with the Customer's actual usage pattern.

Beta Features

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 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.

This documentation is in pre-General Availability status and is intended for demonstration and preliminary use only. It may not be specific to the hardware on which you are using the software. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to this documentation and will not be responsible for any loss, costs, or damages incurred due to the use of this documentation.

The information contained in this document is for informational sharing purposes only and should be considered in your capacity as a customer advisory board member or pursuant to your pre-General Availability trial agreement only. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described in this document remains at the sole discretion of Oracle.

This document in any form, software or printed matter, contains proprietary information that is the exclusive property of Oracle. Your access to and use of this confidential material is subject to the terms and conditions of your Oracle Master Agreement, Oracle License and Services Agreement, Oracle PartnerNetwork Agreement, Oracle distribution agreement, or other license agreement which has been executed by you and Oracle and with which you agree to comply. This document and information contained herein may not be disclosed, copied, reproduced, or distributed to anyone outside Oracle without prior written consent of Oracle. This document is not part of your license agreement nor can it be incorporated into any contractual agreement with Oracle or its subsidiaries or affiliates.

Send Us Your Feedback

We'd like to hear your feedback on this document.

Answering the following questions will help us improve our help content:

- Did you find the information you needed? If not, what was missing?
- Did you find any errors?
- Is the information clear?
- Are the examples correct?
- Do you need more examples?
- What did you like most about this document?

Click [here](#) to send us your comments. If possible, please provide a page number or section title to identify the content you're describing.

To report software issues, contact NetSuite Customer Support.

Table of Contents

Application Performance Management (APM)	1
Application Performance Management Overview	2
Benefits of Application Performance Management	3
Script and Plug-in Types in Application Performance Management	3
Language Support in Application Performance Management	4
Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler	5
Setting Up the Application Performance Management SuiteApp	6
Prerequisites for the Application Performance Management SuiteApp	6
Installing the Application Performance Management SuiteApp	7
Setting Access to the Application Performance Management SuiteApp	8
Getting Started with Application Performance Management	9
Accessing Application Performance Management	9
Using the Application Performance Management Tools	10
Monitoring Account Performance	11
Monitoring Record Pages	16
Monitoring Performance with the Page Time Summary	23
Using Page Time Details	25
Analyzing Scripts	28
Monitoring SuiteCloud Processors Performance	31
Analyzing Web Services Performance	41
Analyzing Search Performance	57
Monitoring Web Services and RESTlet Concurrency	61
Profiling Operations Performance	70
Exporting Data from Application Performance Management	75
Frequently Asked Questions: Application Performance Management	78

Application Performance Management (APM)

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Application Performance Management (APM) SuiteApp enables you to see and manage the performance of your NetSuite customizations and business critical operations.

Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

To know more about the SuiteApp, see the following help topics:

- [Benefits of Application Performance Management](#)
- [Script and Plug-in Types in Application Performance Management](#)
- [Language Support in Application Performance Management](#)
- [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#)

To set up the SuiteApp, see the following help topics:

- [Prerequisites for the Application Performance Management SuiteApp](#)
- [Installing the Application Performance Management SuiteApp](#)
- [Setting Access to the Application Performance Management SuiteApp](#)

To know more about where to start with the SuiteApp, see [Getting Started with Application Performance Management](#).

To know more about the tools available in the SuiteApp, see [Using the Application Performance Management Tools](#).

To export data from the SuiteApp, see [Exporting Data from Application Performance Management](#).

To view answers to frequent queries about the SuiteApp, see [Frequently Asked Questions: Application Performance Management](#).

Application Performance Management Overview



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Application Performance Management (APM) SuiteApp lets you monitor and manage NetSuite performance for business critical operations.

The SuiteApp compiles information into a Performance Health Dashboard that is useful for troubleshooting. From the Performance Health Dashboard, you can go to other tools in APM to investigate the cause of an issue. Use the dashboard as a starting point for investigating issues in your account. For more information, see [Monitoring Account Performance](#).

From the Performance Health Dashboard, you can access the APM tools in the table.

APM Tool	Related Help Topic	Description
Record Pages Monitor	Monitoring Record Pages	Identify and troubleshoot the performance of your record pages.
Page Time Summary	Monitoring Performance with the Page Time Summary	Measure the performance of user event scripts, client scripts, and workflows to identify customizations that take an unusually long time to run.
Page Time Details	Using Page Time Details	View overview information about a specific operation during a specific date and time.
SuiteScript Analysis	Analyzing Scripts	View the history and performance of scripts.
SuiteCloud Processors Monitor	Monitoring SuiteCloud Processors Performance	<p>View and analyze the performance of your map/reduce and scheduled script jobs handled by SuiteCloud Processors.</p> <p>SuiteCloud Processors Monitor replaces the Script Queue Monitor to help you view the performance of deployments that continue to use queues.</p>
SOAP Web Services Analysis	SOAP Web Services Analysis Overview	Monitor the performance of top SOAP web services operations and record processing.
REST Web Services Analysis	REST Web Services Analysis Overview	Monitor the performance of REST web services operations.
Search Performance Analysis	Using the Search Performance Analysis Dashboard	Monitor the performance of multiple saved searches and identify potential issues.
Search Performance Details	Using the Search Performance Details Dashboard	View in-depth statistics about the performance of each saved search.

APM Tool	Related Help Topic	Description
Concurrency Monitor	Monitoring Web Services and RESTlet Concurrency	Monitor peak levels, errors, and other related concurrency data in your account.
Profiler Details	Profiling Operations Performance	Monitor the timing breakdown and context of an operation to locate and correct performance bottlenecks.



Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

Benefits of Application Performance Management

The Application Performance Management (APM) SuiteApp is designed to help you to:

- Access a main dashboard to view potential issues and investigate them using different tools available.
- Identify performance opportunities or degradation. Prioritize issues based on usage and traffic.
- View performance metrics for your most important record pages and assess system health and trends.
- Drill down for greater levels of detail about specific record types, operations, and instances.
- View response times by client, server, and network.
- Monitor performance of user event scripts, workflows, RESTlets, scheduled scripts, and Suitelets.
- Check the overall health of jobs handled by SuiteCloud Processors, scheduling queues, or both.
- Export performance data captured on its various pages.

Script and Plug-in Types in Application Performance Management



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Application Performance Management (APM) SuiteApp lets you monitor the performance of your scripts and plug-ins when you use the Page Time Details and SuiteScript Analysis tools.

In SuiteScript Analysis, you can only view logs of client scripts that ran for a significant amount of time and are useful in diagnosing issues. SuiteScript Analysis is not intended to trace all the scripts and plug-ins that the account processed.

For more information, see:

- [Using Page Time Details](#)
- [Analyzing Scripts](#)

The APM SuiteApp provides data for the following script and plug-in types:

Script Types	Plug-in Types
Bundle Installation	Custom GL Lines
Client	Payment Gateway
Map/Reduce	Revenue Management
Mass Update	Tax Calculation
Portlet	
RESTlet	
Scheduled	
SDF Installation	
Suitelet	
User Event	
Workflow Action	

i Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

Language Support in Application Performance Management

i Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

If the Multi-Language feature is enabled in your account, you can view the following Application Performance Management (APM) SuiteApp pages in your preferred language:

- Performance Health Dashboard

- Page Time Summary
- Page Time Details
- SuiteScript Analysis
- REST Web Services Analysis
- SOAP Web Services Analysis
- Concurrency Monitor
- Search Performance Analysis
- Search Performance Details

For more information about setting your language preferences using the Multi-Language feature, see the help topic [Choosing a Language for Your NetSuite User Interface](#).

Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler



Note: Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

To install the SuiteApp, see [Installing the Application Performance Management SuiteApp](#)

The following are the differences between the Application Performance Management (APM) SuiteApps installed from the SuiteApp Marketplace and from the Search & Install Bundles page, distributed by the SuiteBundler:

	Recent version installed from the SuiteApp Marketplace	Recent version installed from the Search & Install Bundles page
Installation Procedure	APM version 2.0.0 and later are installed from the SuiteApp Marketplace. For more information, see Installing the Application Performance Management SuiteApp .	APM versions before 2.0.0 are installed from the Search & Install Bundles page. For more information, see the help topic Installing a Bundle .
Navigation Link	To access, go to Customization > Performance.	To access, go to Customization > Performance (SuiteBundler).
New Feature Upgrades	APM version 2.0.0 and later are upgraded with new features. For example, REST Web Services Analysis is available only with versions installed from the SuiteApp Marketplace.	APM versions before 2.0.0 will no longer be upgraded with new features.
Web Services Analysis Feature Changes	APM version 2.0.0 and later renames the Web Services Analysis feature to SOAP Web Services Analysis. To access the feature, go to Customization > SOAP Web Services Analysis. For more information, see	APM versions before 2.0.0 retains the name Web Services Analysis. To access the feature, go to Customization > Web Services Analysis.
Monitoring Deployments with Queues	APM version 2.0.0 and later will no longer include the Script Queue Monitor page. To view the performance of deployments that continue to use queues, use the SuiteCloud Processors Monitor.	APM versions before 2.0.0 let you use both the SuiteCloud Processors Monitor and Script Queue Monitor to view the performance of deployments that continue to use queues.

Setting Up the Application Performance Management SuiteApp



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

To set up the Application Performance Management (APM) SuiteApp, follow the steps in the table.

Step	Related Help Topic
1. Log in as a NetSuite administrator.	Roles and Accounts
2. Complete the prerequisites.	Prerequisites for the Application Performance Management SuiteApp
3. Install the APM SuiteApp.	Installing the Application Performance Management SuiteApp
4. Set access for roles and employees to use the APM SuiteApp.	Setting Access to the Application Performance Management SuiteApp

Prerequisites for the Application Performance Management SuiteApp



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

To install the APM SuiteApp, complete the following prerequisites:

- If you are using a non-Administrator or custom role, verify that your role has a View or higher level of access to the Documents and Files permission. Administrators can provide access to permissions

like this on the Role page. They can locate the permission on the **Permissions** subtab, then the **Lists** subtab. See the help topic [Setting Permissions](#).

- Verify that you have permission to access APM. Administrators can access APM and provide APM access to other roles and employees. See [Setting Access to the Application Performance Management SuiteApp](#).
- If you want to access the SuiteScript Analysis tool, verify that Server SuiteScript is enabled. Go to Setup > Company > Enable Features. Click the **SuiteCloud** tab. Verify that the **Server SuiteScript** box is checked.

To continue setting up the SuiteApp, see [Setting Up the Application Performance Management SuiteApp](#).

Installing the Application Performance Management SuiteApp



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

Using the standard Administrator role, follow the procedure to install the Application Performance Management (APM) SuiteApp from the SuiteApp Marketplace.

To install the APM SuiteApp:

1. Go to SuiteApps.
2. In the **Search** field, enter **Application Performance Management**.
3. Click the SuiteApp tile.
The SuiteApp details page opens.
4. Click **Install**. Click **OK**.
The installation process begins.

For more information about installing SuiteApps from the SuiteApp Marketplace, see the help topic [Installing from the SuiteApp Marketplace](#).



Important: If you are using APM from the Search & Install Bundles page, you should uninstall that version after you installed the APM version from the Marketplace. The roles and employees that you previously set in the APM Setup page are automatically migrated to the Marketplace version of the SuiteApp. For more information, see the help topic [Uninstalling a Bundle](#).

To continue setting up the SuiteApp, see [Setting Up the Application Performance Management SuiteApp](#).

Setting Access to the Application Performance Management SuiteApp



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

If you are an administrator, you can set up Application Performance Management (APM) SuiteApp access for other roles and employees.

To set up APM access for other roles and employees:

1. Go to Customization > Performance > APM Setup.
 - To provide access to specific roles (CEO for example), select the **Roles** tab.
 - To provide access to an individual, select the **Employees** tab.
2. Select the role or employee name from the dropdown list.
 1. To provide access to the Top 10 Most Utilized portlet that appears on the Record Pages Monitor, check the box in the **Top 10 Most Utilized** column.
 2. Click **Add**.
3. Repeat Step 2 for each role and employee that you want to provide access to APM.
4. Click **Save**.

For information about NetSuite roles, see the help topic [NetSuite Users & Roles](#).

To start using the APM SuiteApp, see [Getting Started with Application Performance Management](#).

Getting Started with Application Performance Management



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Application Performance Management (APM) SuiteApp includes a powerful set of tools designed for a range of purposes. To start, do the following:

- To set up the APM SuiteApp, see [Setting Up the Application Performance Management SuiteApp](#).
- To access this SuiteApp, see [Accessing Application Performance Management](#).
- To learn about the Application Performance Management tools see the following topics, see [Using the Application Performance Management Tools](#).
- To know more about exporting data from the APM SuiteApp, see [Exporting Data from Application Performance Management](#).

Accessing Application Performance Management



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

After installation, you can access Application Performance Management (APM) by going to Customization > Performance.

By default, account administrators can access APM. Administrators can set up APM access for other roles and employees. For more information, see [Setting Access to the Application Performance Management SuiteApp](#).

To access specific tools in APM, see the following help topics:

- [Accessing the Performance Health Dashboard](#)

- Accessing Record Pages Monitor
- Accessing the Page Time Summary
- Accessing Page Time Details
- Accessing SuiteScript Analysis
- Accessing the SuiteCloud Processors Monitor Dashboard
- Accessing the SuiteCloud Processors Job Details Dashboard
- Accessing REST Web Services Analysis
- Accessing SOAP Web Services Analysis
- Accessing the Search Performance Analysis Dashboard
- Accessing the Search Performance Details Dashboard
- Accessing Concurrency Monitor Dashboards
- Accessing Profiler Details

Using the Application Performance Management Tools

i Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Application Performance Management (APM) SuiteApp is organized to provide varying levels of detail, depending on your needs. You can use the data aggregates, summaries, and visualizations to guide you to the individual logs and instances that contribute to poor response times.

The APM SuiteApp shows data that ran for a significant amount of time so that you can use them to diagnose potential issues in your account. The APM tools are not intended to trace all the scripts and plug-ins that the account processed.

To go to the related help topic of elements in an APM tool, click any of the information icons ⓘ available on the page.

i Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

For more information, see:

- [Monitoring Account Performance](#)
- [Monitoring Record Pages](#)
- [Monitoring Performance with the Page Time Summary](#)
- [Using Page Time Details](#)
- [Analyzing Scripts](#)
- [Monitoring SuiteCloud Processors Performance](#)
- [Analyzing Web Services Performance](#)
- [Analyzing Search Performance](#)
- [Monitoring Web Services and RESTlet Concurrency](#)
- [Profiling Operations Performance](#)

Monitoring Account Performance



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

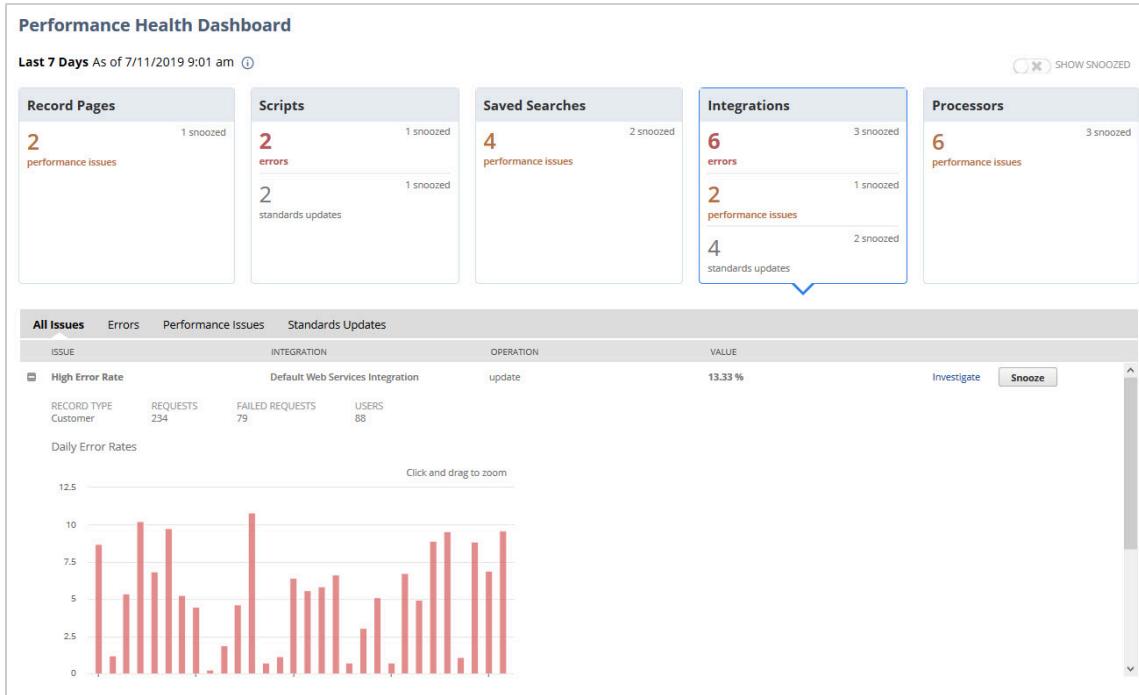
Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

Use the Performance Health Dashboard in the Application Performance Management (APM) SuiteApp to monitor issues that may affect the performance of your record pages, scripts, saved searches, integrations, and processors.

The Performance Health Dashboard is a visual tool that displays high-level information about account issues by using tiles, figures, and tables.

From the Performance Health Dashboard, you can go to other tools in the APM SuiteApp to investigate the cause of an issue. Use the dashboard as a starting point for investigating issues in your account.



i Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

For more information about the dashboard, see the following help topics:

- [Performance Health Dashboard Overview](#)
- [Monitoring Issues with Performance Health Dashboard Tiles](#)
- [Investigating Issues with Performance Health Dashboard Tables](#)
- [Snoozing Issues in the Performance Health Dashboard](#)

Performance Health Dashboard Overview

The Performance Health Dashboard lets you monitor performance issues in your account. Use it to monitor urgent and important issues that were found in the last seven days.

The dashboard displays issues related to the following processes in NetSuite.

- Record Pages
- Scripts
- Saved Searches
- Integrations
- Processors

Accessing the Performance Health Dashboard

To start using the dashboard, go to Customization > Performance > Performance Health Dashboard.

To understand the information that appear on the dashboard tiles, see [Monitoring Issues with Performance Health Dashboard Tiles](#).

To understand the information that appear on the dashboard tables, see [Investigating Issues with Performance Health Dashboard Tables](#).

To understand how to snooze issues for 30 days or to show snoozed issues, see [Snoozing Issues in the Performance Health Dashboard](#).

Monitoring Issues with Performance Health Dashboard Tiles

The Performance Health Dashboard displays a dedicated tile for each process that it monitors.

Record Pages	Scripts	Saved Searches	Integrations	Processors
2 performance issues	2 errors	4 performance issues	6 errors	6 performance issues
1 snoozed	1 snoozed	2 snoozed	3 snoozed	3 snoozed
	2 standards updates		2 standards updates	

One or more of the following types of issues may appear on a tile:

- **Error** - Shows the number of issues related to high error rates.
- **Performance Issue** - Shows the number of issues related to slow or unusual processing times.
- **Standards Update** - Shows the number of issues related to NetSuite standards that you must address to keep your account running smoothly.

Each tile shows the following information:

- Types of issues that were found
- Number of issues for each issue type
- Number of snoozed issues

Click a tile to display tables for each type of issue found in your account. For more information about the information included in the tables, see [Investigating Issues with Performance Health Dashboard Tables](#).

Investigating Issues with Performance Health Dashboard Tables

When you click a tile on the Performance Health Dashboard, it shows detailed tables for each issue type found in your account. Each issue type is located on its own subtab. The dashboard shows an **All Issues** subtab if there are more than one type of issue in the account.

All Issues	Errors	Performance Issues	Standards Updates
ISSUE	INTEGRATION	OPERATION	VALUE
High Error Rate	Default Web Services Integration	update	13.33 %
High Median Time per Record	Default Web Services Integration	deleteList	54.24 s
RECORD TYPE Sales Order	REQUESTS 234	USERS 34	
Unsupported WSDL Version	Default Web Services Integration	-	v2011_2
REQUESTS 234	USERS 34		
Requests Near Concurrency Limit	-	-	7.35 %
AFFECTED INTEGRATIONS 5	USERS 34		

For more information about the list of issues that appear on the tables, see [Performance Health Dashboard Issues and Issue Types](#).

For more information about the columns that appear on the tables, see [Performance Health Dashboard Table Columns](#).

- [Performance Health Dashboard Table Columns](#)
- [Performance Health Dashboard Issues and Issue Types](#)

Performance Health Dashboard Table Columns

Columns that appear on the table vary according to the process that you are investigating. The following table shows the columns that appear for all processes and those that appear only for a specific process:

NetSuite Process	Column	Description
All Processes	Issue	Shows the name of the issue.
	Value	Shows the value or figure as it applies to the issue. Depending on the issue, the value may appear in units of time, percentages, or other formats.
	Investigate Link	Depending on the issue, this column may show an Investigate link that refers users to other tools in the Application Performance Management (APM) SuiteApp.
	Snooze Button	Shows a Snooze button that hides an issue from the table after it is clicked. For more information, see Snoozing Issues in the Performance Health Dashboard .
Record Pages	Record Type	Shows the name of the record type.
	Operation	Shows the name of the operation.
Scripts	Script Name	Shows the name of the script.
	Deployment ID	Shows the identifier of the script deployment.
	Stage	For map/reduce scripts, this column shows the stage that the script was processing when it encountered the issue.
Saved Searches	Saved Search	Shows the name of the saved search.
	Record Type	Shows the record type of the saved search.
Integrations	Integration	Shows the name of the integration.
	Operation	Shows the name of the operation that the integration performed when it encountered the issue.
Processors	—	—

Performance Health Dashboard Issues and Issue Types

The dashboard shows different issues depending on the process and issue type that you are investigating. The following table shows the issues that are included for each issue type:

NetSuite Process	Issue Type	Issue	Description
Record Pages	Performance Issue	High Median Response Time	Alerts you to the high median response time of record instances during the selected period.

NetSuite Process	Issue Type	Issue	Description
Scripts	Error	High Error Rate	Alerts you to the high error rate of script deployments during the selected period.
	Standards Update	Deployments over 100	Alerts you to the presence of scripts that exceed 100 deployments during the selected period.
Saved Searches	Performance Issue	High Median Request Time	Alerts you to the high median time it took to execute the saved searches during the selected period.
		High Timeout Rate	Alerts you to the high rate that saved searches timed out during the selected period.
Integrations	Error	High Error Rate	Alerts you to the high error rate of integrations during the selected period.
		High Error Rate for Account Concurrency	Alerts you to the high error rate because of requests that exceeded the account concurrency limit during the selected period.
		High Error Rate for User Concurrency	Alerts you to the high error rate because of requests that exceeded the user concurrency limit during the selected period.
	Performance Issue	High Median Time per Record	Alerts you to the high median time it took for each record to execute during the selected period.
	Standards Update	Unsupported WSDL Version	Shows integrations during the selected period that still use unsupported WSDL versions.
		Requests Near Concurrency Limit	Measures how much of your integrations register requests near the concurrency limit during the selected period.
	Processors	High Average Wait Time	Alerts you to the high average wait time to complete jobs during the selected period.
		High Rate of Failed Jobs	Alerts you to the high rate of failed jobs during the selected period.
		Low Usage of Reserved Processors	Expresses the ratio of the instances when processors reserved for high-priority jobs are at less than 50% for the selected period.

Snoozing Issues in the Performance Health Dashboard

The Performance Health Dashboard lets you snooze issues for 30 days. The dashboard hides the snoozed issues from the tables. The snoozed issues automatically appear on the table after 30 days.

To show or hide snoozed items, click **Show Snoozed** on the upper right corner of the page.



To snooze an issue:

1. Go to Customization > Performance > Performance Health Dashboard.
2. Click the tile for the NetSuite process you want to review.
3. Click the subtab of the issue type you want to investigate.
The detailed table for the issue type appears.
4. On the table, select the issue that you want to snooze.
5. In the last column of the table, click **Snooze**.

If you want to show a snoozed issue, click **Show Snooze**. Then, locate the issue and click **End Snooze**.

All Issues	Errors	Performance Issues	Standards Updates
ISSUE	INTEGRATION	OPERATION	VALUE
High Error Rate	Default Web Services Integration	update	13.33 %
High Error Rate	Default Web Services Integration	update	27.33 %

Monitoring Record Pages

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

Record Pages Monitor lets you monitor the performance of your record pages. Visual indicators alert you to performance issues and anomalies, which you can investigate by using the portlets and quick links.

Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

Accessing Record Pages Monitor

Go to Customization > Performance > Record Pages Monitor.

For more information, see the following help topics:

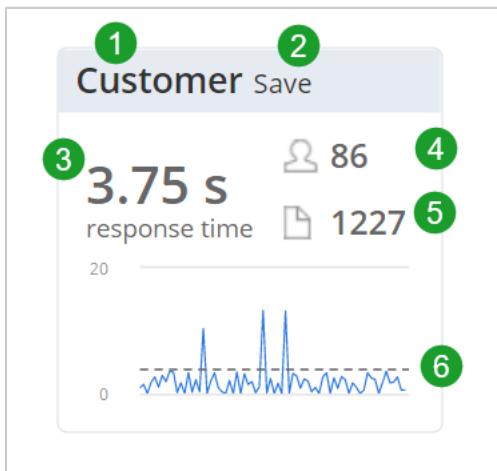
- [Record Pages Monitor Tiles](#)
- [Record Pages Monitor Charts](#)

- Configuring Record Pages Monitor
- Navigating Record Pages Monitor

Record Pages Monitor Tiles

By default, the dashboard displays the 10 most utilized record operations. You can configure the dashboard to show up to 20 record tiles. For more information see, [Changing Watch Lists on Record Pages Monitor](#).

The record operation tiles use a concise format, which lets you view key metrics and a miniaturized trend graph at a glance. Each tile includes the following information:



Tile Element	Description
1	Record type
2	Record operation
3	Average response time
4	Number of users
5	Number of instances
6	Response time trendline

Record Pages Monitor Charts

You can interact with performance data visualizations in several ways. You can show more data, hide data, and use quick links to drill down for more details.

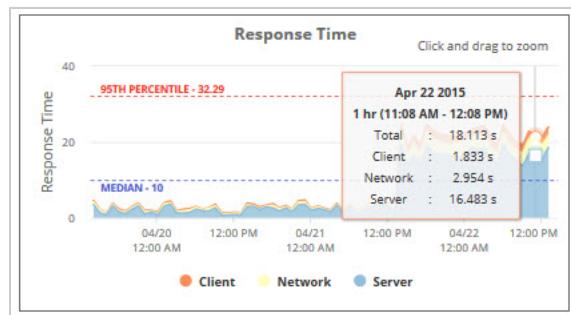
To see the charts that appear when you click a record tile, see:

- Response Time Chart
- Throughput Chart
- User Event and Workflow Chart
- Execution Time Distribution Chart

Response Time Chart

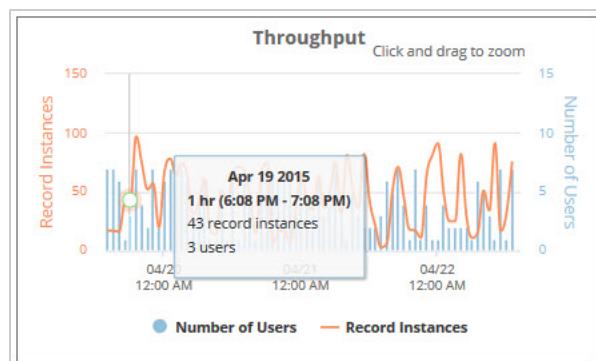
The Response Time chart displays the median response time of record pages over time. You can use this graph to view changes in total request speed and assess its impact on end users.

Each color represents the portion of time used by the client, network, or server. From the graph, you can determine which component used the bulk of the response time.



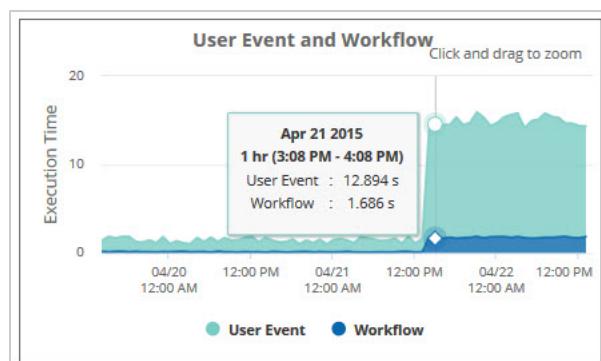
Throughput Chart

The Throughput chart displays the number of record instances and number of users over a period. You can use this graph to identify periods of heavy usage and consider offloading traffic outside the peak times.



User Event and Workflow Chart

The User Event and Workflow chart displays the time it took to run user event scripts and workflows on a record page. This graph is designed to help you identify the impact of customizations and possible performance bottlenecks.



Execution Time Distribution Chart

The Execution Time Distribution chart is a histogram, which displays record instances grouped by response time. This histogram can help you understand whether a high response time was caused only by an anomaly.



Configuring Record Pages Monitor

Modify, filter, and sort the record pages and performance data displayed on Record Pages Monitor.

For more information, see:

Configuration	Description	Related Link
Chart preferences	Change the data and interval for the Execution Time Distribution chart.	Changing Chart Preferences on Record Pages Monitor
Watch lists	Add or remove record page operations that you want to monitor.	Changing Watch Lists on Record Pages Monitor
Custom date and time range	Add a custom date and time range.	Adding a Custom Date and Time Range on Record Pages Monitor

Changing Chart Preferences on Record Pages Monitor

By default, the Execution Time Distribution chart shows the data for all the record tiles on the portlet, with a time interval of one. You can change the chart preferences for the histogram from the portlet set up menu.

To change chart preferences:

1. Go to Customization > Performance > Record Pages Monitor.
2. On the Record Pages portlet, point to the upper right corner.
Icons appear.
3. Select **Set up**.
4. On the Set up Record Pages window, click **Chart Preferences**.
 - To change the response time interval for the bar graphs on the Execution Time Distribution chart, enter a new value in the **Interval** field.
 - To change the data shown on the Execution Time Distribution chart, select **Show All Record Tiles** or **Show Watch List Only** from the **Record Tiles** list.

5. Click **Save**.

Changing Watch Lists on Record Pages Monitor

The record page operations for which performance data is available are called watch lists. You can add up to 10 more record page operations to the default set.

To add or remove an operation on the watch list:

1. Go to Customization > Performance > Record Pages Monitor.
2. On the Record Pages portlet, point to the upper right corner.
Icons appear.
3. Select **Set up**.
4. On the Set up Record Pages window, click the **Watch List** subtab.
5. Choose to add or remove an operation.
 - To add an operation, click **Add Watch List Item**. Select a record type and operation. Click **Add**.
 - To remove a record operation that you added, click the X icon for the record operation.
 - To remove all record operation that you added, click **Remove All**.
6. Click **Save**.



Note: You can remove only the record page operations that you added. You cannot change the record page operations shown by default.

Adding a Custom Date and Time Range on Record Pages Monitor

By default, Record Pages Monitor shows data for the last 24 hours. You can change the date range by selecting one of the preset filters or you can create a custom date range. To discover when an issue started, set the date range to a larger period.

The resolution value sets the plot point intervals on the x-axis of the data visualizations.

If you want to review performance for time periods other than those provided by the preset date and time range filters, create custom filters.

To add or remove a custom date and time range filter:

1. Go to Customization > Performance > Record Pages Monitor.
2. On the Record Pages portlet, point to the upper right corner.
Icons appear.
3. Click the More icon.
4. Select **Set up**.
5. On the Set up Record Pages window, click **Custom Date and Time**.
 - To add a custom filter, click **Add Date and Time**. Select a start date, start time, end date, and end time. Click **Add**.
 - To remove a custom filter that you added, click the X icon for the filter.



Note: A custom date and time range filter cannot span more than 30 days.

- To remove all custom filters that you added, click **Remove All**.
- 6. Click **Save**. The changes are reflected in the dropdown list for the date filter. Newly added custom filters are listed at the bottom of the list.

Navigating Record Pages Monitor

After you configured your chart preferences, watch lists, and custom durations, explore the features available on Record Pages Monitor. To open the page, see [Accessing Record Pages Monitor](#).

When you first open Record Pages Monitor, you see the Record Pages portlet that shows the following elements:

- Fields to filter the tiles that appear on the portlet
- Date and time when the data was last refreshed
- Sorting field to alphabetically arrange the filtered tiles
- Initial set of five tiles that contain metrics for record operations
- Refresh icon that appears when you hover on the upper right corner of the portlet
- More options menu beside the Refresh icon, which is used to configure Record Pages Monitor and export files

Explore features of Record Pages Monitor using the following procedures:

- [Filtering and Sorting Tiles on Record Pages Monitor](#)
- [Viewing Tiles on Record Pages Monitor](#)
- [Viewing Charts on Record Pages Monitor](#)
- [Exporting Data from Record Pages Monitor](#)

Filtering and Sorting Tiles on Record Pages Monitor

Use the filters and sorting field to change the set of record operation tiles and their arrangement on Record Pages Monitor.

To filter and sort tiles on Record Pages Monitor

1. Go to Performance > Record Pages Monitor.
 2. On the Record Pages portlet, go to the first field on the left.
 3. From the following options, select the set of tiles that you want to show on the portlet:
 - **Most Utilized** – Arranges the record tiles by highest number of instances.
 - **Most Users** – Arranges the record tiles by highest number of users.
 - **Highest Response Time** – Arranges the record tiles by highest response time.
- By default, the tiles are filtered according to the most utilized set of record operations.
4. From the date and time range field, select from one of the preset options or from a custom range you created. To add a custom range, see [Adding a Custom Date and Time Range on Record Pages Monitor](#).
- By default, the tiles are filtered according to record operations from the last 24 hours.
5. (Optional) From the **Sorting** field, choose to alphabetically arrange the filtered tiles according to the following option:

- **Record Type** – Arranges the record tiles in alphabetical order according to record type.
 - **Operation** – Arranges the record tiles in alphabetical order according to operation.
6. Point to the upper right corner of the portlet. Click the Refresh icon.
- The set of five tiles are updated based on the options you selected.

Viewing Tiles on Record Pages Monitor

The Record Pages portlet shows a set of five record operation tiles that you can filter and sort according to your preference. Each tile shows metrics about a specific record operation. These metrics include response time, number of users, and record instances.

By default, this portlet filters your record pages to show the 10 most utilized record operations in your account. It also shows up to 10 more record operations that you have added on your watch list. For more information about viewing more than 10 operations, see [Changing Watch Lists on Record Pages Monitor](#). In total, you can see up to 20 tiles in the Record Pages portlet.

Use the navigation buttons (< >) at the side of the portlet to view other tiles. Click a tile to see more details about a particular record operation. A set of charts associated with that record type and operation appear below the tiles.

For more information, see [Record Pages Monitor Tiles](#).

Viewing Charts on Record Pages Monitor

When you click a tile, a set of charts associated with the record type and operation appear on the portlet. The following are the actions that you can perform on each chart:

- To view details about a specific data point, place your cursor over a data on the chart to see data on the tooltip.
- To view performance logs by record type, including performance log information and a list of instances, related to a specific data point, click the relevant area on the chart. The Page Time Summary page opens. For more information, see [Monitoring Performance with the Page Time Summary](#).
- To zoom in, press and drag your cursor over a vertical section on the chart that you zoom in to.
- To return to the original view (zoom out), on the upper right corner of the chart, click **Reset Zoom**.
- To hide or display a segment of data on a chart, click one or more relevant label on the chart legend.

For more information, see [Record Pages Monitor Charts](#).

Exporting Data from Record Pages Monitor

You can export the information captured on the record tiles into a CSV file. Response times that appear on exported files are average response times.

To export data from Record Pages Monitor:

1. Go to Customization > Performance > Record Pages Monitor.
2. On the Record Pages portlet, point to the upper right corner.
Icons appear.
3. Click the More icon.
4. Select **Export**.

Monitoring Performance with the Page Time Summary



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Page Time Summary is a troubleshooting tool, which displays performance logs by record type. This page includes summary performance log information and a list of instances. It displays a script and workflow time breakdown chart for the actively selected instance.

You can use the Page Time Summary page to measure the performance of user event scripts, client scripts, and workflows and quickly identify customizations that take an unusually long time to run.

For each record instance, you can identify the overall time it took for all scripts and workflows deployed on that record type to run.

To modify the aggregations included on the Summary section of the Performance Logs portlet, click the menu at the top right corner of the portlet and select **Set Up**. Clear the box if you do not want the column to show on the Summary section.

Accessing the Page Time Summary

To access the Page Time Summary page, do one of the following:

- Go to Customization > Performance > Page Time Summary.
- On Record Pages Monitor, click a data point on one of the graphs. For more information, see [Record Pages Monitor Charts](#).

Guidelines for Using the Page Time Summary

Refer to the following guidelines to optimize use of the Page Time Summary:

- Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days. For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).
- Page Time Summary can display data from up to 30 days in the past. You can filter the logs that appear on the page by picking a start and end date within the 30-day range.
- Performance is measured only on a per record and per script basis. Identifying the performance of individual API calls is not supported.
- Only UI changes are logged on the Page Time Summary page.

About Performance Logs

A performance log includes instances of the selected record type and operation. The summary and table in the portlet show instances that ran for a significant amount of time and are useful in diagnosing related issues. The portlet is not intended to trace all the scripts and plug-ins that the account processed.

Each entry lists the following information. Note that all time entries are shown in seconds.

Column	Description
Date and Time	Date and time of the instance.
Email	The email address of the user who is logged in when the operation was performed.
Client	The time it took for the client to format and send the data to the NetSuite server, plus the time it took to display the data when the server responded.
Network	The time it took for the data to move back and forth between the client and the NetSuite server.
SuiteScript	The total time it took for all triggered scripts to run.
Workflow	The total time it took for all triggered workflows to run.
Server	The total page load time spent on retrieving information from the NetSuite server.
Total	The total request speed between all triggered scripts, triggered workflows, the client, and the network.
Page Time Details	Click the icon in this column to open the Page Time Details for the instance. For more information, see Using Page Time Details .
Profiler Details	Click the icon in this column to open the Profiler Details page. For more information, see Profiling Operations Performance .



Note: The Total time, SuiteScript time, and Workflow time found on Performance Logs are used to calculate the NetSuite System time shown on the Script and Workflow Time Breakdown chart. For more information, read [Script and Workflow Time Breakdown Chart](#).

Filtering Performance Log Details

To set the filters for the performance log details, click the plus icon on the Filters section on the Page Time Summary page. Set the filters and click **Refresh** to update the values on the Page Time Summary page.

The following filters are available:

Filter	Description
Record Type	The record type where the scripts were deployed. This field shows all scriptable record types.
Operation	The UI operation that triggered the script. <ul style="list-style-type: none"> ■ View – The script ran when the user clicked View on an existing record (beforeLoad). ■ Edit – The script ran when the user clicked Edit on an existing record (beforeLoad). ■ New – The script ran when the user clicked New to create a record (beforeLoad). ■ Save – The script ran when the user clicked Save or Submit (beforeSubmit), or the script ran after the user clicked Save or Submit (afterSubmit).
Email	The email address of the user logged in when the script ran. If left blank, the search defaults to all email messages.

Filter	Description
Start Date / End Date	The date and time ranges of the search.
Start Time / End Time	
Response Time	<p>The amount of time to run a record instance.</p> <p>You can set the response time filter to greater than or less than a particular value, or between an upper and lower limit.</p>

Script and Workflow Time Breakdown Chart

This pie chart shows the scripts associated with the Performance Log instance that ran for a significant amount of time and are useful in diagnosing issues. The chart is not intended to trace all the scripts and plug-ins that the account processed. The chart also shows the percentage of time taken up by the system. All time values are displayed in seconds.

The Script and Workflow Time Breakdown chart includes an entry for NetSuite System time. NetSuite System time is calculated using the following formula:

NetSuite System Time = Server Time - SuiteScript Time - Workflow Time

Total time, SuiteScript time, and Workflow time can be found on the Details section of the Performance Logs portlet. For more information, read [About Performance Logs](#).

You can perform any of the following tasks on the Script and Workflow Time Breakdown chart:

- To view the execution time, place your cursor over a section of the pie chart.
- To scroll through the items on the chart legend, click the up and down arrows.
- To hide or display specific items from the chart, click their corresponding labels on the chart legend.
- To see more information about the scripts, workflows, and NetSuite system times, go to the Details table. The table includes the response time and related SuiteApp for the NetSuite server, user event scripts, client scripts, and workflows.
- To export a CSV file of the Details table, click the CSV export icon.

Using Page Time Details



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

Page Time Details lets you view overview information about a specific operation during a specific date and time. It includes a timeline of scripts, workflows, and plug-ins that ran during the period. It also displays

a detailed table that lets you see information about each instance. The timeline also tracks the timing of the client header, render, and init components. For more information, see [Viewing the Page Time Details Timeline](#).

To know more about the script and plug-in types that you can monitor on Page Time Details, see [Script and Plug-in Types in Application Performance Management](#).



Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

For more information, see:

- [Accessing Page Time Details](#)
- [Viewing the Page Time Details Timeline](#)
- [About SuiteScript and Workflow Details](#)

Accessing Page Time Details

To access Page Time Details, choose from the following:

- If you have access to the operation ID of the script from other APM tools like Profiler Details, go to Customization > Performance > Page Time Details. Enter the value on the **Operation ID** field. Click **Search**.

Like other tools, Page Time Details also provides a link to Profiler Details, which lets you monitor the performance of the operation. To avoid getting an error and before you click **Profiler Details** on the upper right corner of the page, ensure that the **Operation ID** field contains a value.

- Go to Customization > Performance > Page Time Summary.

On the Performance Logs section, place your cursor in the **Page Time Details** column. Click the view icon. This action opens the Page Time Details on a separate page. For more information, see [Monitoring Performance with the Page Time Summary](#).

Viewing the Page Time Details Timeline

You can view the execution time of scripts and plug-ins on Page Time Details. For more information about the script and plug-in types that can appear on the timeline, see [Script and Plug-in Types in Application Performance Management](#).

Page Time Details shows scripts and plug-ins that ran for a significant amount of time and are useful in diagnosing issues. The page is not intended to trace all the scripts and plug-ins that the account processed.

On the Page Time Details page, you can view a header that shows the following information about the page:

- Operation ID
- Page
- Date and Time
- Email Address

- SuiteScript
- Workflow

The header also contains a **View Profiler Details** link that will take you to Profiler Details. For more information, read [Profiling Operations Performance](#).

Page Time Details includes a timeline that shows how much time is spent to run a particular record page. These time segments are arranged chronologically.

To view the execution time, place your cursor over a section of data on the timeline. In the following example, the largest segment of time was used to run the Client : Init function for the Calculate Discount script.

i Note: On the page details timeline, gaps between server components are part of the overall NetSuite server time. For example, on the screenshot, a gap exists between Workflow Sales Order Approval and Workflow Line Item Reorder. This signifies NetSuite server time which could also be associated with your NetSuite customizations.

You can track the timing of the following client components on the timeline:

- **Client : Header** – The amount of time to render the head element of the page. Most static assets, including CSS and JavaScript, are loaded during this time.
Network delays can contribute to lengthy client header times. To know whether assets are loading slowly, review your firewall and network connection settings. You can also improve speed by adjusting browser cache settings.
- **Client : Render** – The amount of time for the browser to render the response after the head element finished (the time taken between the Client : Header and Client : Page Init timings).
An older browser or insufficient RAM and CPU capability can contribute to longer rendering time.
- **Client : Init** – The amount of time used by client scripts to run pageInit functions. This function contains user-defined client scripts triggered by the pageInit client event type and standard pageInit operations. If the pageInit function triggers other client scripts as part of pageInit, the timing is recorded.

PageInit functions that are ran by client scripts are subsets of Client : Init. They are listed and indented under the Client : Init line on the Page Time Details timeline.

To improve Client : Init time, investigate client script implementations for the page. A variety of factors affect client script pageInit timing, such as third party calls from client scripts or logic that triggers other client script validations. An outdated browser and JavaScript engine will also negatively affect performance.

About SuiteScript and Workflow Details

On the Page Time Details page, the SuiteScript and Workflow Details section follows the timeline.

The SuiteScript and Workflow Details section shows scripts and plug-ins that ran for a significant amount of time and are useful in diagnosing issues. The table is not intended to trace all the scripts and plug-ins that the account processed.

You can click a column header to sort the list by that column's values.

Each entry includes the following details about each script or workflow that was run during the selected period:

- **Date and Time** – Shows the date and time when the script or workflow was run.

- **Type** – Shows the type of script or workflow that was run.
- **Name** – Shows the script or workflow name. You can click the value in this column to view the SuiteScript analysis. For more information, see [Analyzing Scripts](#).
- **Execution Context** – Shows the type of action that triggered a user event script.
- **Deployment** – Shows the deployment link. You can click the value in this column to see the script deployment record.
- **Total Time** – Shows the total time, measured in seconds, required for all triggered scripts and workflows to run.
- **Usage Units** – Shows the number of governance units that were consumed. For client scripts, this value is not available and is denoted with an en dash (-).
- **Record Operations** – Shows the number of record operations that were executed. For client scripts, this value is not available and is denoted with an en dash (-).
- **URL Requests** – Shows the number of URL requests. For client scripts, this value is not available and is denoted with an en dash (-).
- **Searches** – Shows the number of searches that ran. For client scripts, this value is not available and is denoted with an en dash (-).

To export a CSV file of data available on the SuiteScript and Workflow Details section, click the CSV export icon on the upper left corner of the section.

Analyzing Scripts



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

You can use SuiteScript Analysis to learn about when a script was installed and how it performed in the past.

You can also view the timing of execution for locked scripts that came with a bundle.

To know more about the script and plug-in types that you can monitor on SuiteScript Analysis, see [Script and Plug-in Types in Application Performance Management](#).



Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

To learn more, see:

- Accessing SuiteScript Analysis
- Finding a Script
- Using SuiteScript Details
- Using the Performance Chart

Accessing SuiteScript Analysis

To access the SuiteScript Analysis page, do one of the following:

- Go to Customization > Performance > SuiteScript Analysis.
- On the Page Time Details page, on the SuiteScript and Workflow Details section, click the name of the script in the **Name** column.

Finding a Script

To search for a specific script to analyze on the SuiteScript Analysis page:

1. On the SuiteScript Analysis page, click the plus icon on the Filters section to expand the filters.
2. Specify values for the filters. The following filters are available:

Filter	Description
Start Date and Time	In the date field, select the date when the script started. From the adjoining field, select the time.
End Date and Time	In the date field, select the date when the script started. From the adjoining field, select the time.
Type	From the list, select the type of script or plug-in. After you set the type, the Name field is automatically populated with the corresponding records.
Name	From the list, select the name of the record.
Client Event Type	This field appears when you select Client from the Type field. From the list, select the type of client event.
Map/Reduce Stage	This field appears when you select Map/Reduce from the Type field. From the list, select the map/reduce stage that you want to investigate.
Context	This field appears when you select any User Event types from the Type field. From the list, select the context used to trigger the script.

3. Click **Refresh**.

Using SuiteScript Details

The SuiteScript Details portlet provides the details of the performance chart. This portlet includes metrics collected during script execution, such as the number of logs, URL Requests, and record operations during the selected time range.

If you are viewing a client script, you can only see the logs for scripts that ran for a significant amount of time and are useful in diagnosing issues. SuiteScript Analysis is not intended to trace all the scripts and plug-ins that the account processed.

Data for some metrics are not available for client scripts. If a client script is selected, the value for usage count, URL requests, search calls, and record operations are denoted with an en dash (-).

To see the individual instances of the processed script and related summary data on SuiteScript Details, click **View Logs**.

The screenshot shows the 'SuiteScript Details' page. At the top, it displays the script name 'Test Event' and type 'User Event (Before Load)'. Below this, the context is listed as 'User Interface'. The time range is from 'May 7, 5:00 PM' to 'May 8, 1:00 AM'. A table below provides a summary of log metrics:

NAME	VALUE
Number of Logs	9
Users	3
Total Time	0.116
Usage Count	20.000
URL Requests	0.000
Search Calls	2.000
Record Operations	0.000
Error Count	0

At the bottom of the page is a 'View Logs' button.

SuiteScript Details Logs

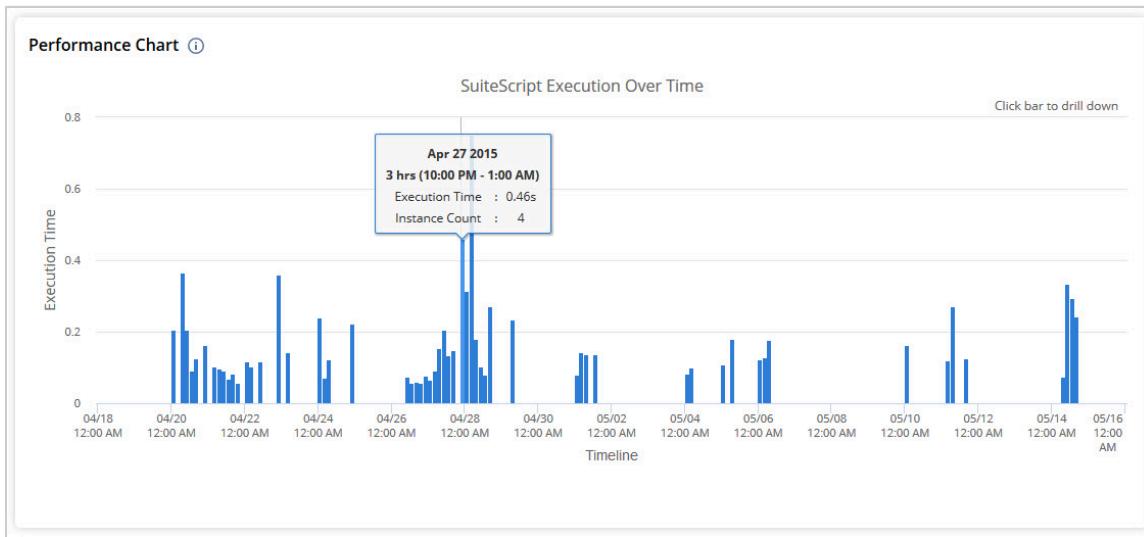
After you click **View Logs** in SuiteScript Details, the SuiteScript Details log window opens. The window shows the list of logs for the script or plug-in within the duration that you selected. The following information is available for each log:

- **Date and Time** - Shows the date and time when the script or plug-in instance ran.
- **Name** - Shows the name of the user who ran the script or plug-in during the instance.
- **Email Address** - Shows the email address of the user who ran the script or plug-in during the instance.
- **Role ID** - Identifies the role that the user accessed to run the script or plug-in during the instance.
- **Record ID** - Identifies the record matching the script or plug-in that ran during the instance.
- **Context** - Shows the context for the script or plug-in that ran during the instance.
- **Total Time** - Shows the total number of seconds that the script or plug-in ran.
- **Usage Count** - Shows the number of governance units that were consumed during the instance.
- **URL Requests** - Shows the number of URL requests that ran during the instance.
- **Search Calls** - Shows the number of searches that ran during the instance.
- **Record Operations** - Shows the number of record operations that ran during the instance.
- **Includes Errors** - Shows if an error was encountered or not when the instance ran.

- **Profiler Details** - Shows an icon that you can click to open the Profiler Details page.

Using the Performance Chart

The Performance Chart displays an aggregate of SuiteScript execution over time. For precise details about the average execution time, place your cursor over a bar on the chart.



To view the execution time for each instance in a particular hour, click a bar with multiple instances.

The Performance Chart refreshes and displays the execution time values within a particular hour. On this example, the higher response times occurred only between 1:10 p.m. and 1:15 p.m.

Click the back button on the chart to return to the default Performance Chart view.

Monitoring SuiteCloud Processors Performance

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

How to Monitor the Performance of NetSuite SuiteCloud Processors

You can use the SuiteCloud Processors Monitor tool to view and analyze the performance of your map/reduce and scheduled script jobs handled by SuiteCloud Processors. Guided by this tool, you can track changes in your processor usage and pinpoint causes of inefficiency. By constantly monitoring your

performance, you can determine ways to maximize your processor usage and decide if you need to add SuiteCloud Plus licenses to enhance your performance.

SuiteCloud Processors Monitor replaces the Script Queue Monitor to help you view the performance of deployments that continue to use queues.



Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

This tool consists of the following dashboards:

- **SuiteCloud Processors Monitor** – Shows vital processor settings and statistics in several portlets, so you can compare data and improve your performance.
- **SuiteCloud Processors Job Details** – Provides in-depth information about specific deployments based on your selected filters.

See the following help topics:

- [Using the SuiteCloud Processors Monitor Dashboard](#)
- [Using the SuiteCloud Processors Job Details Dashboard](#)

For more information about SuiteScript, see the following topics:

- [SuiteCloud Processors](#)
- [SuiteScript 2.x Map/Reduce Script Type](#)
- [SuiteScript 2.x Scheduled Script Type](#)
- [SuiteScript 2.x Script Types](#)

Using the SuiteCloud Processors Monitor Dashboard

The SuiteCloud Processors Monitor dashboard is a visual and informative tool that lets you monitor the performance of your script jobs. You can use this dashboard to monitor both scheduled and map/reduce script jobs.

To set the date range for this dashboard, read [Setting the Date Range in SuiteCloud Processors Monitor](#).

The dashboard consists of several portlets. To find out more, see the following help topics:

- [Using the Overview Portlet in SuiteCloud Processors Monitor](#)
- [Using the Processor Settings Portlet in SuiteCloud Processors Monitor](#)
- [Using the Wait Time by Priority Portlet in SuiteCloud Processors Monitor](#)
- [Using the Elevated Priority Portlet in SuiteCloud Processors Monitor](#)
- [Using the Processor Utilization Portlet in SuiteCloud Processors Monitor](#)
- [Using the Job Status Portlet in SuiteCloud Processors Monitor](#)
- [Using the Processor Concurrency Portlet in SuiteCloud Processors Monitor](#)
- [Using the Queue and Processor Details Portlet in SuiteCloud Processors Monitor](#)

Accessing the SuiteCloud Processors Monitor Dashboard

To start using the SuiteCloud Processors Monitor dashboard, go to Customization > Performance > SuiteCloud Processors Monitor.



Important: Administrators who are already using the Application Performance Management (APM) SuiteApp need to save access again for other roles and employees so they can use the SuiteCloud Processor Monitor Dashboard. For more information, see [Setting Access to the Application Performance Management SuiteApp](#).

Setting the Date Range in SuiteCloud Processors Monitor

To set the date range for all portlets on the SuiteCloud Processors Monitor dashboard, click the **Viewing** link at the upper right corner of the page.

You can select a preset or custom time frame from the dropdown list. Your chosen date range corresponds to a resolution value, which determines the intervals plotted along the x-axis of each chart.

To know the resolution assigned to your selected date range and portlet, refer to the following table:

Date Range	Resolution	
	Processor Concurrency Portlet	Other Portlets
Last 1 hour	1 minute	3 minutes
Last 3 hours	10 minutes	10 minutes
Last 6 hours	15 minutes	15 minutes
Last 12 hours	30 minutes	30 minutes
Last 24 hours (default)	1 hour	1 hour
Last 3 days	1 hour	3 hours
Last 7 days	1 hour	8 hours
Last 14 days	1 hour	12 hours
Last 30 days	1 hour	1 day
Custom (Limited to dates within the last 30 days)	(refer to preceding resolutions)	(refer to preceding resolutions)

Guidelines for Setting the Date Range for the SuiteCloud Processors Monitor Dashboard

- The SuiteCloud Processors Dashboard can only display data from the last thirty days. When setting a custom date range, select dates within this limitation.
- The Processor Concurrency portlet resolutions differ from other portlets because it changes its chart from a line graph to a heat map, depending on the date range.

Using the Overview Portlet in SuiteCloud Processors Monitor

You can use the Overview portlet in SuiteCloud Processors Monitor to quickly view statistics and details about your deployments. The portlet contains a summary of vital processor statistics followed by a detailed table about your scheduled and map/reduce scripts.

The Overview portlet logs only the jobs that ran for a significant amount of time and are useful in diagnosing issues. SuiteCloud Processors Monitor is not intended to trace all the jobs that the account processed.

The summary includes the following statistics:

- **Jobs Completed** – This number shows the total count of jobs that were completed within the time range.
- **Jobs Failed** – This number shows the total count of jobs that failed within the time range
- **Average Wait Time** – This number shows the average wait time of all jobs completed within the time range.
- **Processor Utilization** – This number shows how much of the total processing time within the time range was used to complete jobs.

You can find the following details on the table that follows the summary:

- **Deployment name** – This column shows the user-defined names on the deployment record.
- **Script name** – This column shows the user-defined name on the script record.
- **Type** – This column shows each deployment's supported script type, which can either be map/reduce or scheduled.
- **Completed** – This column shows the number of scripts that were completed.
- **Failed** – This column shows the number of scripts that failed.
- **Average execution time** – This column shows the average time, in seconds, it took to execute the job.
- **Average wait time** – This column shows the average wait time before scripts were executed.
- **Priority** – This column shows each deployment's priority level to give you an idea which jobs are processed first.
- **Queue** – This column shows the assigned queue for scheduled script deployments that continue to use queues. It marks deployments that use SuiteCloud processors as **-None-**.
- **View Details** – This column shows View Details icons that open SuiteCloud Processors Job Details on a separate page.

Note: Deployments that are handled by SuiteCloud Processors are marked **- None -** in the Queue column.

Overview									
Jobs Completed		Jobs Failed		Average Wait Time			Processor Utilization		
325		23		12.5 s			48.32%		
NSTestSuiteLaun - PSQM Random Sch									
DEPLOYMENT NAME	SCRIPT NAME	TYPE	COMPLETED	FAILED	AVE EXECUTI...	AVE WAIT TIM...	PRIORITY	QUEUE	VIEW DETAILS
NSTestSuiteLauncher	NSTestSuiteLauncher	Scheduled	25	1	0.75 s	0.75 s	Low	- None -	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Map/Reduce	12	1	54.43 s	15.23 s	High	1	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Scheduled	35	5	69.76 s	13.45 s	Standard	- None -	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Map/Reduce	15	2	63.34 s	54.30 s	High	3	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Map/Reduce	45	0	1.00 s	8.00 s	Standard	2	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Scheduled	53	1	50.45 s	90.23 s	Low	- None -	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Scheduled	12	1	64.54 s	8.23 s	Low	3	
PSQM Random Sched Sc...	PSQM Random Sched Sc...	Map/Reduce	5	0	40.34 s	16.16 s	High	- None -	

Using the Processor Settings Portlet in SuiteCloud Processors Monitor

You can use the Processor Settings portlet to see your priority elevation and processor reservation settings without navigating to the SuiteCloud Processors Preferences page. This portlet makes it convenient for you to discover which processor settings yield favorable or problematic effects on your script jobs' performance.



You can see the following details on the Processor Settings portlet:

Setting	Description
Total No. of Processors	The total number of processors available to your account.
Priority Elevation	The priority elevation option that was set for your account.
Elevation Interval	The time interval based on your priority elevation selection.
Processor Reservation	Displayed if the Enable Reservation box on the SuiteCloud Processors Preferences page is checked. Checking this box allows the reservation of processors for high priority jobs for your account.
No. of Reserved Processors	The number of processors reserved for high priority jobs. Displayed if processor reservation is enabled.
Reserved Processors in Use	The number of reserved processors that are actively being used by your jobs.
Reuse Idle Processors	Displayed if the Reuse Idle Processors box on the SuiteCloud Processors Preferences page is checked. Checking this box allows reserved processors that are not in use for 24 hours to accept lower priority jobs.

Using the Wait Time by Priority Portlet in SuiteCloud Processors Monitor

You can use the Wait Time by Priority portlet to view separate charts for wait times and job counts at every priority level.

The Wait Time by Priority portlet includes the following charts:

- Total Wait Time** – This line chart shows how long it took to complete the jobs in the selected interval and priority level.
- Jobs** – This stacked bar chart shows the total number of jobs in the selected interval as well as their distribution by priority level.

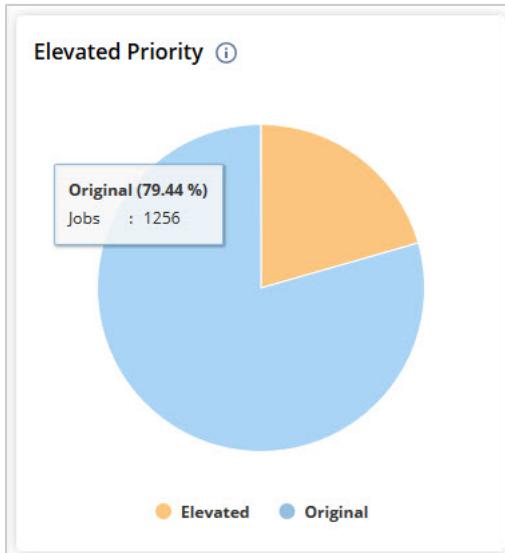
When you point to an area on either chart, counts for that interval will simultaneously appear on both charts. This behavior lets you see the impact of the job count and priority settings on total wait time.



Using the Elevated Priority Portlet in SuiteCloud Processors Monitor

You can use the Elevated Priority portlet to compare the total number of jobs with elevated priority levels against jobs that kept their original priority levels. It uses a simple pie chart to display total job counts.

Note: You should monitor changes to this portlet and the Wait Time by Priority portlet whenever you tweak your processor settings. This way, you can determine ways to adjust priority elevation settings to reduce wait times.



Using the Processor Utilization Portlet in SuiteCloud Processors Monitor

You can use the Processor Utilization portlet to monitor the rate by which SuiteCloud Processors are being used.

You can also view historical data within your preferred date range and investigate which settings contribute to optimal utilization.

You can view the following charts on the Processor Utilization portlet:

- **Utilization** – This bar chart shows the ratio of utilized time to available time. Utilized time counts how long the processors were used during a specific interval.

The following table shows the formulas to calculate the available time and processor utilization:

Field	Formula
Available Time	Resolution (in seconds) × Number of SuiteCloud Processors
Processor Utilization	(Utilized Time / Available Time) × 100%

For more information about date ranges and resolutions, read [Setting the Date Range in SuiteCloud Processors Monitor](#).

- **Jobs** – This stacked bar chart shows the total number of jobs at every priority level.

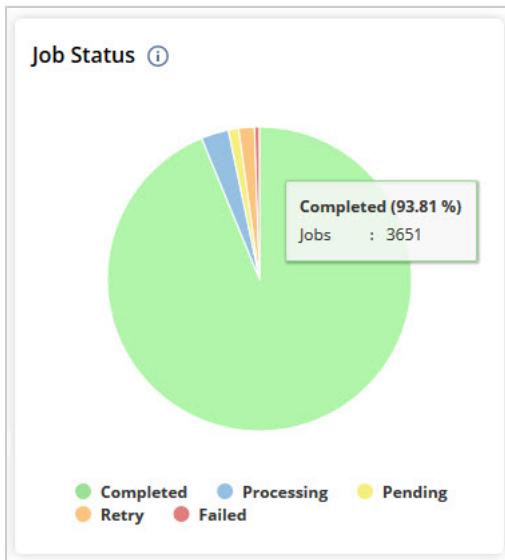
When you point to an area on either chart, counts for that interval will simultaneously appear on both charts. This behavior lets you see the impact of the number of jobs on processor utilization.



Using the Job Status Portlet in SuiteCloud Processors Monitor

You can use the Job Status portlet to compare the total number of jobs according to status. It uses a simple pie chart to display the distribution of job statuses.

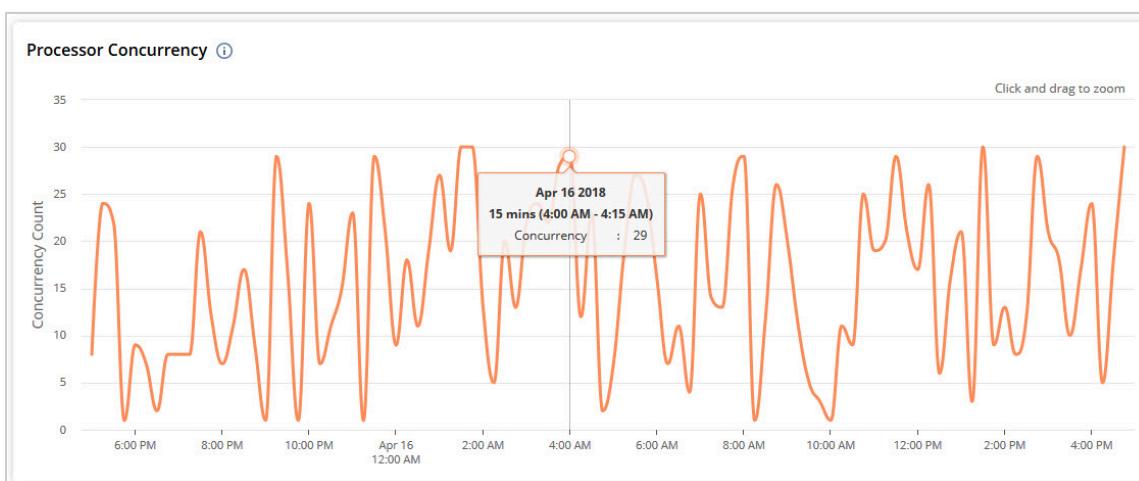
Note: You can monitor changes on this portlet and on the Processor Utilization portlet when you modify your processor settings. This will help you know which settings lead to efficient utilization and successful job completion.



Using the Processor Concurrency Portlet in SuiteCloud Processors Monitor

You can use the Processor Concurrency portlet to identify peaks and gaps in your processing bandwidth. This portlet displays your concurrency count over time. You can identify peaks and gaps in your processing bandwidth by using this portlet.

The portlet's graph changes depending on the time range you select. It displays a line graph when the range is less than seven days and a heat map when the range is equal to or more than seven days.



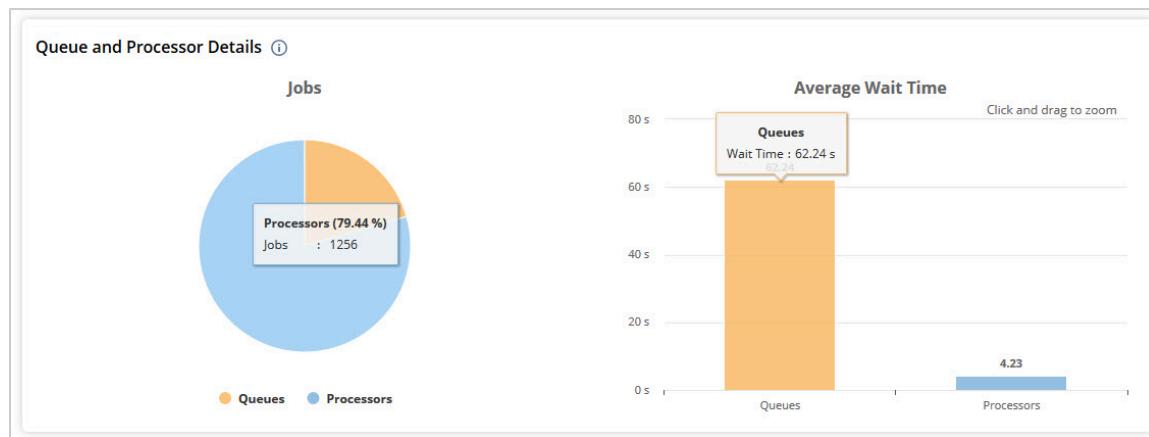
Click any data point on this heat map to see a detailed line graph for that specific time.

Using the Queue and Processor Details Portlet in SuiteCloud Processors Monitor

You can use the Queue and Processor Details portlet to monitor the differences between jobs handled by scheduling queues and jobs handled by SuiteCloud Processors.

You can view the following charts on the Queue and Processor Details portlet:

- **Jobs** – This pie chart shows the ratio of requests handled by scheduling queues to those handled by processors.
- **Average Wait Time** – This bar chart shows the average wait time of jobs handled by scheduling queues compared to those handled by processors. The average wait time for map/reduce scripts includes data gathered only on the getInputData stage.



Using the SuiteCloud Processors Job Details Dashboard

The SuiteCloud Processors Job Details Dashboard lets you see more details about a specific deployment or processor job you need to investigate. The dashboard has one portlet, which displays a detailed table and a corresponding timeline. To find out more about the portlet, read [Using the Job Details Portlet in SuiteCloud Processors Job Details](#).

Accessing the SuiteCloud Processors Job Details Dashboard

You can go to the SuiteCloud Processors Job Details dashboard by choosing one of the following paths:

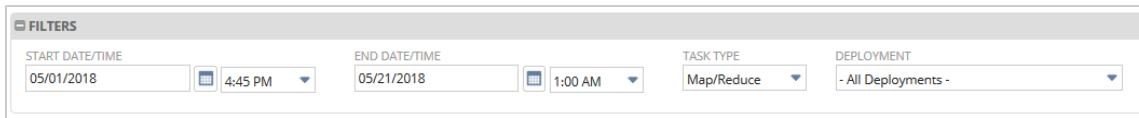
- Go to Customization > Performance > SuiteCloud Processors Job Details.
- Go to Customization > Performance > SuiteCloud Processors Monitor. Go to the Overview portlet. Point to the row of the deployment or script you want to verify. Click the view icon that appears under the View Details column.

Filtering Data on the SuiteCloud Processors Job Details Dashboard

You can filter data on the SuiteCloud Processors Job Details dashboard according to the following:

- **Start Date/Time and End Date/Time** – You can specify the start and end dates by clicking the corresponding calendar icons and selecting the correct dates. You can change the start and end times by using the corresponding dropdown lists.

- **Task Type** – You can choose to show data for all supported task types or for a specific task type by using the dropdown list.
- **Deployment** – You can choose to show data for all deployments or for a specific deployment using the dropdown list.



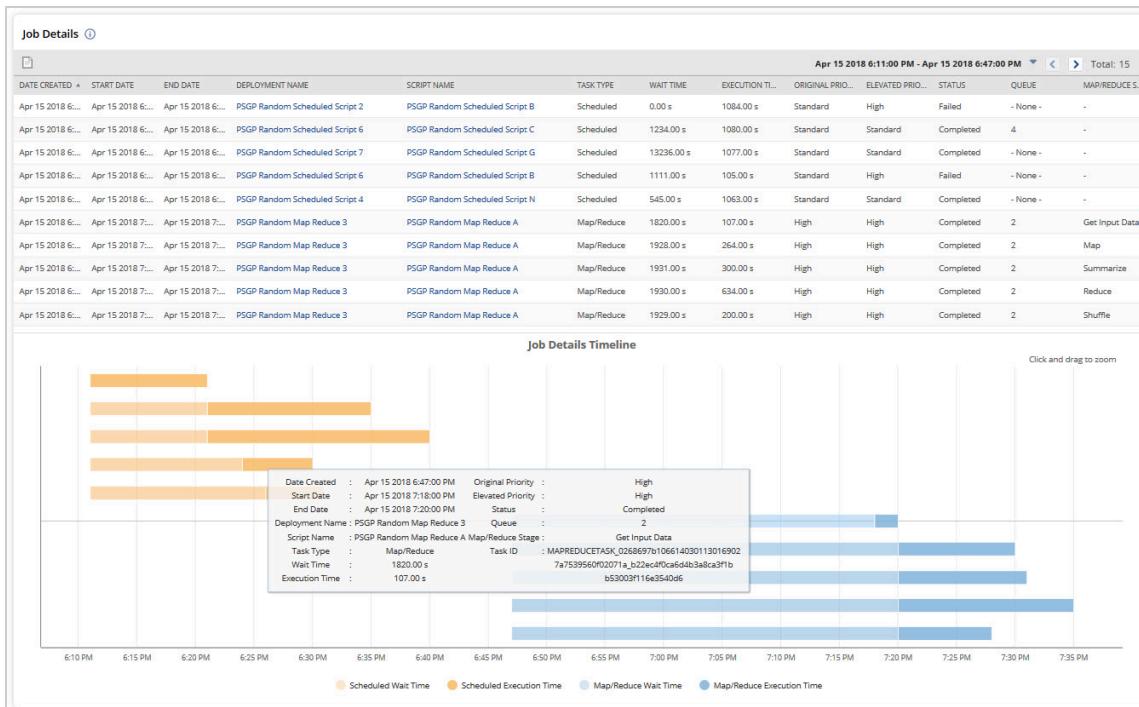
Using the Job Details Portlet in SuiteCloud Processors Job Details

You can use the Job Details portlet on the SuiteCloud Processors Job Details dashboard to view details about specific deployments. It consists of a table of performance statistics and a timeline.

The Job Details portlet logs only the jobs that ran for a significant amount of time and are useful in diagnosing issues. SuiteCloud Processors Job Details is not intended to trace all the jobs that the account processed.

Note: Deployments that are handled by SuiteCloud Processors are marked **- None -** in the Queue column.

The timeline shows you the duration of wait times and execution times for your scheduled and map/reduce script jobs. You can point to any value on the timeline charts to see the corresponding statistics.



Analyzing Web Services Performance



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

Application Performance Management (APM) lets users view aggregate data about SOAP and REST web services operations using overview data, statistics, and charts. These tools give you a quick view of your web services integrations, so you are better equipped to handle errors, implement changes, and maintain them.

Monitor the performance of web services with the following tools in Application Performance Management (APM):

- **SOAP Web Services Analysis** - This tool lets you monitor the performance of top SOAP web services operations and record processing. It shows a status breakdown for SOAP web services and provides information about the API versions used in requests. It also provides further details about each operation.
- **REST Web Services Analysis** – This tool lets you monitor the performance of REST web services operations. It provides information about top REST web services operations, users, requests, error statistics, and execution timings.

Guidelines for Analyzing Web Services Performance

- SOAP Web Services Analysis and REST Web Services Analysis show only synchronous operations and requests. To know more about the difference between synchronous and asynchronous request processing, see the help topic [Synchronous Versus Asynchronous Request Processing](#).
- Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

To monitor the performance of your SOAP web services, see the following help topics:

- [SOAP Web Services Analysis Overview](#)
- [Using SOAP Web Services Analysis](#)

To monitor the performance of your REST web services, see the following help topics:

- [REST Web Services Analysis Overview](#)
- [Using REST Web Services Analysis](#)

SOAP Web Services Analysis Overview



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

SOAP Web Services Analysis lets you monitor the performance of top SOAP web services operations and record processing. It shows a status breakdown for SOAP web services and provides information about the API versions used in requests. It also provides further details about each operation.

Watch the following video for a general introduction of SOAP Web Services Analysis:



[Monitoring SOAP Web Services in the APM SuiteApp](#)

Accessing SOAP Web Services Analysis

To start using the Web Services Analysis dashboard, go to Customization > Performance > SOAP Web Services Analysis.



Note: If you are using an APM SuiteApp version installed from the Search & Install Bundles page, go to Customization > Performance (SuiteBundler) > Web Services Analysis.

Using SOAP Web Services Analysis



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

To start using SOAP Web Services Analysis, see the following help topics:

- [Filtering Data in SOAP Web Services Analysis](#)
- [Monitoring Top SOAP Web Services Operations](#)

- Viewing SOAP Web Services Operation Details
- Monitoring Top SOAP Web Services Record Processing
- Monitoring the Status of SOAP Web Services
- Monitoring the API Version Usage of SOAP Web Services

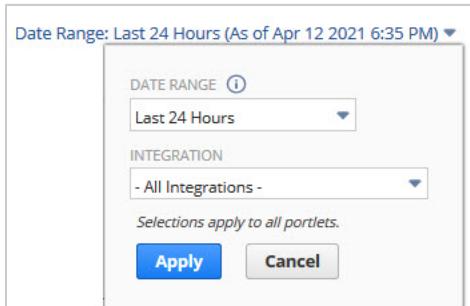
Filtering Data in SOAP Web Services Analysis

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

To filter data for all portlets, click the **Date Range** at the upper right corner of the page.



Set the data according to the following filters:

- **Date Range** -This filter lets you select a preset or custom range. Each range corresponds to a resolution value, which is used to set the plot point intervals on the x-axis of data visualizations.

Date Range	Resolution
1 hour	3 minutes
3 hours	10 minutes
6 hours	15 minutes
12 hours	30 minutes
24 hours (default)	1 hour
3 days	3 hours
7 days	8 hours
14 days	12 hours

Date Range	Resolution
30 days	1 day

- **Integration** -This filter lets you display data according to a specific web service integration.

To apply your filters to all portlets, click **Apply**.

To apply changes in data filters, click **Refresh** on the upper left corner of the page.

Monitoring Top SOAP Web Services Operations



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Top SOAP Web Services Operations portlet helps you monitor the performance of the top SOAP-based web services that you ran.

Use this portlet to establish operations-related trends in web services, detect inconsistencies, and make informed decisions when modifying operations.



The Top SOAP Web Services Operations portlet includes overview statistics that show the following:

- **Users** – Shows the total number of users of the top operations.
- **Total Requests** – Shows the total number of requests of the top operations.
- **Total Errors** – Shows the total number of errors when the top operations ran.
- **Error Rate** – Shows the rate by which top operations encountered errors relative to the total number of requests that ran.
- **Total Records** – Shows the total number of records of the top operations.

To see more details about each operation, click a data point. The Web Services Operation Details page appears. For more information, see [Viewing SOAP Web Services Operation Details](#).

The Top SOAP Web Services Operations portlet displays visual data through charts that can display up to 10 operations. The portlet includes the following charts:

- **Execution Time** - This chart shows the average time it takes for each web service operation to execute, in seconds.
- **Requests** – This chart shows the total number of requests for each operation, stacked to show the finished and failed counts.
- **Error Rate** – This chart shows the percentage of error for each operation.
- **Records** – This combination chart overlays total records per operation with total records per minute.

Viewing SOAP Web Services Operation Details

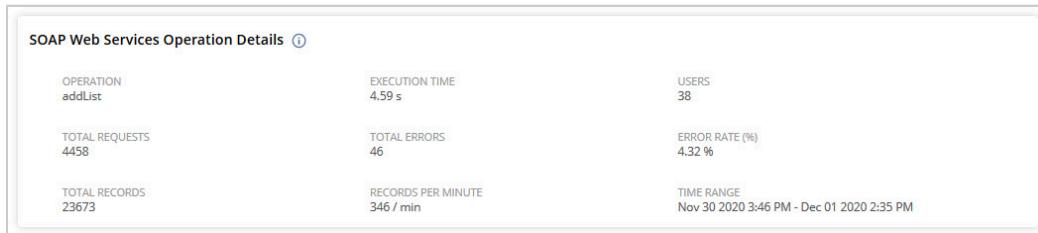
Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

SOAP Web Services Operation Details displays the following portlets:

- **SOAP Web Services Operation Details** – This is a summary of data specific to the web service operation, including total records and request counts, error rate, and execution time.



- **Performance Details** – These four charts map the web service operation's execution time, error rate, requests, and records at specific points in time. Click a data point in the chart to open the Web Services Operation Logs window. For more information, see [Web Services Operation Logs](#).



- **Top Records Performance** – This line graph compares the execution time of each record type at specific points in time. It can display up to five record types at a time. Click a data point in the chart to open the Web Services Record Processing Logs window. For more information, see [Web Services Record Processing Logs](#).



Viewing SOAP Web Services Logs

SOAP Web Services Operations Details displays two sets of log tables, one for operation logs and one for record processing logs.

This page shows only the instances that ran for a significant amount of time and are useful in diagnosing issues. This analysis tool is not intended to trace all the operations and records that the account processed.

Web Services Operation Logs

Web Services Operation Logs appears when you click a data point in Performance Details chart.

Web Services Operation Logs					
Apr 15 2018 11:30:00 PM - Apr 15 2018 11:33:00 PM Total: 19					
DATE AND TIME	EMAIL ADDRESS	EXECUTION TIME	TOTAL RECORDS	STATUS	PROFILER DETAILS
Apr 15 2018 11:30:00 PM	rwlfe@netsuite.com	23.340 s	52	Finished	
Apr 15 2018 11:31:00 PM	rwlfe@netsuite.com	3.250 s	51	Rejected Account Concurrency	
Apr 15 2018 11:32:00 PM	rwlfe@netsuite.com	5.870 s	22	Failed	
Apr 15 2018 11:33:00 PM	rwlfe@netsuite.com	10.540 s	64	Rejected User Concurrency	
Apr 15 2018 11:34:00 PM	rwlfe@netsuite.com	3.660 s	17	Rejected Integration Concurrency	
Apr 15 2018 11:35:00 PM	rwlfe@netsuite.com	16.540 s	19	Finished	
Apr 15 2018 11:36:00 PM	rwlfe@netsuite.com	10.550 s	30	Failed	
Apr 15 2018 11:37:00 PM	rwlfe@netsuite.com	3.410 s	87	Finished	
Apr 15 2018 11:38:00 PM	rwlfe@netsuite.com	21.340 s	3	Finished	
Apr 15 2018 11:39:00 PM	rwlfe@netsuite.com	2.340 s	76	Rejected User Concurrency	

This window includes the following information:

- **Date and Time** – Shows the date and time for each instance.
- **Email Address** – Shows the email address of the user who ran the instance.
- **Execution Time** – Shows the amount of time it took to run the instance.
- **Total Records** – Shows the total number of records that were accessed when the instance ran.
- **Status** – Shows the status of the instance after it ran.
- **Profiler Details** – Shows a view icon that you can click to go to the Profiler Details page for the instance. Profiler Details is a tool that lets you gather performance data about the timing and context of an operation, action, or request.

Web Services Record Processing Logs

Web Services Record Processing Logs appears when you click a data point in Performance Details chart.

Web Services Record Processing Logs					
Apr 15 2018 11:30:00 PM - Apr 15 2018 11:33:00 PM Total: 19					
DATE AND TIME	EMAIL ADDRESS	EXECUTION TIME	RECORD TYPE	OPERATION	PROFILER DETAILS
Apr 15 2018 11:30:00 PM	rwlfe@netsuite.com	23.340 s	Customer	Add	
Apr 15 2018 11:31:00 PM	rwlfe@netsuite.com	3.250 s	Customer	Delete	
Apr 15 2018 11:32:00 PM	rwlfe@netsuite.com	5.870 s	Lead	Delete	
Apr 15 2018 11:33:00 PM	rwlfe@netsuite.com	10.540 s	Item	Update	
Apr 15 2018 11:34:00 PM	rwlfe@netsuite.com	3.660 s	Item	Add	
Apr 15 2018 11:35:00 PM	rwlfe@netsuite.com	16.540 s	Customer	Add	
Apr 15 2018 11:36:00 PM	rwlfe@netsuite.com	10.550 s	Employee	Update	
Apr 15 2018 11:37:00 PM	rwlfe@netsuite.com	3.410 s	Customer	Update	
Apr 15 2018 11:38:00 PM	rwlfe@netsuite.com	21.340 s	Sales Order	Add	
Apr 15 2018 11:39:00 PM	rwlfe@netsuite.com	2.340 s	Customer	Update	

This window includes the following information:

- **Date and Time** – Shows the date and time for each instance.
- **Email Address** – Shows the email address of the user who ran the instance.

- **Execution Time** – Shows the amount of time it took to run the instance.
- **Record Type** – Shows the type of record that was processed.
- **Operation** – Shows the type of operation that was processed.

Profiler Details – Shows a view icon that you can click to go to the Profiler Details page for the instance. Profiler Details is a tool that lets you gather performance data about the timing and context of an operation, action, or request.

Monitoring Top SOAP Web Services Record Processing

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

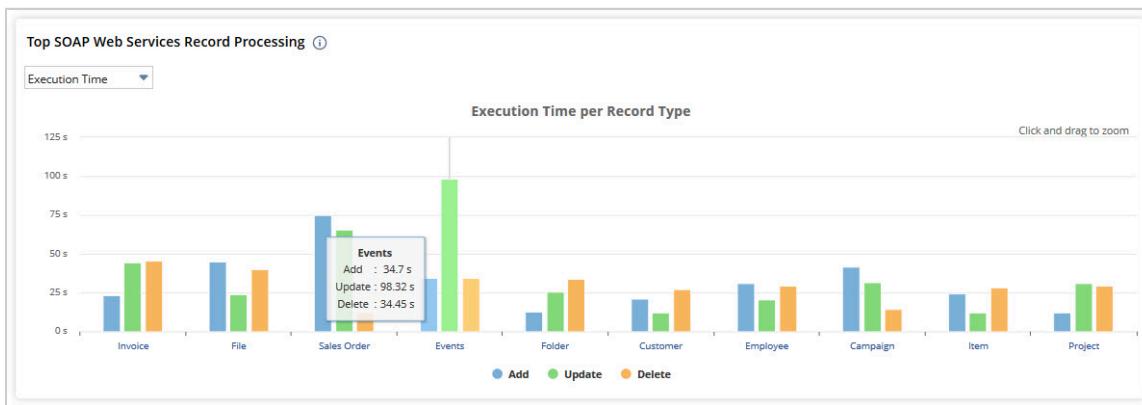
The Top SOAP Web Services Record Processing portlet clusters a series of operations-related data points according to record type. You can use this portlet to pinpoint and address areas of concern in record processing.

To change the data points in the series, click the dropdown arrow at the upper left corner of the portlet. You can select between **Execution Time** and **Instance Count**. Each chart can display up to 10 record types at a time.

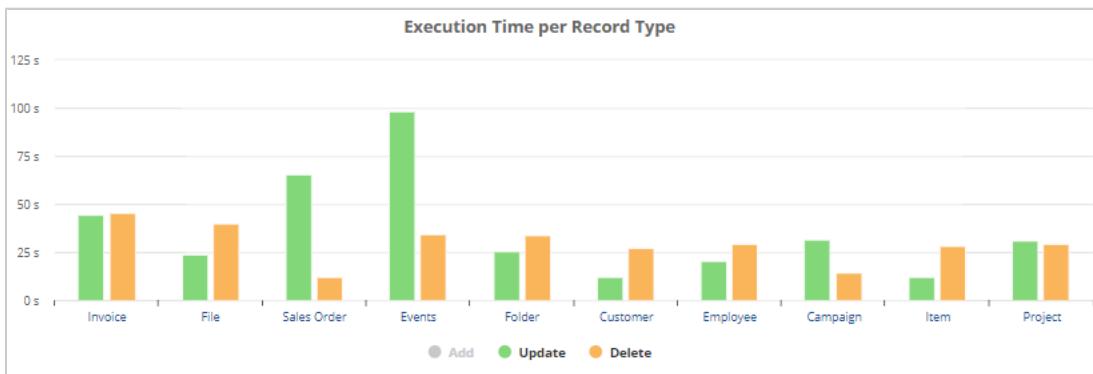


Execution Time View

When selected, this view shows the time it took for operations in each record type to run their requests.

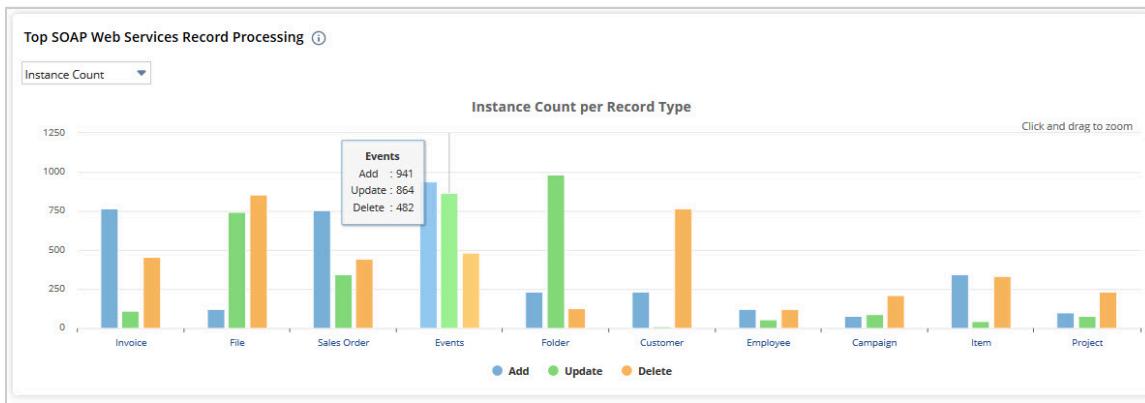


Click any operation from the legend to exclude it from the chart.



Instance Count View

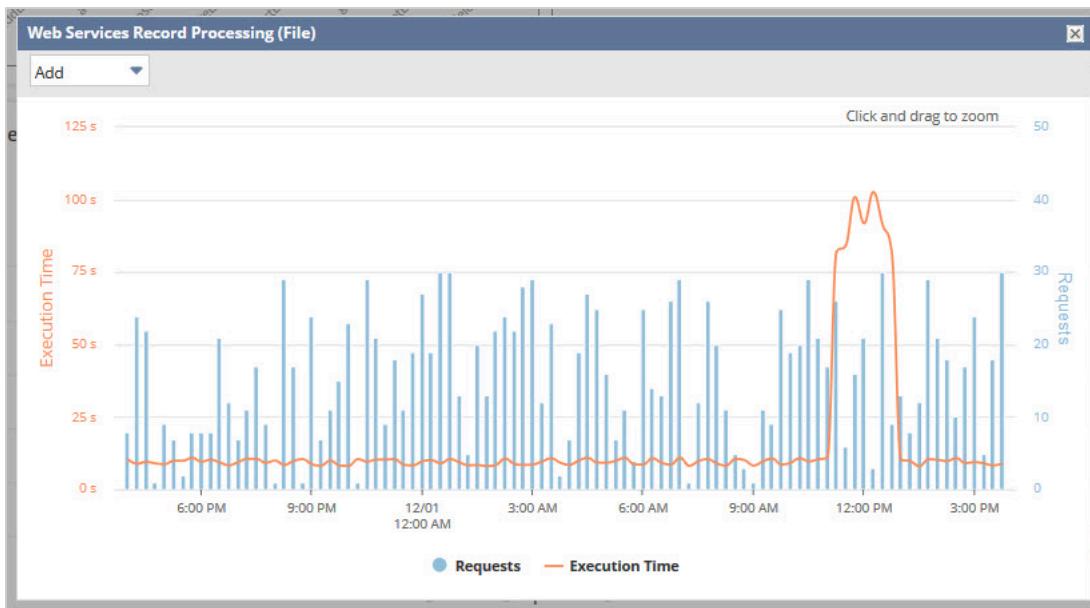
When selected, this view shows the number of requests that ran during the operations in each record type.



Web Services Record Processing

To find more information about a record type, click its name or bars in the chart. A pop-up combination chart appears, showing data about a web service operation for the specific record type at specific points in time.

To view data specific to an operation, select the operation from the dropdown arrow at the upper left corner of the window.



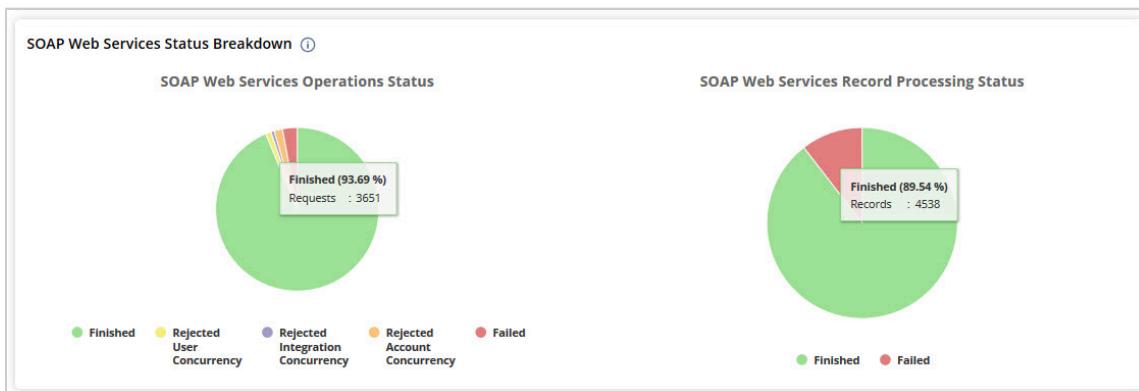
Monitoring the Status of SOAP Web Services

i Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

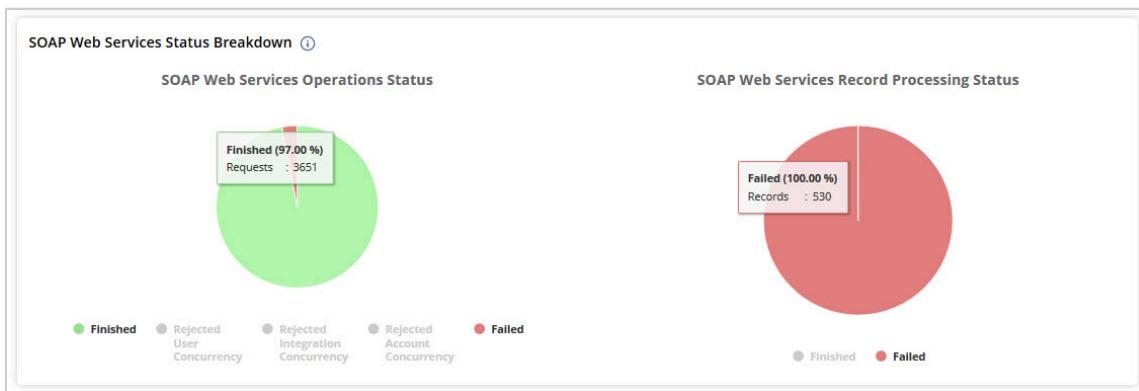
Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The SOAP Web Services Status Breakdown portlet displays the status of web services operations and record processing using pie charts. You can use this portlet to monitor the health of web services operations and record processing and respond to failures or errors as they happen. You can see the percentage and number of requests or records when you point to a section in the pie chart.



You can also click any status from the legend to exclude it from the chart.



Monitoring the API Version Usage of SOAP Web Services

i Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

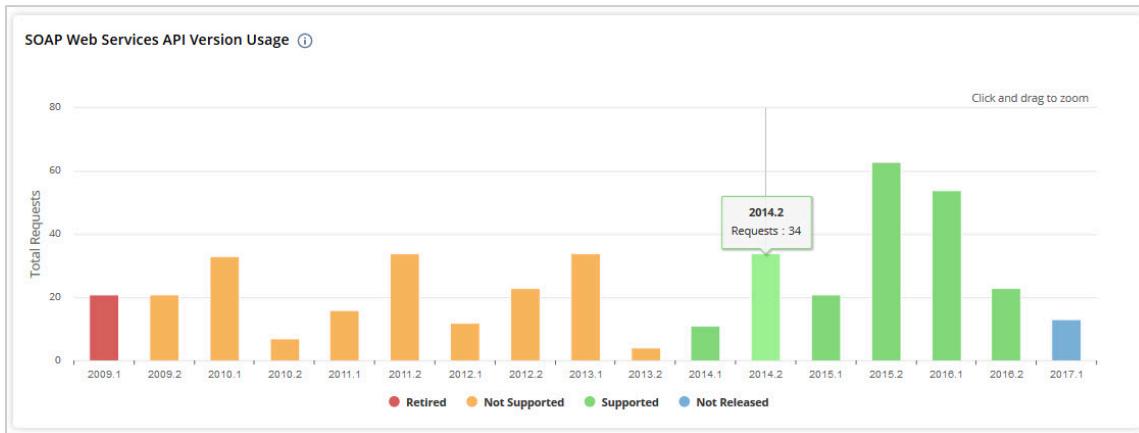
Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The SOAP Web Services API Version Usage portlet displays the total SOAP web service requests for each API version. These versions are color-coded according to their level of support. This portlet lets you monitor and predict the impact of API changes on your web services.

The API versions are color-coded and classified according to the following levels of support:

- **Retired** – The SOAP web services API is no longer in the system. These versions are no longer supported.
- **Not Supported** – The SOAP web services API is still in the system. But these versions are no longer supported.
- **Supported** – The SOAP web services API exists and can be used. These versions are supported.
- **Not Released** – The SOAP web services API exists and can be used. These versions are not yet released.



REST Web Services Analysis Overview

i Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

REST Web Services Analysis lets you monitor the performance of REST web services operations. It provides information about top REST web services operations, users, requests, error statistics, and execution timings.

Watch the following video for a general introduction of REST Web Services Analysis:



Accessing REST Web Services Analysis

To start using the REST Web Services Analysis, go to Customization > Performance > REST Web Services Analysis.

Using REST Web Services Analysis

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

To start using SOAP Web Services Analysis, see the following help topics:

- [Filtering Data in REST Web Services Analysis](#)
- [Monitoring REST Web Services Performance](#)
- [Viewing REST Web Services Logs](#)

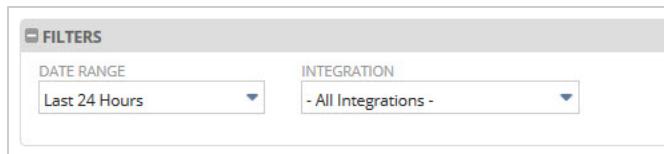
Filtering Data in REST Web Services Analysis

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

To filter data for all portlets, click **Date Range** at the upper right corner of the page.



Set the data according to the following filters:

- **Date Range** - This filter lets you select a preset or custom range. Each range corresponds to a resolution value, which is used to set the plot point intervals on the x-axis of data visualizations.

Date Range	Resolution
1 hour	3 minutes

Date Range	Resolution
3 hours	10 minutes
6 hours	15 minutes
12 hours	30 minutes
24 hours	1 hour
3 days	3 hours
7 days	8 hours
14 days	12 hours
30 days	1 day

- **Integration** - This filter lets you display data according to a specific web service integration.

To apply your filters to all portlets, click **Apply**.

To apply changes in data filters, click **Refresh** on the upper left corner of the page.

Monitoring REST Web Services Performance

i Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

REST Web Services Analysis uses the following portlets to help you monitor the performance of REST web services:

- [Overview Portlet](#)
- [Top REST Web Services Operations Portlet](#)

Overview Portlet

The Overview portlet provides summary statistics and visual information about REST-based web services that ran in your account.



The portlet shows the following information:

- **Users** – Shows the total number of users of the operations.
- **Total Requests** – Shows the total number of requests of the operations.
- **Error Rate** – Shows the rate by which operations encountered errors relative to the total number of requests that ran.
- **Errors Pie Chart** – Shows the distribution of the errors that the operations encountered.

Top REST Web Services Operations Portlet

The Top REST Web Services Operations portlet displays information about the top five operations in individual tiles.



Each tile shows the following information about the operation:

- **Execution Time** – Shows the amount of time it took to process the operation.
- **Error Rate** – Shows the rate by which the operations encountered errors relative to the total number of requests that ran.
- **Total Requests Icon** – Shows the total number of requests for the operation.
- **Execution Time Chart** – Shows a smaller version of the execution times for the operation's requests over time.

To view detailed and visual information about the operation, click the tile.

The following charts appear:

- **Execution Time** – Shows the execution times for the operation's requests over time.
- **Requests** – Shows the number of requests that the operation ran over time.
- **Error Rate** – Shows the error rate that the operation's requests encountered over time.

Click a data point in any of the charts to open the related Web Services Operation Logs table. For more information about the table, see [Viewing REST Web Services Logs](#).

Viewing REST Web Services Logs

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

An operation logs table appears when you click a data point in a chart in one of the Top REST Web Services Operations portlet.

The web services operation logs table shows only the instances that ran for a significant amount of time and are useful in diagnosing issues. This analysis tool is not intended to trace all the operations and records that the account processed.

get Dec 1, 2015, 3:45 AM – 4:00 AM						
	DATE AND TIME	EXECUTION TIME	STATUS	EMAIL ADDRESS	HTTP METHOD	HTTP STATUS CODE
	Apr 16 2018 12:30:00 AM	23.340 s	Finished	rwoffe@netsuite.com	POST	204
	Apr 16 2018 12:31:00 AM	3.250 s	Failed	rwoffe@netsuite.com	POST	204
	Apr 16 2018 12:32:00 AM	5.870 s	Failed	rwoffe@netsuite.com	DELETE	404
	Apr 16 2018 12:33:00 AM	5.870 s	Failed	rwoffe@netsuite.com	DELETE	404
	Apr 16 2018 12:34:00 AM	10.540 s	Failed	rwoffe@netsuite.com	POST	400
	Apr 16 2018 12:35:00 AM	16.540 s	Finished	rwoffe@netsuite.com	GET	204
	Apr 16 2018 12:36:00 AM	10.550 s	Failed	rwoffe@netsuite.com	GET	404
	Apr 16 2018 12:37:00 AM	3.410 s	Finished	rwoffe@netsuite.com	GET	204
	Apr 16 2018 12:38:00 AM	21.340 s	Finished	rwoffe@netsuite.com	POST	204
	Apr 16 2018 12:39:00 AM	2.340 s	Failed	rwoffe@netsuite.com	GET	204

This table includes the following information:

- **Date and Time** – Shows the date and time for each instance.
- **Execution Time** – Shows the amount of time it took to run the instance.
- **Status** – Shows the status of the instance after it ran.
- **Email Address** – Shows the email address of the user who ran the instance.

- **HTTP Method** – Shows the method used in the HTTP call.
- **HTTP Status Code** – Shows the numbered code that represents the HTTP status
- **URL** – Shows the internal URL that was used to access and test the integration.

Analyzing Search Performance



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).



How to Use the NetSuite Search Performance Analysis Tools

Saved searches empower businesses with up-to-date and precise business intelligence for strategic decision-making. You can catch potential issues related to saved search performance by monitoring them in real time. In the Application Performance Management (APM) SuiteApp, NetSuite provides several tools for you to view and analyze the performance of your saved searches.

Guidelines for Analyzing Search Performance

Refer to the following guidelines to optimize use of search performance tools:

- Administrators who are already using the Application Performance Management (APM) SuiteApp need to save access again for other roles and employees so they can use the search performance tools. For more information, see [Setting Access to the Application Performance Management SuiteApp](#).
- Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

To know more about each tool, read the following topics:

- [Using the Search Performance Analysis Dashboard](#)
- [Using the Search Performance Details Dashboard](#)

Using the Search Performance Analysis Dashboard

The Search Performance Analysis dashboard is a visual tool for monitoring multiple saved searches on one page. The dashboard presents saved searches in the form of tiles, which contains helpful metrics updated in real time. You can use this tool to quickly identify saved search performance issues and anomalies. Looking at the dashboard also lets you promptly compare statistics between various saved searches.

To start, read [Using the Saved Searches Portlet](#).

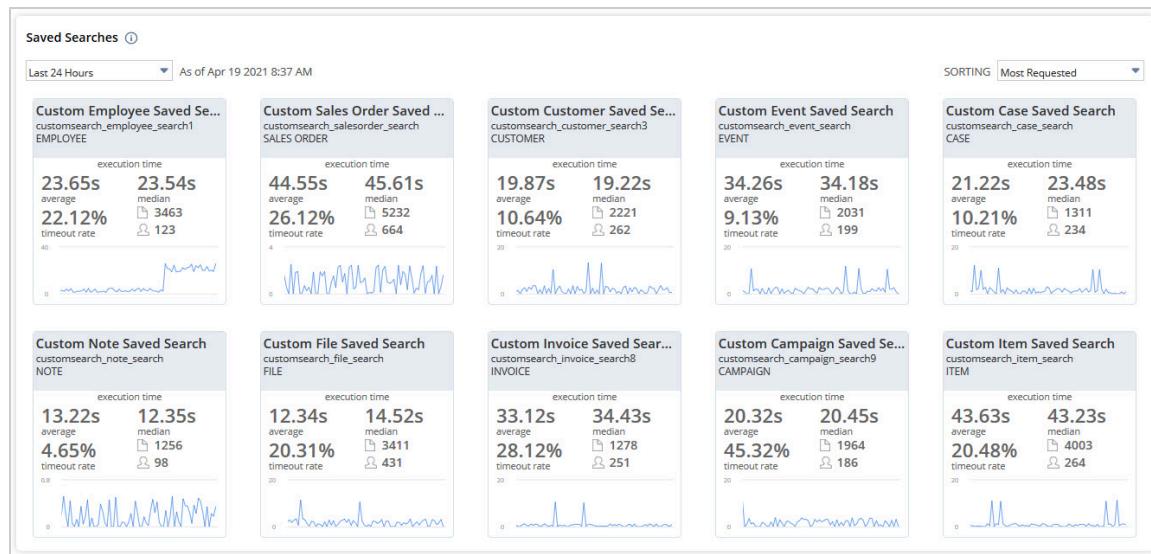
Accessing the Search Performance Analysis Dashboard

To start using the Search Performance Analysis dashboard, go to Customization > Performance > Search Performance Analysis.

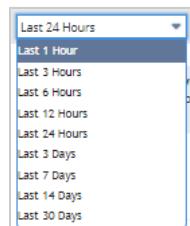
Using the Saved Searches Portlet

Saved searches are presented in the form of tiles. The portlet displays the top ten saved searches based on your filters. Each tile contains the following information:

- **Execution Time** – Shows the median number of seconds it took for the saved search to execute within the specified period. This time includes only the retrieval of the saved search and excludes the retrieval of other page elements, such as filters, fields, or the UI.
- **Timeout Rate** – Shows the percentage of timeouts during saved search executions relative to the total requests within the specified period.
- **Number of Users** – Shows the total number of users who accessed the saved search within the specified period.
- **Number of Requests** – Shows the total number of requests for the saved search within the specified period.
- **Execution Time Line Graph** – Shows a line graph of the median execution time within the specified period.



You can update the duration of data presented using the dropdown list on the upper left corner of the page. You can select between the following:



If you need to access information within a custom time frame, click the saved search tile. This action takes you to the Search Performance Details Dashboard, where you can filter data according to start date/time and end date/time. To know more, read [Filtering Data on the Search Performance Details Dashboard](#).

You can also sort the data according to the most requested, most timeouts, most users, or highest execution time. To sort, select from the dropdown list on the upper right corner of the page.

Using the Search Performance Details Dashboard

The Search Performance Details Dashboard provides you with more in-depth statistics about the performance of each saved search. The dashboard consists of two portlets and provides summary lists, charts, and logs about a specific saved search. It can be used for gathering data during performance reviews and critical investigations.

To start, read the following topics:

- [Accessing the Search Performance Details Dashboard](#)
- [Filtering Data on the Search Performance Details Dashboard](#)

To know more about the available portlets on the dashboard, see:

- [Viewing Saved Search Details](#)
- [Viewing Saved Searches by Context](#)

Accessing the Search Performance Details Dashboard

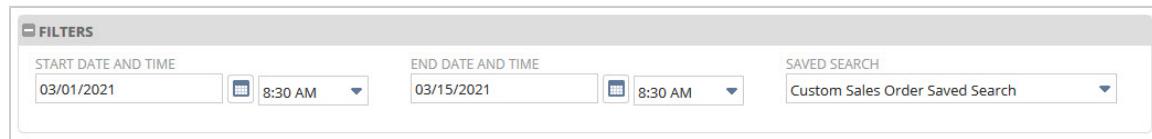
You can go to the Search Performance Analysis dashboard by choosing one of the following paths:

- Go to Customization > Performance > Search Performance Details.
- Go to Customization > Performance > Search Performance Analysis and click a saved search tile.

Filtering Data on the Search Performance Details Dashboard

You can filter data on the Search Performance Details dashboard according to the following:

- **Start Date/Time and End Date/Time** – You can specify the start and end dates by clicking the corresponding calendar icons and selecting the correct dates. You can change the start and end times by using the corresponding dropdown lists.
- **Saved Search** – You can choose to show data for all saved searches or for a specific saved search using the saved search dropdown list.



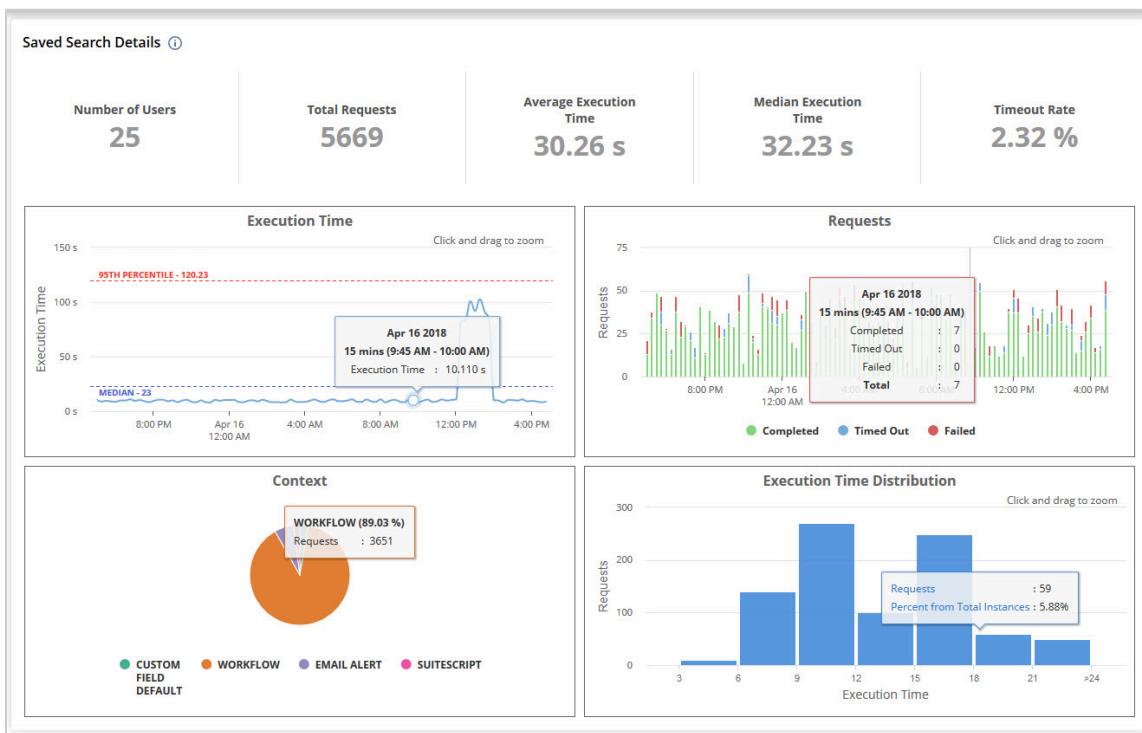
To apply changes in data filters, click **Refresh** on the upper left corner of the page.

Viewing Saved Search Details

The Saved Search Details portlet displays summary lists and four charts, which show performance statistics in detail. You can find the following charts on the portlet:

- **Execution Time** – Shows a line graph comparing the median execution time of saved searches over a specific period. This time includes only the retrieval of the saved search and excludes the retrieval of other page elements, such as filters, fields, or the UI.
- **Requests** – Shows a combination bar and line chart, which overlaps timeout counts with successful or failed status data over a specific period.
- **Context** – Shows a pie graph to display the proportion of contexts that used the saved search within the specified duration.
- **Histogram** – Shows a histogram comparing the total number of saved searches in various execution time intervals.

You can point to any value on the portlet's charts to see a summary of data relevant to the chart.



Viewing Saved Search Logs

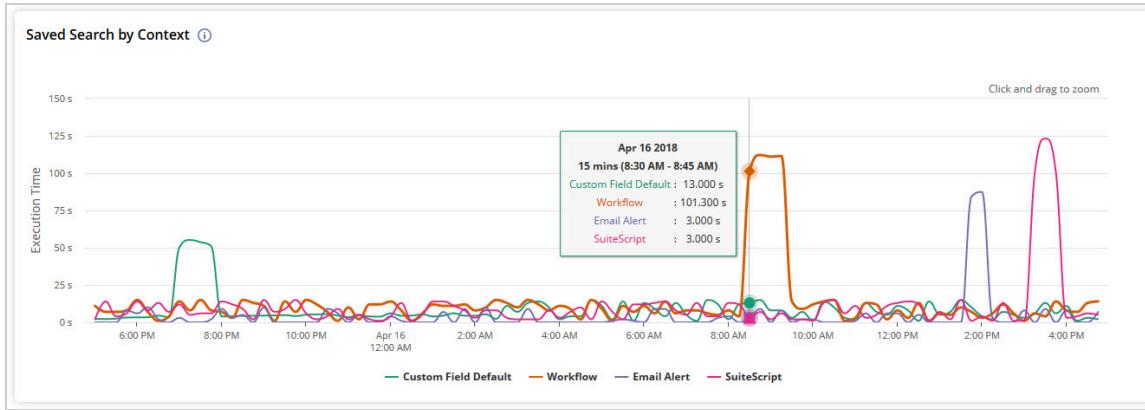
You can view logs for each saved search when you click a value on any of the charts.

The saved search logs include only the instances that ran for a significant amount of time and are useful in diagnosing issues. Saved Search Details is not intended to trace all the operations and records that the account processed.

The logs record the date, user, context, execution time, success, and timeout. You can click the corresponding icons in the **Profiler Details** column to go to Profiler Details.

Viewing Saved Searches by Context

The Saved Searches by Context portlet lets you analyze changes in execution time among several contexts over a specific period. This portlet can help you find trends in running saved searches depending on which context is used and when they were run.



You can also click an item on the legend to hide or display that segment of data.

Monitoring Web Services and RESTlet Concurrency

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

Use the Concurrency Monitor tool to analyze the performance of web services and RESTlet integrations. The tool includes dashboards that lets you view critical data about your concurrent requests and limits. You can use the information to optimize the schedules of your integrations and maximize your SuiteCloud Plus licenses. Concurrency Monitor displays estimated concurrency and error rates to help you decide if your usage requires you to change account settings, modify integrations, or add SuiteCloud Plus licenses.

Guidelines for Monitoring Web Services and RESTlet Concurrency

Refer to the following guidelines to optimize use of the Concurrency Monitor tool:

- Data shown on the Concurrency Monitor excludes requests from internal applications. These internal applications are excluded because they do not count toward your concurrency limit. For more information, read the help topic [Concurrency Governance for Internal Applications](#).
- Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

See the following help topics:

- [Concurrency Monitor Overview](#)
- [Using the Concurrency Monitor Dashboard](#)
- [Using the Concurrency Details Dashboard](#)

Concurrency Monitor Overview

Concurrency Monitor lets you monitor the performance of web services and RESTlet integrations in your account. The tool includes two dashboards that provide different levels of information that you can use to investigate. You can view a different display depending on the governance type that applies to your account.

For more information, see the following:

- [Governance Types on Concurrency Monitor](#)
- [Concurrency Monitor Dashboards](#)
- [Accessing Concurrency Monitor Dashboards](#)

Governance Types on Concurrency Monitor

The data shown on the Concurrency Monitor varies according to the governance type that applies to your account. The tool provides concurrency data for the following:

- **Accounts without integration-specific limits** - Concurrency requests for these accounts are not governed. Concurrency limits are not allocated for any integration.
- **Accounts with integration-specific limits**- Concurrency requests for these accounts are governed. Part of the account limit is allocated for specific integrations.

For accounts with integration-specific limits, Concurrency Monitor displays separate sets of data for the following:

- **Allocated Limit** - View concurrency data about a specific integration that was allocated with a concurrency limit.
- **Unallocated Limit** - View concurrency data about the rest of the requests or integrations that were not allocated with a concurrency limit.

Both allocated and unallocated limit counts add up to the total concurrency limit of the account. To view the limits for each on the Concurrency Monitor dashboard, check the Overview sections in the **Unallocated Limit** and **Allocated Limit** subtabs.

Concurrency Monitor Dashboards

Concurrency Monitor consists of the following dashboards:

- **Concurrency Monitor** – Shows an overview of data related to the concurrency of your account and its available integrations. The dashboard includes an estimated concurrency rates chart that display errors and peak concurrency levels for each hour during the specified date range. When you click a point in the chart, the Concurrency Details dashboard opens.
- **Concurrency Details** – Shows concurrency data specific to the hour that you selected on the Concurrency Monitor dashboard. The dashboard breaks down concurrency counts for each minute of the hour. You can also view the concurrency request logs for a specific time.

Accessing Concurrency Monitor Dashboards

The following table shows how you can access each Concurrency Monitor dashboard:

Dashboard	Navigation
Concurrency Monitor	Go to Customization > Performance > Concurrency Monitor.
Concurrency Details	To open the page: 1. Go to Concurrency Monitor. 2. On the Estimated Concurrency Rates chart, click a data point.



Important: Administrators who are already using the Application Performance Management (APM) SuiteApp need to save access again for other roles and employees so they can use the Concurrency Monitor. For more information, see [Setting Access to the Application Performance Management SuiteApp](#).

Using the Concurrency Monitor Dashboard

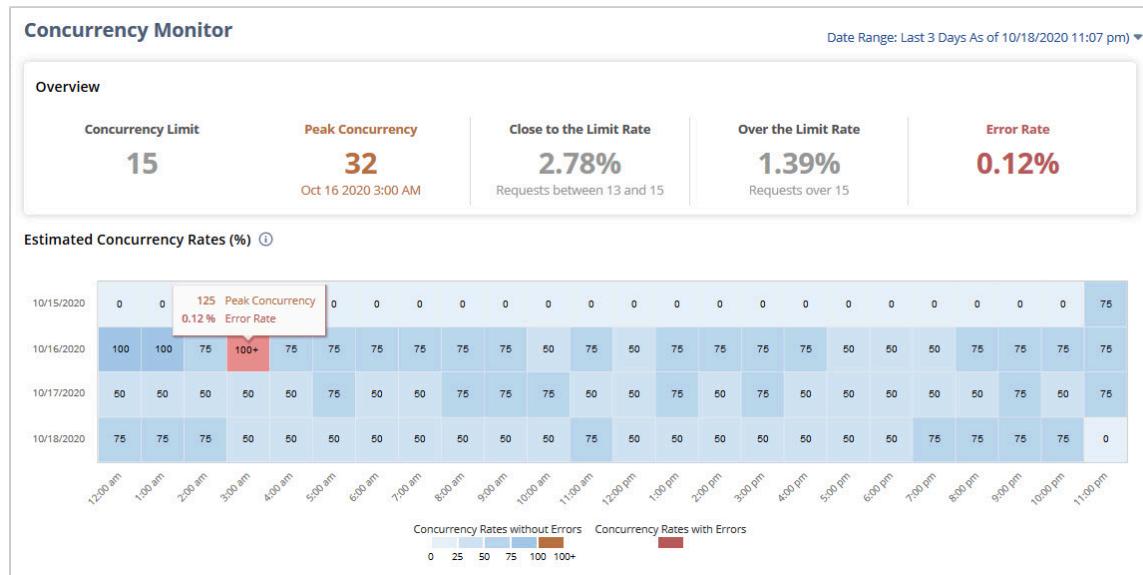
The Concurrency Monitor dashboard shows an overview of data related to the concurrency of your account and its available integrations. Use this dashboard to view concurrency data across different date range selections.

To set the date range for this dashboard, see [Filtering Data on the Concurrency Monitor Dashboard](#).

Concurrency Monitor automatically displays data according to the governance type that applies to your account. For more information see [Governance Types on Concurrency Monitor](#).

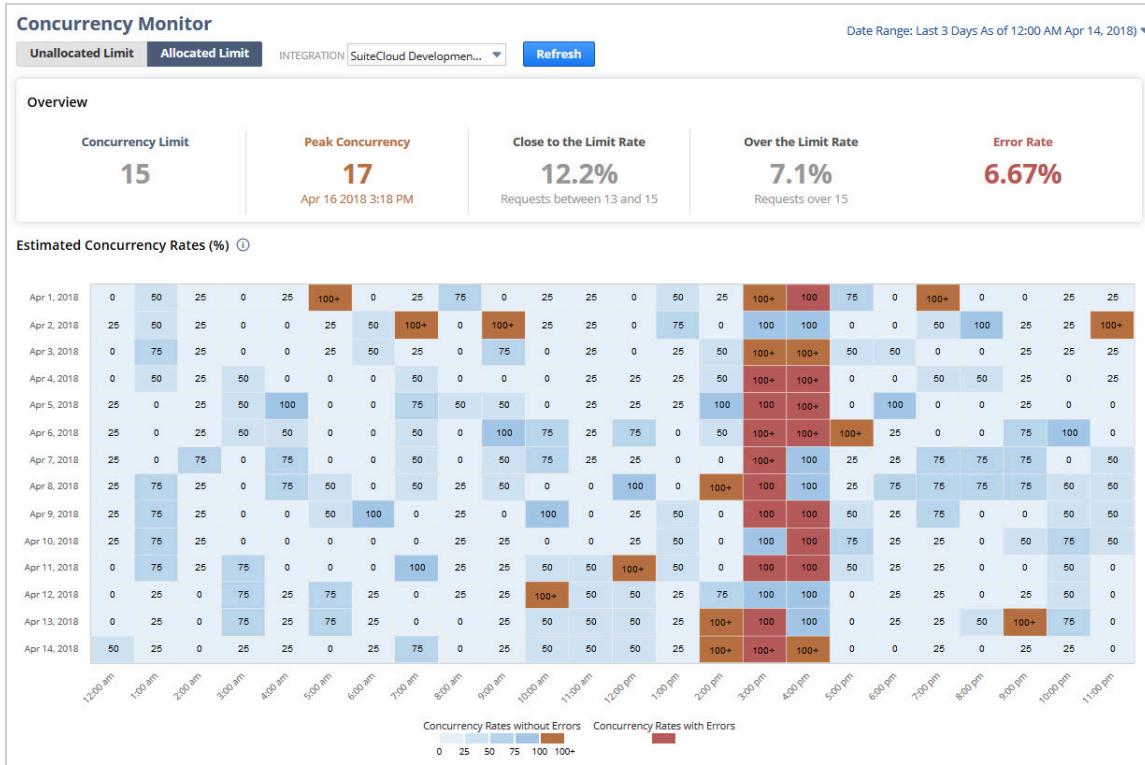
Accounts without Integration-Specific Limits

The following view appears for accounts without integration-specific limits:

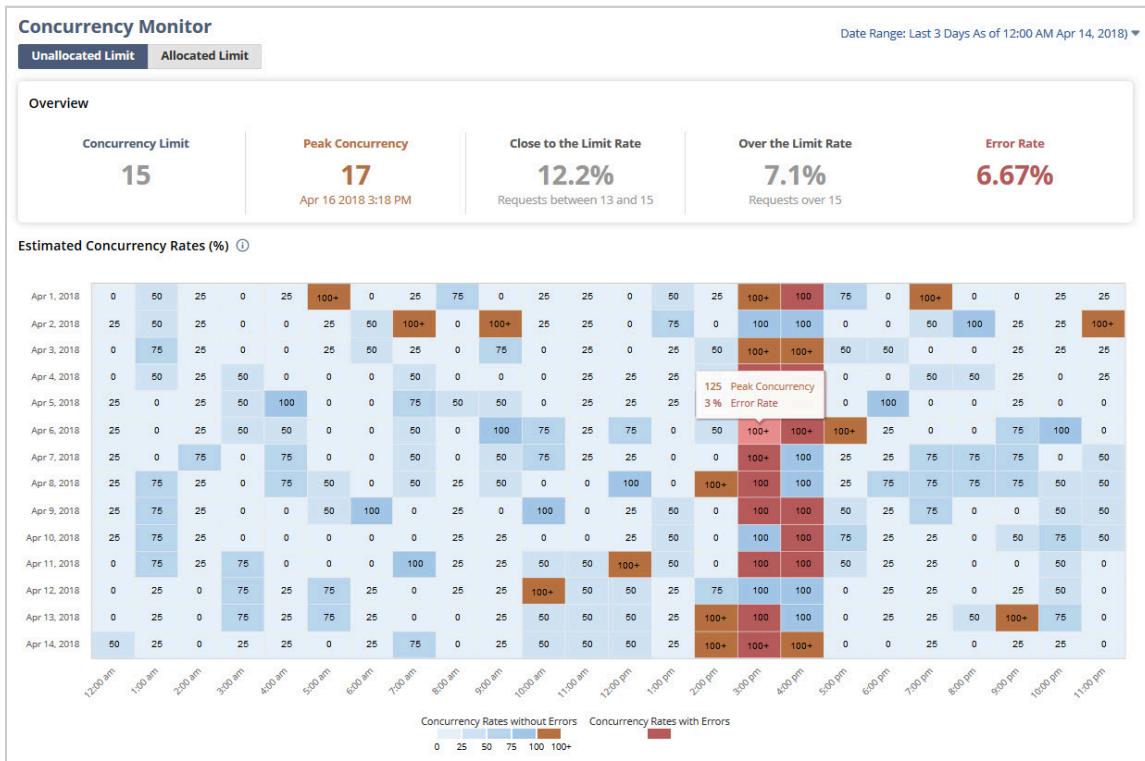


Accounts with Integration-Specific Limits

For accounts with integration specific limits, Concurrency Monitor separates data for allocated and unallocated limits. To view concurrency data for integrations with allocated limits, click the **Allocated Limit** subtab:



To view concurrency data about the rest of the requests or integrations that were not allocated with a concurrency limit, click the **Unallocated Limit** subtab:



To find out more about the dashboard portlets, see the following help topics:

- Viewing the Overview Portlet in the Concurrency Monitor Dashboard
- Viewing the Estimated Concurrency Rates Chart in the Concurrency Monitor Dashboard

Filtering Data on the Concurrency Monitor Dashboard

You can select from the following available date ranges to filter data on the Concurrency Monitor Dashboard:

- Last 3 Days
- Last 7 Days
- Last 14 Days
- Last 30 Days

To filter data on the Concurrency Monitor Dashboard:

1. Go to Customization > Performance > Concurrency Monitor.
2. On the upper corner of the Concurrency Monitor page, click the **Date Range** link.
3. Select a date range.
4. Click **Apply**.
5. To apply the changes on all portlets, click **Refresh** on the upper left side of the dashboard.

Viewing the Overview Portlet in the Concurrency Monitor Dashboard

View the following information about the Overview portlet in the Concurrency Monitor dashboard:

- **Concurrency Limit** – Shows the limit of concurrent web services and RESTlet requests you can run. It is based on the service level and SuiteCloud Plus licenses available for your production, sandbox, and release preview accounts. Web services and RESTlet integrations are rejected when you exceed your concurrency limit.
- **Peak Concurrency** – Shows the estimated highest concurrency count from the data based on your selected date range. The tile also includes the date and time of the peak concurrency.

i Note: The peak concurrency shown on the Concurrency Monitor dashboard is an estimated value only. This value may be different from the value shown on the Concurrency Details dashboard, which shows the exact peak concurrency value.

- **Close to the Limit Rate** - Shows the rate by which you ran requests close to the concurrency limit. The tile also includes the range of request counts used to define this rate.
- **Over the Limit Rate** - Shows the rate by which you ran requests over the concurrency limit.
- **Error Rate** - Shows the rate by which your concurrency requests encountered errors.

Viewing the Estimated Concurrency Rates Chart in the Concurrency Monitor Dashboard

Use the Estimated Concurrency Rates chart in the Concurrency Monitor dashboard to view peak concurrency counts and error rates for each hour. Each cell in the chart represents an hour of day during the selected date range.

The total number of concurrency counts available on this table may vary from the total number of concurrency counts on the Concurrency Details dashboard. To provide a bigger picture, the Concurrency Monitor may substitute generic values for instances where the limit is not available. To view accurate estimates for each instance in time, click the cell and view their designated Concurrency Details page.

You can click any data on the charts to access the Concurrency Details dashboard, which displays concurrency data by the minute. To find out more about the dashboard, read [Using the Concurrency Details Dashboard](#).

Using the Concurrency Details Dashboard

The Concurrency Details dashboard lets you view exact concurrency counts for each minute during the hour you clicked on Concurrency Monitor.

Concurrency Details includes overview information about the selected duration. For more information, see [Viewing the Overview Portlet in the Concurrency Details Dashboard](#).

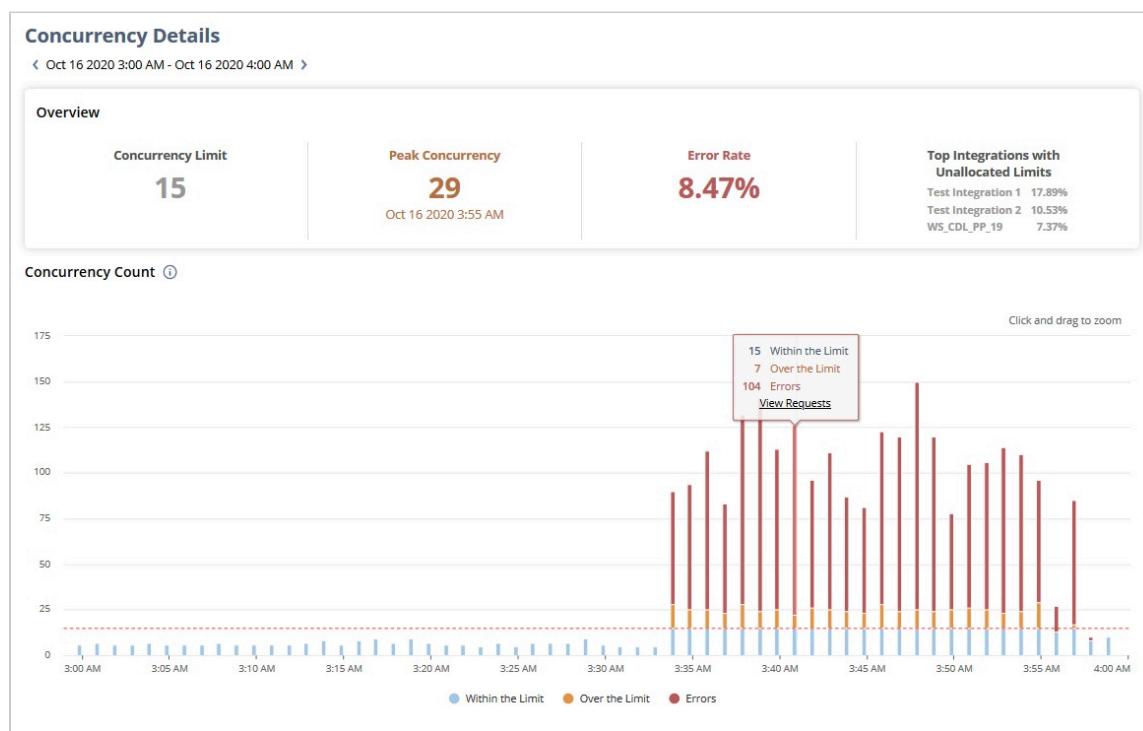
The Concurrency Count chart illustrates instances that are within the limit, over the limit, and has errors. The dotted red line indicates the concurrency limit during the hour you are investigating. Some instances may show errors even if the concurrency counts during that minute fall within the limit and below the red dotted line. For more information, see [Viewing the Concurrency Count Chart in the Concurrency Details Dashboard](#).

Concurrency Details lets you see logs about concurrency requests during a specific time. For more information, see [Viewing Request Logs in the Concurrency Details Dashboard](#).

The dashboard displays data according to the governance type that applies to your account.

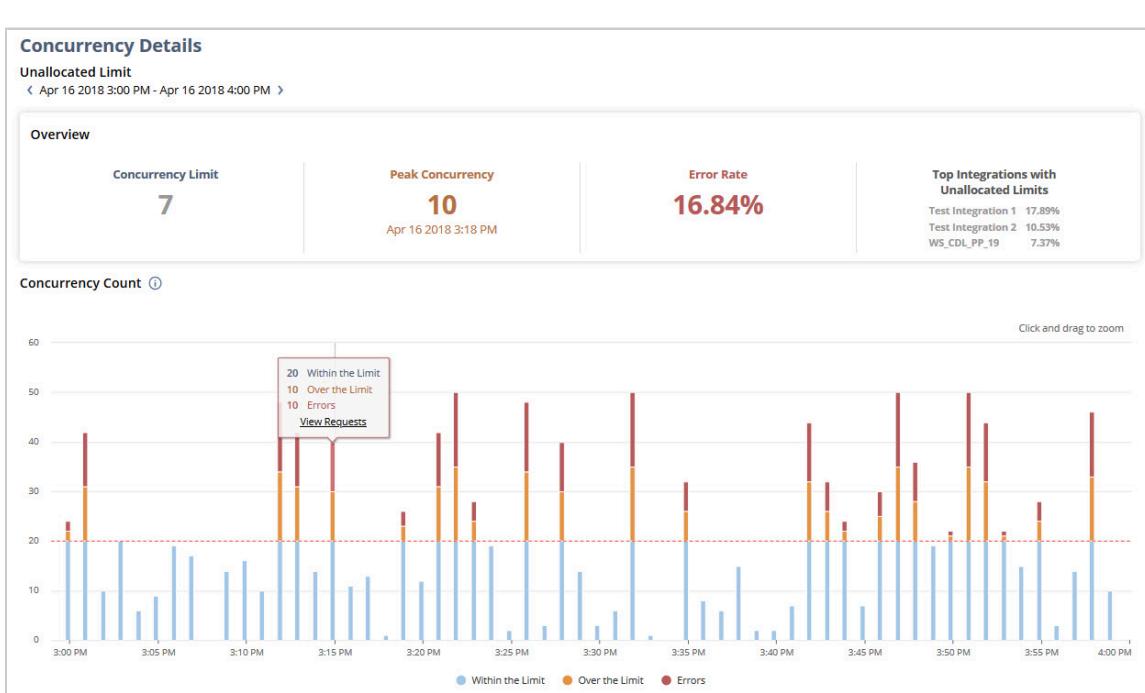
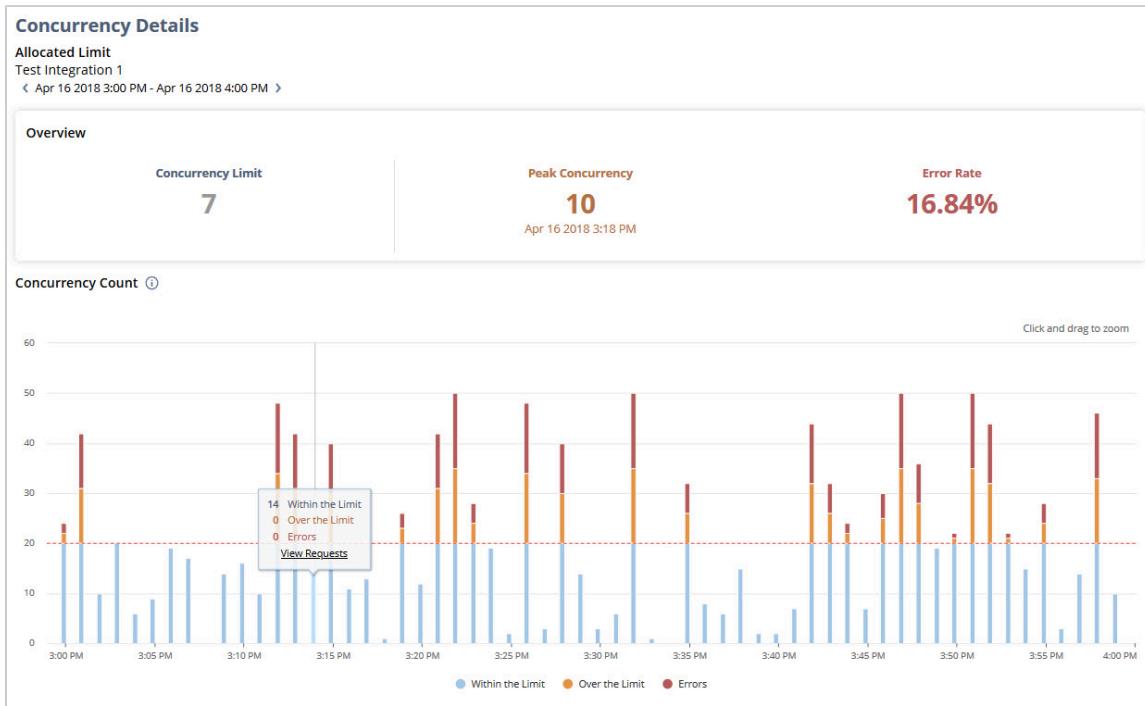
Accounts without Integration-Specific Limits

The following view appears for accounts without integration-specific limits:



Accounts with Integration-Specific Limits

If you're viewing an account with integration-specific limit, Concurrency Details shows data filtered according to the subtab and table cell you clicked on the Concurrency Monitor Dashboard. Before investigating in Concurrency Details, ensure that you select the correct data set subtab, either Allocated Limit or Unallocated Limit, from Concurrency Monitor.



Viewing the Overview Portlet in the Concurrency Details Dashboard

Information about the Overview portlet in the Concurrency Details dashboard varies according to the governance type of your account. The following table shows the statistic available for each type:

Governance Type	Statistic	Description
All Types	Concurrency Limit	Shows the limit of concurrent web services and RESTlet requests you can run. It is based on the service level and SuiteCloud Plus licenses available for your production, sandbox, and release preview accounts. Web services and RESTlet integrations are rejected when you exceed your concurrency limit.
	Peak Concurrency	Shows the highest concurrency count from the data based on your selected date range. The tile also includes the date and time of the peak concurrency.
	Error Rate	Shows the rate by which your concurrency requests encountered errors.
Accounts without Integration-Specific Limits	Top Integrations with Unallocated Limits	Lists the integrations that were not allocated with a concurrency limit and which ran the highest amount of concurrent requests.
Accounts with Integration-Specific Limits - Unallocated Limit View	Top Integrations with Unallocated Limits	Lists the integrations that were not allocated with a concurrency limit and which ran the highest amount of concurrent requests.

Viewing the Concurrency Count Chart in the Concurrency Details Dashboard

Use the Concurrency Count Chart in the Concurrency Details dashboard to view the exact concurrency counts for each minute during the hour you selected.

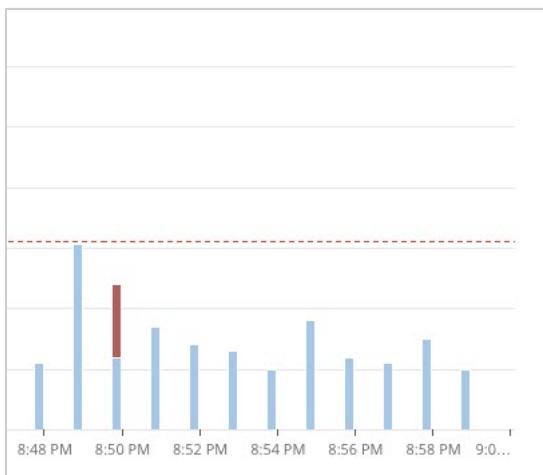
The Concurrency Count chart illustrates concurrencies that are within the limit, over the limit, and has errors. The dotted red line indicates the concurrency limit during the hour you are investigating. Red bars in the chart represent concurrency requests that encountered errors.

If the number of errors is significantly higher than the concurrency limit, it will fall above the dotted red line. Sometimes, errors may appear not only in the first instance but also in the two or more instances that appear after it. Unlike the first one, the instances that follow may display errors even if the concurrency counts fall within the limit and below the dotted red line.

For example, in the following figure, you can see a high error count above the dotted red line at 8:49 p.m. Errors continue to be counted at 8:50 p.m. even if the concurrency count during that instance falls below the line.



Note, however, that errors should not appear below the dotted red line if the instance does not appear after one with a high error count. If your chart displays a similar case, contact NetSuite Customer Support. Refer to the following figure:



To view the number of requests that ran within the concurrency limit, ran over the limit, and encountered errors, point to a bar on the chart. To view all the minutes of the hour, click and drag an area on the chart.

When you point to a bar on the chart, the tooltip includes a **View Requests** link. Click the link to open the Concurrency Request Logs window. For more information, see [Viewing Request Logs in the Concurrency Details Dashboard](#).

Viewing Request Logs in the Concurrency Details Dashboard

When you point to a bar on the Concurrency Count chart, the tooltip includes a **View Requests** link. Click the link to open the Concurrency Request Logs window.

The Concurrency Request Logs window lets you see details about concurrency requests during a specific time. To go through the list of instances, use the paging toolbar on the upper right corner of the popup window. Click the arrows until you see the desired page or select a page from the dropdown list.

Concurrency Request Logs						
				4/16/2018 3:30 pm - 4/16/2018 3:40 pm		Total: 19
Start Date	End Date	Type	Integration	Operation	Script Name	Status
4/16/2018 3:30 pm	4/16/2018 3:45 pm	WEB SERVICE	Custom Integrati...	addList	-	Finished
4/16/2018 3:31 pm	4/16/2018 3:45 pm	WEB SERVICE	XYZ Integration 1	update	-	Failed
4/16/2018 3:32 pm	4/16/2018 3:37 pm	RESTLET	-	-	SJG Script	REJECTACCOUNTCONCURRENCY
4/16/2018 3:33 pm	4/16/2018 3:41 pm	WEB SERVICE	Custom Integrati...	get	-	Finished
4/16/2018 3:34 pm	4/16/2018 3:39 pm	WEB SERVICE	XYZ Integration 1	addList	-	Failed
4/16/2018 3:35 pm	4/16/2018 3:48 pm	RESTLET	-	-	LSA script	REJECTACCOUNTCONCURRENCY
4/16/2018 3:36 pm	4/16/2018 3:46 pm	WEB SERVICE	ABC Integration 1	deleteList	-	REJECTUSERCONCURRENCY
4/16/2018 3:37 pm	4/16/2018 3:49 pm	WEB SERVICE	Custom Integrati...	getList	-	Failed
4/16/2018 3:38 pm	4/16/2018 3:44 pm	RESTLET	-	-	CUSTOMER restle...	Finished
4/16/2018 3:39 pm	4/16/2018 3:48 pm	WEB SERVICE	XYZ Integration 1	get	-	Finished

Profiling Operations Performance

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

You can use Profiler Details to see the timing breakdown and context of an operation then locate and correct performance bottlenecks.

Profiler Details is designed to help you further analyze the root cause of performance issues shown in Page Time Summary, Page Time Details, SuiteScript Analysis, SOAP Web Services Analysis, and Search Performance Details. This page is available only through links in tables or logs on these pages. To investigate performance issues, explore the specific operations you are interested in, then go to the Profiler Details page dedicated to these operations. For more information, see [Accessing Profiler Details](#).

Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

For more information about Profiler Details, see the following help topics:

- [Profiler Details Overview](#)
- [Using Profiler Details](#)

Profiler Details Overview

Profiler Details is a tool that lets you gather performance data about the timing and context of an operation, action, or request. You can use this tool to determine which operations cause delays.

Profiler Details logs only the scripts that ran for a significant amount of time and are useful in diagnosing issues. It is not intended to trace all the scripts and plug-ins that the account processed.

Profiler Details show contextual data from the following Application Performance Management (APM) tools:

- Page Time Summary
- Page Time Details
- SuiteScript Analysis
- SOAP Web Services Analysis
- Search Performance Details

Profiler Details Limitations

Data shown on the Profiler Details page are limited by the following:

- Profiler Details logs only the operations that have customizations.
- Profiler Details cannot display information about client scripts.

Using Profiler Details

To open Profiler Details, you need to click one of the links or icons located on specific Application Performance Management (APM) pages. Profiler Details uses data from the APM page to provide context about the operation that you want to investigate.

The Profiler Details page consists of the following areas:

- **Header** – This area contains basic information about the operation, such its ID and start time and date. For more information, read [Viewing the Details of an Operation](#).
- **Timeline** – This area shows a timeline of how long and when each child record ran during the execution of the operation. For more information, read [Viewing Data on the Timeline Section of Profiler Details](#).
- **Timing Details** – This area displays more granular information about each child record, including their context and types. For more information [Viewing Data on the Timing Details Section of Profiler Details](#).

Accessing Profiler Details

Follow these procedures to access Profiler Details from different Application Performance Management (APM) tools.

Accessing Profiler Details from Page Time Summary

[To go to Profiler Details from Page Time Summary:](#)

1. On the Page Time Summary page, go to the Performance Logs section.

2. In the Profiler Details column, click the view icon that corresponds to the operation you want to investigate.

Accessing Profiler Details from Page Time Details



Note: To access Page Time Details, read [Using Page Time Details](#).

To go to Profiler Details from the Timeline of Page Time Details:

1. On the Page Time Details page, go to the timeline section.
2. Point to the data segment that you want to investigate. Click **View Profiler Details** on the tooltip.



Note: The **View Profiler Details** link will not appear when you point to client scripts or network data segments.

To go to Profiler Details from SuiteScript and Workflow Details in Page Time Details:

1. On the Page Time Details page, go to the SuiteScript and Workflow Details section.
2. In the **Profiler Details** column, click the view icon that corresponds to the operation that you want to investigate.

Accessing Profiler Details from SuiteScript Analysis

To go to Profiler Details from SuiteScript Analysis:

1. On the SuiteScript Analysis page, go to the SuiteScript Details section.
2. Click **View Logs** to open the SuiteScript Details log page.
3. On the SuiteScript Details logs page, locate the **Profiler Details** column
4. Click the view icon that corresponds to the operation that you want to investigate.

Accessing Profiler Details from SOAP Web Services Analysis

To go to Profiler Details from SOAP Web Services Analysis

1. On the SOAP Web Services Analysis page, locate the Top SOAP Web Services Operations portlet.
2. On the chart, click a data segment you want to explore.
3. On the SOAP Web Services Operation Details page, choose between two portlets to explore data.
 - Using the Performance Details portlet
 - Click a data point on the chart.
 - On the Web Services Operation Logs page, locate the **Profiler Details** column.
 - Click the view icon that corresponds to the operation that you want to investigate.
 - Using the Top Records Performance portlet
 - Click a data point on the chart.

- On the Web Services Record Processing Logs page, locate the **Profiler Details** column.
- Click the view icon that corresponds to the operation that you want to investigate.

Accessing Profiler Details from Search Performance Details

To go to Profiler Details from Search Performance Details

1. On the Saved Search Logs page, locate the **Profiler Details** column.
2. Click the view icon that corresponds to the operation that you want to investigate.

Viewing the Details of an Operation

When you go to the Profiler Details page, the first thing you will see is the navigation path on top of the page. This path exposes the levels of hierarchy available for the operation you are viewing. It allows you to drill forward or backward between child and parent records.

You can see the header section following the navigation path. This section shows the following information:

- **Profiler Operation ID** – This figure identifies the operation that is profiled on the page. This ID remains constant across parent and child records of the same operation.
- **Start Time and Date** – This data shows the time and date when the operation began processing
- **Scripts** – This figure is the count of scripts that ran during the operation.
- **Searches** – This figure is the count of searches that ran during the operation.
- **Workflows** – This figure is the count of workflows that ran during the operation.
- **Records from Scripts/Workflows** – This figure is the count of records triggered by scripts and workflows that ran during the operation.
- **Request URLs** – This figure is the count of URL requests that ran during the operation.

Note: The count of data found on the header section may not match the data on the Timeline and Timing Details sections.

Viewing the Timing Breakdown of an Operation

You can view the timing breakdown of an operation on the Timeline and Timing Details sections of Profiler Details.

Viewing Data on the Timeline Section of Profiler Details

The Timeline section maps how long each type of information ran during the operation. It covers the following types of information:

- **Record** - Refers to the timing of a record operation.
- **Script** - Refers to the timing of a script.
- **Script Initialization** - Refers to when scripts are initialized or started.
- **Workflow** - Refers to the timing of a workflow.

- **Workflow Execution** - Refers to when workflows are executed or ran.
- **Request URL** - Refers to the timing of a request URLs.
- **Script Execution** - Refers to when scripts are executed or ran.
- **Saved Search** - Refers to the timing of a search.
- **Web Service** - Refers to the timing of a web service.
- **Initialization Request** - Refers to the timing of requests to initialize scripts.
- **After Submit** - Refers to events after users perform actions that save or submit a record and after changes are committed to the database.
- **Before Submit** - Refers to events when users perform actions that save or submit a record but before changes are committed to the database.
- **Prepare Before Load** - Refers to events when users perform actions that prepare to load or read a record.
- **Prepare Submit** — Refers to events when users perform actions that prepare to save or submit a record.
- **Approvals Execution** - Refers to when actions to change the approval status of a record are executed or ran.
- **Workflow Details** - A section of the Workflow Execution content that refers to in-depth details related to a workflow that was executed or ran.



Note: Profiler Details in APM cannot display information about client scripts.

In the Timeline section, you can point to a segment of data to view more details like execution time and type of information. These details provide context about the data. By knowing the execution time, for instance, you can determine if the value is equal to your expected time for that segment.

When you view the labels of the x-axis in the timeline, you may see the following icons:

- **Hierarchy icon** – You can click this icon to drill down to the child of a record. After you click this icon, all sections in Profiler Details refreshes to show the timing details and context of the child record.
- **Note icon** – You can click this icon to view the API calls for a script you want to explore.



Note: Note: On the Profiler Details timeline, gaps may exist between lines. This signifies NetSuite server time that is not associated with your NetSuite customizations.

Viewing Data on the Timing Details Section of Profiler Details

The Timing Details section shows the context and timing information in a table format. It includes the following information for each time entry:

- **Date & Time** – Shows when the operation started to process.
- **Type** – Shows which type of information is being processed.
- **Name** – Shows the name assigned to the operation.
- **Execution Time** – Shows the total duration that the operation took to process.
- **Operation** – For records, this specifies the operation that was applied on the record.
- **Searches** – Shows the number of scripts that ran during the operation.
- **Workflows** – Shows the number of workflows that ran during the operation.

- **Records from Scripts/Workflows** – Shows the number of records triggered by scripts and workflows that ran during the operation.
- **Request URLs** – Shows the number of URL requests that ran during the operation.
- **Record Type** – Shows the record type assigned to the operation.
- **Context** – Shows the context for the type of information, such as script, that ran.
- **Script Type** – Shows the type of script associated with a script that ran. This column remains blank if the type is not a script.
- **Deployment** – Shows the name of the script deployment and links to the deployment record. This column is blank if the type is not a script.
- **Entry Point** – Shows the user-defined name of the function that was invoked for the operation to run.
- **Trigger Type** – Shows the type of operation that was used to trigger an event. This column is blank if the type is not a script.
- **Bundle** – Shows the bundle ID associated with the operation that ran.
- **Method** – For Request URLs, this specifies the http method used.
- **Web Service Operation** – Shows the web service operation that is associated with the type of information that ran.
- **API Version** – Shows the version of the API when the operation ran.

To export data from the Timing Details section, click the CSV export icon.

Exporting Data from Application Performance Management

Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

The Application Performance Management (APM) SuiteApp lets you export performance data from various tools. You can export CSV files from the APM SuiteApp.

Note: Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).

Date and time shown on the exported files are expressed in the time zone that you set as a preference.

Refer to the following table to determine how to extract data from each tool.

APM Tool	Page or Window Name	To Export Data
Record Pages Monitor	Record Pages Monitor	<ol style="list-style-type: none"> 1. Go to Customization > Performance > Record Pages Monitor. 2. On the Record Pages portlet, point to the upper right corner to show the menu icon . 3. Click the menu icon , and then select Export.
Page Time Summary	Performance Logs portlet	<ol style="list-style-type: none"> 1. Go to Customization > Performance > Page Time Summary. 2. On the Performance Logs section, click the CSV export icon .
	Script and Workflow Time Breakdown portlet	<ol style="list-style-type: none"> 1. Go to Customization > Performance > Page Time Summary. 2. On the Details section, click the CSV export icon .
Page Time Details	SuiteScript and Workflow Details section	<ol style="list-style-type: none"> 1. Go to the page. See Accessing Page Time Details. 2. On the SuiteScript and Workflow Details section, click the CSV export icon .
SuiteScript Analysis	SuiteScript Details popup window	<ol style="list-style-type: none"> 1. Go to Customization > Performance > SuiteScript Analysis. 2. On the SuiteScript Details portlet, click View Logs. 3. On the SuiteScript Details page, click the CSV export icon .
SuiteCloud Processors Monitor	SuiteCloud Processors Monitor page	<ol style="list-style-type: none"> 1. Go to Customization > Performance > SuiteCloud Processors Monitor. 2. On the Overview portlet, click the CSV export icon .
SuiteCloud Processors Job Details	SuiteCloud Processors Job Details page	<ol style="list-style-type: none"> 1. Go to Customization > Performance > SuiteCloud Processors Job Details. 2. On the Job Details portlet, click the CSV export icon .
Search Performance Details	Saved Search Logs popup window	<ol style="list-style-type: none"> 1. Go to Customization > Performance > Search Performance Details. 2. On the Saved Search Details portlet, click any data point. 3. On the Saved Search Logs popup window, click the CSV export icon .
Concurrency Details	Instance Details popup window	<ol style="list-style-type: none"> 1. Go to Customization > Performance > Concurrency Monitor. 2. Filter the data according to date range. To know more, read Filtering Data on the Concurrency Monitor Dashboard. 3. On the General Concurrency portlet, choose the cell of the hour you want to explore. 4. Click the cell to access the Concurrency Details dashboard.

APM Tool	Page or Window Name	To Export Data
		<ol style="list-style-type: none"> 5. On the Detailed Concurrency portlet, click the View Requests link on the tooltip to go to open the Instance Details popup window. 6. Click the CSV export icon .
REST Web Services Analysis	REST Web Services Logs	<ol style="list-style-type: none"> 1. Go to Customization > Performance > REST Web Services Analysis. 2. On the Top REST Web Services Operations portlet, choose and click an operation tile. 3. From the chart where you want to export data, click a data point. <p>The corresponding REST Web Services Logs table appears.</p>
	Web Services Operation Logs popup window	<ol style="list-style-type: none"> 1. Go to Customization > Performance > SOAP Web Services Analysis. 2. Click a data point to open the SOAP Web Services Operation Details page. 3. On the Performance Details portlet, click any data point. 4. On the Web Services Operation Logs popup window, click the CSV export icon .
	Web Services Record Processing Logs popup window	<ol style="list-style-type: none"> 1. Go to Customization > Performance > SOAP Web Services Analysis. 2. Click a data point to open SOAP Web Services Operation Details page. 3. On the Top Records Performance portlet, click any data point. 4. On the Web Services Record Processing Logs popup window, click the CSV export icon .
Profiler Details	Timing Details section	<ol style="list-style-type: none"> 1. Go to the page. See Accessing Profiler Details. 2. On the Timing Details section, click the CSV export icon.

Frequently Asked Questions: Application Performance Management



Note: This topic applies to Application Performance Management (APM) version 2.0.0 and later versions available in the SuiteApp Marketplace.

Beginning on March 7, 2023, access to pages of APM SuiteApp versions installed from the Search & Install Bundles page will be removed. If you are using any of these versions, install the latest version of the APM SuiteApp from the SuiteApp Marketplace, then uninstall the version from the Search & Install Bundles page (Bundle ID: 67350).

For more information, see [Differences Between APM from the SuiteApp Marketplace and from the SuiteBundler](#).

See the following questions and answers for more information about the Application Performance Management SuiteApp (APM).

Is there a cost associated with the APM?

No. This SuiteApp is available for installation at no cost. See [Setting Up the Application Performance Management SuiteApp](#) for instructions.

Will installation of the APM cause slower performance in my NetSuite account?

No. The SuiteApp reads from data stored in the server. It does not create any additional overhead for your existing customizations aside from the scripts used to display the dashboard.

When I install APM from the SuiteApp Marketplace, what happens to the roles and employees that I set in the APM Setup page of the APM installed from the Search & Install Bundles page?

If you have the APM from the Search & Install Bundles page in your account then you installed APM from the Marketplace, the roles and employees that you already set in the APM Setup page are automatically migrated to the Marketplace version of the SuiteApp.

Can the layout of the APM be customized?

This feature is not available now.

Can the displayed content in each pane of the APM be restricted?

This feature is not available now.

How many record tiles can Record Pages Monitor show?

Record Pages Monitor can show up to 20 record tiles. By default, the dashboard displays the 10 most used record operations and can be configured to show an additional 10. For more details, see [Record Pages Monitor Tiles](#).

Can the APM get data from a date prior to the date this SuiteApp was installed?

Yes.

What is the time range of past data that the APM can retrieve?

The Record Pages Monitor can display data from up to 30 days in the past. 30 days is also the maximum preset option in the time interval dropdown list, and custom date. Date ranges than span more than 30 days in the past are not assured to be available. You may customize your date range to retrieve data from more than 30 days in the past, but the page can display the data only if it is still available.

The Page Time Summary search can retrieve data from up to 2 days less than the past month. An "Error encountered in search" message appears when this limit is reached.

The SuiteScript Analysis search can retrieve data from up to 2 days less than the past month. An "Error encountered in search" message appears when this limit is reached.

What time zone is used in the APM?

Time values shown in APM follow the time zone that the user set for the account.

Is the raw data used by the APM available for access?

No. This data is not available in its raw form. It is represented by the aggregations and visualizations that APM provides.

Can the data shown in the APM be exported as a Microsoft Excel, CSV, or PDF file?

You can export the data from various APM pages into a CSV file. The maximum number of data rows that can be exported is 10,000. For more information, read [Exporting Data from Application Performance Management](#).

Does the APM show the number of records affected and the median length of time required to process one record?

Yes, this information is shown in the record tiles on the Record Pages Monitor.

In the time interval dropdown on the Record Pages Monitor, what does (resolution x min/hour) mean?

Resolution means the time interval used for the aggregation. For example, a resolution of 5 minutes means that each point in the trend graph represents an aggregate of 5 minutes. The resolution value sets the plot point intervals on the x-axis of the data visualizations. For more information about the time interval dropdown list, see [Adding a Custom Date and Time Range on Record Pages Monitor](#).

What value is captured by the response time shown in the record tiles?

This value is the median of each response time in the total time for the specified combination of record, operation, and time.

Is there any legend in the APM or associated email alert indicating when performance is not normal?

This feature is not available now.

On the Page Time Details page, what are Client: Header, Client: Render, and Client: Init?

Client: Header is the amount of time to render the head element of the page. Client: Render is the amount of time for the browser to render the response after the head element finished rendering. Client: Init is the amount of time used by the Page Init function. For more information, see [Using Page Time Details](#).

Does the APM make it possible to determine which script or workflow is causing a high SuiteScript or workflow time?

This information can be determined through analysis of the Page Time Summary and Page Time Details.

Can the APM tell if a script is slow due to a slow search?

This feature is not available now.

Does the APM include performance data from scripts associated with other SuiteApps?

Yes.

Does the APM provide a way to determine if a script is currently running?

Script performance log data is only captured after scripts have been executed successfully. If data for a script is shown in the APM, the script has stopped running.

Does the APM provide a way to determine which part of a script execution is causing slower performance?

This feature is not available now.

Does the SuiteScript Analysis tool also reflect the run time of workflows?

No.

Is there an analysis tool for workflows similar to the SuiteScript Analysis tool?

Workflow times are included in the Page Time Summary. A dedicated analysis tool for workflows is not available now.

What is the relationship between the execution time and instance count numbers shown when you place your cursor over the SuiteScript Analysis Performance Chart?

The time it took for each instance to execute is based on the execution time. The execution time is represented as an aggregation.

How long does it take for the APM to reflect script optimizations made after reviewing APM data?

The change in performance should take effect quickly. You should be able to see the impact on performance in APM data almost in real time.

Why does a script run much more slowly in my NetSuite account than the same script runs in my friend's NetSuite account?

Each NetSuite instance is different. Many factors other than configuration can impact performance.

What should I do if I think that the number of seconds averaged per operation is not fast enough?

If you require investigation of performance data from the APM, please file a case with NetSuite Customer Support.

Does the APM provide information about web services performance?

Yes, this information is available on the SOAP Web Services Analysis and REST Web Services Analysis tools. For more information, see [Analyzing Web Services Performance](#).

Does the APM provide information about web store performance?

You can view the performance of web stores or websites and other Commerce products on the SuiteCommerce APM and SuiteCommerce InStore APM SuiteApps. For more information, see the help topic [Application Performance Management \(APM\) for Commerce](#).

Does the APM provide information about performance of scheduled scripts using multiple queues?

Yes, this information is available on the SuiteCloud Processors Monitor tool. SuiteCloud Processors Monitor replaces the Script Queue Monitor to help you view the performance of deployments that continue to use queues. For more information, see [Monitoring SuiteCloud Processors Performance](#).

Why do some of my account's logs seem incomplete after the move to the Oracle Cloud Infrastructure (OCI)?

Your performance logs are not moved with your NetSuite account to the new data center built on the Oracle Cloud Infrastructure (OCI). For the first 29 days after the move, the displayed values will be calculated using data stored since the date of the move, rather than from the last 30 days.

For more information about account moves to OCI, see the help topic [Account Move to OCI FAQ](#).