

# NetSuite 2019.1 Release Notes

Release Preview Draft  
Revision Date: January 16, 2019  
PDF File Version: v1



**Important:** This document summarizes the changes to NetSuite between 2019.1 and the previous release.

These release notes are subject to change every week.

The 2019.1 enhancements and changes listed in this document are not available to customers until they are upgraded to NetSuite 2019.1. Please check the version number at the bottom of your Home page if you are unsure which NetSuite version you are using. The features and SuiteApps described here may not be available in your NetSuite account. Your access to these features and SuiteApps is subject to the terms of service in your NetSuite contract. Some features may require extra purchase.

Click links below for details about product changes:

## NetSuite

### NetSuite · Accounting

Adjustment-Only Secondary Books  
Budgets for Secondary Accounting Books  
Employee Related Lists Enhancements  
Period End Journal Entries Enhancements  
Advanced Revenue Management Enhancements  
GL Audit Numbering Enhancement  
Month End Currency Revaluation Enhancement  
Transaction Numbering Enhancements  
Currency Rounding in Custom GL Lines Plug-in  
SuiteApprovals V3.0

### NetSuite · Administration

Opt In to Release Preview  
Mandatory 2FA Now Enforced for Integration Access to NetSuite  
Issue Token Endpoint Extended to Accommodate Mandatory 2FA Requirement  
Sandbox Domain Deprecation  
Core Administration Permissions Feature  
Plan to Deprecate the Full Access Role  
Enhanced Options to Configure Subsidiary Restrictions for Roles  
New Employee Access Permission  
Copy to Account (Beta): Copy a Custom Record from One Account to Another  
Multi-Language Translation Management (Beta)  
Certificate Storage for Digital Signing  
Mutual (Two-Way) Authentication for Outbound HTTPS Connections  
Log of Outbound HTTPS and SFTP Requests Now Available  
Reset of Long-Abandoned Customer Center Passwords  
Account-Specific Domains in NetSuite

### NetSuite · Employee Management

Time-Off Management: Accruals Based on Hours Worked for Non-Netsuite Payroll Customers  
 Missing Weekly Timesheets  
 Foreign Currency Expense Reports  
 Employee Status and Employee Type Categories  
 Workforce Analytics Enhancements  
 Advanced Employee Permissions Enhancements  
 Time-Off Expiry Notification Configuration  
 Classification for Individual Paycheck Line Items  
 Associating Deductions and Earnings Payroll Items with Asset Accounts  
 Corporate Card Expenses Enhancements  
 Weekly Timesheets Improvements  
 Kudos Enhancements

#### NetSuite · Item Record Management

Commerce Categories on the Item Record  
 CSV Import of Item Location Configuration  
 Fulfill and Receive Service Items

#### NetSuite · Inventory Management

Inventory Costing Enhancements  
 Control Tower Snapshot Enhancements

#### NetSuite · Manufacturing

Editing Legacy Bills of Material (BOMs)  
 Decimal (non-integer) Resource Values in Work Center  
 Buildable Quantity Field in Saved Searches  
 New Item Record Communications Tab  
 CSV Import for BOM and BOM Revisions  
 Advanced Manufacturing

#### NetSuite · Order Management

Add-On Items for SuiteBilling  
 Recurring Amount on SuiteBilling Subscription Lines  
 Installment Billing  
 Off-Cycle Modify Pricing Change Orders for SuiteBilling  
 Recurring Amount on SuiteBilling Subscription Lines  
 SuiteBilling Joins for Search and Advanced Search  
 Electronic Bank Payments Enhancements  
 Inbound Shipment Management  
 Electronic Invoicing Enhancements

#### NetSuite · Projects

Resource Groups  
 Charge Based Billing Support for Purchases  
 Default Configurations for Advanced Project Profitability  
 Advanced Project Profitability Improvements  
 Project Management Improvements

#### NetSuite · Vendors, Purchasing, and Receiving

Installment Payments  
 Vendor Payment Approvals

**NetSuite · Taxation**

Making Tax Digital for UK VAT  
 New Country Tax Reports for SuiteTax  
 Malaysia Sales and Service Tax (SST-02) Return

**NetSuite · User Interface**

User Interface Enhancements to Dashboards  
 Account-Specific Domains Listed on Company Information Page

**Commerce****Commerce · Commerce Applications****SuiteCommerce Release Notes****Commerce · Site Management Tools****Published Assets****Commerce · Commerce Merchandising**

Assigning or Removing Items in a Merchandise Hierarchy With the Hierarchy Manager  
 Customer Specific SuitePromotions  
 Enhanced Search Experience with Commerce Search Synonyms

**Commerce · Commerce Platform**

Ability to Preview System Email Templates for Web Stores  
 Separate Shopping Cart for Each Business Customer Contact  
 Image Compression for Web Store Images  
 Ability to Track Subscription Email sent to an Entity  
 Shopping Domains in System Email Templates  
 Frequency of Updates to Dynamic Groups used as Audiences  
 Out of Stock Items in Web Store Email  
 CNAME Flattening is now supported in SuiteCommerce  
 Account-Specific Domains for External Forms  
 CMS Page Types

**SuiteCloud Platform****SuiteCloud Platform · SuiteApp Distribution**

Bundle Support during Release Phasing  
 SuiteApp Marketplace Permission Replaces SuiteBundler Permission  
 Translation Collection Objects Can Be Included in Bundles  
 New Location for Installing SDF SuiteApps

**SuiteCloud Platform · SuiteBuilder - Customization**

Address Scripting Enhancements to Support Transaction Tax Calculations  
 Advanced Printing Enhancements for Additional Language Support  
 Applied Custom Segments Visible on the Custom Record Type Configuration Page  
 Ability to Include Custom Record Names in Saved Search Results  
 Custom Sublist Translation Field Length Increased  
 Unified ID Applied to All New Custom Segments

**SuiteCloud Platform · SuiteAnalytics (Dashboards, Reporting, and Search)**

SuiteAnalytics Workbook Feature Now Generally Available  
 New Analytics Portlet for SuiteAnalytics Workbook  
 New Multi-Series Chart for Trend Graph Portlet  
 User Interface Enhancements to Dashboards

**SuiteCloud Platform · CSV Import**

Newly Supported Record Types for CSV Import

**SuiteCloud Platform · SuiteFlow (Workflow Manager)**

Enhancements to Release Status  
 New Create Line Action  
 Enhancement to Set Field Mandatory Action  
 Enhancement to Set Field Display Label Action  
 Translation Support for Workflow Actions  
 Enhanced Ability to Identify Workflow Actions in a Workflow Log

**SuiteCloud Platform · SuiteScript**

SuiteScript 2.0 – N/translation Module (Beta)  
 SuiteScript 2.0 – Bulk Actions (Beta)  
 SuiteScript 2.0 – Query API Enhancements  
 SuiteScript 2.0 – Enhancement for N/currentRecord Module  
 SuiteScript 2.0 – N/format/i18n Module  
 SuiteScript 2.0 – Enhancement for N/file Module  
 SuiteScript 2.0 – Signing API  
 Address Scripting Enhancements to Support Transaction Tax Calculations  
 Ability to Execute Installation Scripts in a SuiteApp Project Deployment

**SuiteCloud Platform · SuiteTalk (Web Services) Integration**

Release Preview Version of the 2019.1 WSDL  
 Araxis Merge Diff File for the 2019.1 Endpoint  
 2019.1 SuiteTalk Schema Browser

**SuiteCloud Platform · SuiteCloud IDE Plug-ins**

2019.1 Plug-in for Eclipse is Not Yet Available for Download  
 2019.1 Plug-in for WebStorm is Not Yet Available for Download

**SuiteCloud Platform · SuiteCloud Development Framework**

New Standard Role for Developer  
 Ability to Execute Installation Scripts in a SuiteApp Project Deployment  
 Installation Preferences Now Support File and Folder Locking in SDF SuiteApps  
 SDF Now Supports Custom Content Type Records for SuiteCommerce Site Management  
 Roles in SDF Now Support Restrictions  
 New Workflow Enhancements Supported in SDF  
 SDF SDK 2019.1 is Not Yet Available for Download  
 Copy to Account (Beta): Copy a Custom Record from One Account to Another

**SuiteApps**

SuiteApps · SuiteApps (Bundles) Released by NetSuite

Accounting SuiteApps  
 Order Management SuiteApps  
 Manufacturing SuiteApps  
 Taxation SuiteApps

## Accounting

NetSuite 2019.1 includes the following enhancements to accounting features:

- Adjustment-Only Secondary Books
- Budgets for Secondary Accounting Books
- Employee Related Lists Enhancements
- Period End Journal Entries Enhancements
- Advanced Revenue Management Enhancements
- GL Audit Numbering Enhancement
- Month End Currency Revaluation Enhancement
- Transaction Numbering Enhancements
- Currency Rounding in Custom GL Lines Plug-in
- SuiteApprovals V3.0

## Adjustment-Only Secondary Books

NetSuite 2019.1 offers you the ability to post book-specific adjustments to a secondary, adjustment-only book at closing.

Adjustment-only books differ from standard secondary books in that they do not duplicate the data in the primary book. Instead, adjustments to data from the primary book are made in the adjustment book. You can display financial reports on the data from both the primary book and adjustment book in reports and searches.

Adjustment-only books can be used to comply with different accounting standards across multiple jurisdictions. They are also useful when the only requirement is to post adjustments by book-specific journal entries. You can create multiple adjustment books for a single base accounting book, and adjustment-only books do not count against the accounting book limit.



**Note:** Adjustment-only books do not support using different base currencies in different books or books with different revenue recognition rules. Use a standard secondary accounting book setup for these cases.

To use this feature, you must use NetSuite OneWorld and have the Multi-Book Accounting feature enabled. Then, when setting up a new accounting book, check the new **Adjustment Only** box on the accounting book record to make it an adjustment-only book.

When created, standard transactions post only to the primary book, and adjustments are made in the adjustment-only book using book-specific journal entries. Reports generated for the adjustment-only book automatically include data from the primary book.

For more information, see the help topic Adjustment-Only Books Overview.

## Budgets for Secondary Accounting Books

In NetSuite 2019.1, you can now create and report on budgets and set independent budget exchange rates for secondary books. A new list called **Accounting Book** has been added to the budget record to select the book for which the budget is to be created.

With this option you can compare your secondary book data with budget values. It is particularly useful if you create budgets in a secondary book base currency. As with budgets for primary books, you can import budget data from CSV files.

Budgets for secondary books are included in the following budget reports:

- Budget Income Statement
- Budget Income Statement Detail
- Budget vs. Actual

Secondary book budgets can be used with or without the Multiple Budget feature. In both cases, you can create secondary book budgets with global budget categories if the secondary books can be consolidated and include the parent subsidiary.

If you do not have the Multiple Budgets feature, budgets for secondary books are treated as global budgets by default. With the Multiple Budgets feature enabled, you can create budgets with local budget categories without any restrictions. Secondary budgets are also copied when you copy budgets at Transactions > Financial > Copy Budgets.

To use this feature, you must use NetSuite OneWorld and the Multi-Book Accounting feature enabled.

For more information, see the help topic Budgets for Secondary Accounting Books Overview.

## Employee Related Lists Enhancements

In NetSuite 2019.1, you can assign a category to an employee status and an employee type. Categories for employee status include prehire, actively employed, leave, and terminated. Categories for employee type include contingent, contractor, non-worker, and permanent. For more information, see [Employee Status and Employee Type Categories](#).

## Period End Journal Entries Enhancements

NetSuite 2019.1 includes the following enhancements to the Period End Journal Entries feature.

### New and Enhanced Subsidiary Preferences

One subsidiary preference for Period End Journal Entries has been changed in 2019.1 and a new preference has been added.

- Create Period End Journals by Segment has been enhanced and renamed to **Group by These Segments**. The enhanced preference is a multi-select list that displays all the segment types available for the subsidiary. You select the classification segments for which you want to generate separate period end journals. The multi-select list for this preference displays all the segment types in the account that impact the general ledger.
- When the GL Audit Numbering feature is enabled, the new **Exclude Balance Sheet Closing Journals from GL Numbering** preference lets you skip GL numbering for balance sheet closing journals. Balance sheet closing journals are excluded from GL audit numbering when the preference box is

checked. The check box is available for editing after you have saved the subsidiary record with the Create Balance Sheet Closing and Opening Journals preference checked and configured.

## Increased Flexibility for Creating Period End Journals

Changes in the user interface and processing rules have been made to enhance period end journal creation and deletion.

- The Task: Create Period End Journals page now includes a **Create All Journals** button. When you click Create All Journals, all period end journal processes shown on the task page are started. If you have already successfully completed some processes for this period, those processes are skipped. If the Require Memo on Period End Journals box is checked in the preferences for any subsidiary, an error is logged for the first process for that subsidiary. The processes for other subsidiaries continue to run.

- The Actions menu has been moved from the Create Journals page to the Task: Create Period End Journals page. The Actions menu includes the Delete link that opens the Delete Period End Journals page.
- On the Create Period End Journals page, you can now check any box on any of the subtabs that have journals ready to process. If you check boxes for processes that are dependent on other processes, the required processes run automatically, even if you have not selected them. Previously completed processes are skipped.

## Advanced Revenue Management Enhancements

Advanced Revenue Management includes two enhancements in 2019.1:

- The functions available for fair value formulas have been restricted to those that are appropriate for use with fair value calculations.
- A new filter has been added to the Update Revenue Arrangement and Revenue Plans page for those who use Multi-Book Accounting with Advanced Revenue Management. When you do manual updates, the **Accounting Book** filter enables you to filter your submissions by accounting book, as well as by date range. The Accounting Book filter applies to the update processes for revenue elements, revenue arrangements, and revenue recognition plans.

## GL Audit Numbering Enhancement

Beginning in 2019.1, you can choose whether to exclude posting transactions containing only zero-amount lines from general ledger audit numbering, including:

- Voided transactions
- Cancelled bills
- Item fulfillments for zero-amount items

This can be used for companies in jurisdictions which require that all transactions be numbered for audit purposes, regardless of value. To use this preference, you must have the GL Audit Numbering feature enabled.

This feature adds an **Exclude Zero Amount Transactions** box to the GL Audit Numbering Sequence form at Transactions > Management > GL Audit Numbering Sequences. When checked, transactions with only zero-amount lines are excluded from the numbering sequence. When cleared, all transactions will be included in GL audit numbering.

For more information, see the help topic [Excluding Transactions with Zero Amount Lines from GL Audit Numbering](#).

## Month End Currency Revaluation Enhancement

The Month End Currency Revaluation page now has **Mark All** and **Unmark All** buttons at the top of the list of accounts to facilitate account selection. You can access this page from the menu at Transactions > Financial > Revalue Open Currency Balances or from the Revalue Open Foreign Currency Balances task on the Period Close Checklist.

<div> <input type="button" value="Mark All"/> <input type="button" value="Unmark All"/> </div>					
INCLUDE	ACCOUNT	ACCOUNT TYPE	CURRENCY	LAST RUN DATE	RESULT
<input checked="" type="checkbox"/>	Accounts Payable	Accounts Payable	US Dollar		
<input checked="" type="checkbox"/>	Accounts Receivable	Accounts Receivable	US Dollar		
<input checked="" type="checkbox"/>	Fees Receivable	Accounts Receivable	US Dollar		

## Transaction Numbering Enhancements

Following are the 2019.1 transaction numbering enhancements:

- [Block Duplicate Document Numbers When Creating Vendor Bills, Vendor Credits, Card Charges, or Card Refunds](#)
- [Global Search by Document Number Only](#)

### Block Duplicate Document Numbers When Creating Vendor Bills, Vendor Credits, Card Charges, or Card Refunds

NetSuite 2019.1 now makes it possible to block users from creating the following transaction types if saving the form will result in duplicate document numbers:

- Vendor Bills
- Vendor Credits



- Card Charges
- Card Refunds

Prior to 2019.1, if the **Duplicate Number Warnings** preference on the Items/Transactions subtab at Setup > Accounting > Preferences > Accounting Preferences (Administrator) was checked, NetSuite warned when saving a transaction would produce a duplicate document number. With 2019.1, when **Warn and Block** in the Duplicate Number Warnings list is selected, users must change the external document number when a duplicate is possible.

To use this preference, an administrator can go to Setup > Accounting > Preferences > Accounting Preferences (Administrator). On the Items/Transactions subtab, select one of three options in the Duplicate Number Warnings list:

- **No Warnings** – Users are not warned when the transaction they are saving will create a duplicate document number.
- **Warn** – Users receive a message when attempting to save a transaction record with the same document number as another record of the same type. When the warning is displayed, a user can enter a different number before attempting to save again. Prior to 2019.1, this is how the Duplicate Number Warnings preference worked.
- **Warn and Block** – Users receive a message when attempting to save a transaction record with the same number as another record of the same type. When the warning is displayed, the user must click Cancel and change the document number in the record.

Users can also set their preference for duplicate number warnings at Home > Settings > Set Preferences > Transactions > Warnings, however, this setting is overridden by the company preference at Setup > Accounting > Preferences > Accounting Preferences (Administrator).

For more information, see the help topics Items/Transactions Accounting Preferences and Duplicate Transaction Number Warnings.

## Global Search by Document Number Only

NetSuite 2019.1 adds a preference to search only by document numbers when running global searches.

Prior to 2019.1, entering a number in global search returned results for both that document number and transaction number. With this preference, global search excludes transaction numbers from the search, and only searches by document numbers.

To use this preference, users with the **Set Up Company** role permission can go to Setup > Company > General Preferences and clear the **Show Transaction Numbering Setup** box. This will limit global searches to document numbers. This preference also hides the transaction numbering subtab at Setup > Company > Auto-Generated Numbers. To include both document and transaction numbers in global searches, check the Show Transaction Numbering Setup box.

For more information, see the help topic Setting General Account Preferences.

## Currency Rounding in Custom GL Lines Plug-in

Currency precision in NetSuite is zero or two decimal places, depending on the currency. For example, USD amounts have two digits to the right of the decimal, and Japanese yen (JPY) have none. Previously, the custom lines rounding was performed together with standard lines, which could result in errors or rounding corrections that sometimes affected standard lines.

As of 2019.1, credit and debit amounts set by the Custom GL Lines Plug-in are now directly rounded to currency precision. This change ensures that custom and standard lines are rounded and balanced

separately. The totals of the rounded currency amounts entered on custom lines must balance, so a check is performed when the plug-in starts to run. If the validation of the totals fails, then the plug-in run also fails.

## Administration

NetSuite 2019.1 includes the following enhancements to Administration features:

- [Opt In to Release Preview](#)
- [Mandatory 2FA Now Enforced for Integration Access to NetSuite](#)
- [Issue Token Endpoint Extended to Accommodate Mandatory 2FA Requirement](#)
- [Sandbox Domain Deprecation](#)
- [Core Administration Permissions Feature](#)
- [Plan to Deprecate the Full Access Role](#)
- [Enhanced Options to Configure Subsidiary Restrictions for Roles](#)
- [New Employee Access Permission](#)
- [Copy to Account \(Beta\): Copy a Custom Record from One Account to Another](#)
- [Multi-Language Translation Management \(Beta\)](#)
- [Certificate Storage for Digital Signing](#)
- [Mutual \(Two-Way\) Authentication for Outbound HTTPS Connections](#)
- [Log of Outbound HTTPS and SFTP Requests Now Available](#)
- [Reset of Long-Abandoned Customer Center Passwords](#)
- [Account-Specific Domains in NetSuite](#)

### Opt In to Release Preview

If you used a Release Preview account last release, you will receive a 2019.1 Release Preview account by default. If this does not apply to your organization and you would like to receive a 2019.1 Release Preview account, opt in. As of 2019.1, an opt-in procedure has been introduced to help you request a preview of the upcoming release. For more information, see the help topic [Requesting a Release Preview Account](#).

### Mandatory 2FA Now Enforced for Integration Access to NetSuite

NetSuite began enforcing the mandatory two-factor authentication (2FA) requirement in all NetSuite accounts as of 2018.2. By default, the Administrator and other highly privileged roles are designated as 2FA required, and this requirement cannot be removed. Any standard or customized roles subject to the 2FA requirement are indicated in the **Mandatory 2FA** column on the Two-Factor Authentication Roles page.

Integrations that employ user credentials to access NetSuite may be subject to mandatory 2FA in the following situations:

- NLAAuth for RESTlets. For more information, see the help topic [Using User Credentials for RESTlet Authentication](#).

- SuiteTalk (web services) integrations that use the login operation. For more information, see the help topic login.
- SuiteTalk (web services) integrations that use the passport element sent as Request Level Credentials (RLC). For more information, see the help topic Request-Level Credentials.
- Inbound SSO integrations that use the mapSso operation. For more information, see the help topic mapSso.

For more information, see the help topic Mandatory Two-Factor Authentication (2FA) for NetSuite Access.



**Important:** It is possible that your integrations must use certain functions that require a highly privileged role. You should transition these integrations to use token-based authentication (TBA) rather than user credentials, or specify a less-privileged role that does not require 2FA. For more information, see the help topic Token-based Authentication (TBA). For information about using TBA with your integrations, see the help topic Integration Management.



**Note:** A series of test windows is planned for enforcing mandatory 2FA for integrations. These test windows will help you to determine whether your integrations are ready for mandatory 2FA. You will receive notifications concerning the dates and times the test windows will be in effect in your accounts.

## Issue Token Endpoint Extended to Accommodate Mandatory 2FA Requirement

For the issue token endpoint, the NLAAuth authentication header includes an optional parameter, `nlauth_otp`. The `nlauth_otp` parameter is useful if you are going to issue a token for a highly privileged role. You can use the `nlauth_otp` parameter to include a one-time password (OTP) in the NLAAuth header. The OTP is equivalent to the 2FA verification code provided by a user logging in to the NetSuite UI. Users can generate the necessary codes using an authenticator app, such as Google Authenticator, Microsoft Authenticator, or Okta Verify. The authentication application you choose must support OATH TOTP, the IETF RFC 6238 standard. To review the standard, go to <https://tools.ietf.org/html/rfc6238>.

An authenticator app is configured for and linked to a user's email address. The verification code must be synchronized to the email address used in the NLAAuth header for the integration.



**Note:** An authenticator app must generate the verification code included in an NLAAuth header. Verification codes such as those supplied by an email, an SMS message, a voice call, or from a backup code are not acceptable.

The OTP is a TOTP: a time-based one-time password. Time-based means that the verification code must be generated at the time of need. In this case, the verification code must be generated when the request is sent and being authenticated. The verification code is valid for approximately a minute surrounding the time of authentication. The validity window may vary depending on the implementation.


For more information, see the help topic Mandatory 2FA, the Issue Token Endpoint, and `nlauth_otp`.

When calling the Issue Token endpoint, an Integration record is created and automatically installed in your account. The **Require Approval during Auto-Installation of Integration** preference affects whether this new record is automatically enabled. You can manage the preference at Setup > Integration > Web Services Preferences.

If the box for the **Require Approval during Auto-Installation of Integration** preference is:

- not checked (set to false) the **State** field on the new application is automatically set to **Enabled**, and all requests are permitted.
- checked (set to true) the **State** field on the new integration record is set to **Waiting for Approval**.

In the latter case, you must manually edit the record and set the **State** to **Enabled**. Until you do, all requests sent by that application are blocked.

 **Note:** A series of test windows is planned for enforcing mandatory 2FA for integrations using the issue token endpoint. These test windows will help you to determine whether your integrations that are using the issue token endpoint are ready for mandatory 2FA. You will receive notifications concerning the dates and times when the test windows will be in effect in your accounts.


## Sandbox Domain Deprecation

The sandbox domain will no longer be accessible as of February 28, 2019. You must refresh your sandbox accounts residing on the sandbox domain (system.sandbox.netsuite.com) before this date so that they will move to the NetSuite domain (system.netsuite.com). If you do not refresh your sandbox, you will lose access to sandbox accounts on the sandbox domain on February 28th, 2019.

For more information, see the help topic [Sandbox Pre-transition Checklist](#).

## Core Administration Permissions Feature

The Core Administration Permissions feature has been introduced in 2019.1 to reduce the need to use the standard administrator role. You can use the Core Administration Permissions feature to customize a role to behave like the administrator role, while also restricting access to areas of NetSuite. For example, you can create a role for an IT administrator and assign the access the role needs, but limit the role's access to sensitive employee information.

 **Important:** When you assign the Core Administration Permissions feature to a role, the role automatically becomes a mandatory two-factor authentication (2FA) role. For more information, see the help topic [Permissions Requiring Two-Factor Authentication \(2FA\)](#).

Before you can assign the Core Administration Permissions, you must enable the feature. To enable the Core Administration Permissions feature, go to Setup > Company > Setup Tasks > Enable Features. On the **Company** subtab, under Access, check the **Core Administration Permissions** box.

You can assign Core Administration Permissions to any role, and then configure the role to restrict access to areas of NetSuite. To grant access to other parts of NetSuite, assign the appropriate permissions to the customized role. To assign Core Administration Permissions, go to Setup > Users/Roles > User Management > Manage Roles. Next to a role, click **Customize**. Check the **Core Administration Permissions** box. To save your changes, click **Save**.

For more information, see the help topic [Core Administration Permissions Feature](#).

## Plan to Deprecate the Full Access Role

As of 2019.1, the following changes have been made to the Full Access role:

- The Full Access role has been renamed to **Full Access (deprecated)**.
- You cannot assign the Full Access role to new users.
- When users log in with the Full Access role, they see a notification indicating that the Full Access role is being deprecated.
- A new permission called Core Administration Permissions is available. This permission provides access to some of the same functions that are currently available to users with the Full Access role. You may be able to use the Core Administration Permissions as an alternative to the Full Access role.

You should review the users in your account to whom the Full Access role is assigned. Determine which users need the Full Access role for their job functions and consider the following:

- If any users do not need the Full Access role, assign them another role and encourage them to start using it as soon as possible.
- For users who do require this role, analyze their needs to determine the access granted by this role that is not available through a different role. Develop a strategy to configure the desired access for these users by assigning them a different role or additional global permissions.

For more information, see the help topics [Customizing or Creating NetSuite Roles](#) and [Core Administration Permissions Feature](#).

## Enhanced Options to Configure Subsidiary Restrictions for Roles

As of 2019.1, enhancements have been added to the role record page where you configure subsidiary restrictions. These changes are designed to make it more intuitive to assign subsidiary restrictions to roles. Previously, it was not clear how to restrict access to a user's subsidiary, and granting access to all active subsidiaries was a manual process. Also, it was not possible to control access to inactive subsidiaries because they were not included in the list of active subsidiaries. To address these issues, a new Subsidiary Restrictions section has been added to the role record.


The Subsidiary Restrictions section of the role record now includes the following four options:

- **All** – Grants the role access to all subsidiaries, including inactive subsidiaries.
- **Active** – Grants the role access to the active subsidiaries only.
- **User Subsidiary** – Restricts the role's access to the user's subsidiary only. When users logs in with this role, they can access their own subsidiary only. A user's subsidiary is set on the employee record. For more information, see the help topic [Assigning a Subsidiary to an Employee](#). By default, this option is selected when you create a new role.
- **Selected** – When you select this option, a list of active and inactive subsidiaries is populated. You select the subsidiaries to which you want to restrict the role's access. You must select at least one subsidiary from the list.

Also, the **Allow Cross-Subsidiary Record Viewing** box has been moved from the General section to the Subsidiary Records section of the role record.

The enhancements to subsidiary restrictions may cause some users to experience changes in access to records. Administrators will be required to adjust the impacted roles to make sure that users have the access they require. Additionally, some scripts using custom roles may require updates.

If necessary, administrators and users with the Set Up Company permission can revert the role behavior of active and inactive subsidiaries to the 2018.2 state. To revert the 2019.1 subsidiary assignment changes, on the General Preferences page, check the **Enable Legacy Subsidiary Restrictions** box.


 **Note:** The Enable Legacy Subsidiary Restrictions is a temporary feature that will be removed in a future release. As such, you should only use the feature as a temporary solution.

For more information about subsidiary restrictions for roles, see the help topic Customizing or Creating NetSuite Roles.


## New Employee Access Permission

As of 2019.1, when the Advanced Employee Permissions feature is enabled, the Employee Access permission is available to be assigned to roles. A role with this permission can give access and assign roles to employees who fall into the restriction policy defined on their role. This permission is not automatically assigned to a role when the feature is enabled and must be manually added. For more information, see the help topic Employee Access Permission Overview.

## Copy to Account (Beta): Copy a Custom Record from One Account to Another

 **Warning:** Copy to Account is a beta feature. The contents of this feature are preliminary and may be changed or discontinued without prior notice. Any change may impact the feature's operation with the NetSuite application. Warranties and product service levels do not apply to this feature or the impact of the feature on other portions of the NetSuite application. We may review and monitor the performance and use of this feature. The documentation for this feature is also considered a beta version and is subject to revision.

Copy to Account is a new SuiteCloud platform tool for administrators. Users with limited programming knowledge can copy a custom record, also known as a custom object, into another account.

 **Note:** Copy to Account is powered by SuiteCloud Development Framework (SDF). For more information, see *SuiteCloud Development Overview*.

Prior to 2019.1, installing a customization to another account required SuiteScript or SDF experience. You could use SDF to import customizations into an account customization project and deploy them to your accounts. With Copy to Account, you can now deploy a custom record, also known as a custom object, with a point-and-click NetSuite interface. Copy to Account is for accounts to which you have administrator access, such as your production, development, and sandbox account types. It can copy one custom object (including dependencies and instances) at a time.

Copy to Account is available only to users with the account administrator role. In addition, on the target account to which you want to deploy, you must enable the **Copy to Account** feature at **Setup > Company > Enable Features**.

**SuiteCloud Development Framework**

☒ SUITECLOUD DEVELOPMENT FRAMEWORK

CREATE SUITECLOUD PROJECTS CONTAINING CUSTOMIZATIONS FOR INTERNAL USE WITHIN YOUR ORGANIZATION OR FOR COMMERCIAL DISTRIBUTION. BY [SERVICE](#).

☐ COPY TO ACCOUNT (BETA)

COPY CUSTOMIZATIONS FROM OTHER ACCOUNTS INTO THIS ACCOUNT. BY ENABLING THIS FEATURE, YOU AGREE TO THE [SUITECLOUD TERMS OF SERVICE](#).

To start Copy to Account, in the source NetSuite account, click the **Copy to Account (Beta)** link on a custom record that is supported by SDF. For more information about custom records that are supported by SDF, see the help topic [Customizations Supported by SuiteCloud Development Framework](#).

Specify the target account and give it a deployment name.

Copy Object to Account

Account

> Dependencies > Preview > Deployment

Object: My Custom KPI Scorecard Account: Blank Account

Specify a target account and audit trail name:

**TARGET ACCOUNT \*** ⓘ

**DEPLOYMENT AUDIT TRAIL NAME \***

⚠ Warning: This is a production (or live) account.

Next

Cancel

Copy to Account determines any dependencies, references, and instances related to the custom record. A data grid is generated to show the required items, parent and child components, status in the target account, and other information to help you select which dependencies to include in your copy.

**Note:** You cannot copy customizations that are locked, part of an installed SuiteApp, or involved in a circular dependency. For more information, see *Dependency Errors*.

Copy Object to Account Account > **Dependencies** > Preview > Deployment Object: My Custom KPI Scorecard Account: Blank Account

Select dependencies: Learn more about dependencies

<input type="checkbox"/>	NAME	SCRIPT ID	TYPE	STATUS	INCLUDE INSTANCES
<input checked="" type="checkbox"/>	My Custom KPI Scorecard	custkpiScorecard1	KPI Scorecard	Absent from Target Account	

Back Next Cancel

After selecting your dependencies, you are prompted to preview deployment to the target account. During this step, your copy is validated against the target account.

Copy Object to Account Account > Dependencies > **Preview** > Deployment Object: My Custom KPI Scorecard Account: Blank Account

✓ Preview is complete. Ready to deploy.

Validate manifest -- Success  
 Validate deploy file -- Success  
 Validate configuration -- Success  
 Validate objects -- Success  
 Validate files -- Success  
 Validate folders -- Success  
 Validate preferences -- Success  
 Validate flags -- Success  
 Validate account settings -- Success  
 Validate Custom Objects against the Account -- Success  
 Validate file cabinet items against the account -- Success  
 Validation COMPLETE

DEPLOYMENT PREVIEW

Create object -- custkpiScorecard1 (kpiScorecard)  
 Preview COMPLETE

Back Deploy Cancel

When the preview is completed, your copy is ready to deploy. At the deploy step, you can leave the page or keep the page open to view a live log. Deployment cannot be canceled.

Copy Object to Account Account > Dependencies > Preview > **Deployment** Object: My Custom KPI Scorecard Account: Blank Account

✓ Deployment complete DEPLOYMENT AUDIT TRAIL NAME: Custom KPI Copy

2019-01-04 08:47:06 (PST) Installation started  
 Info -- Account [(PRODUCTION) Blank Account]  
 Info -- Account Customization Project [Custom KPI Copy]  
 Info -- Framework Version [1.0]  
 Validate manifest -- Success  
 Validate deploy file -- Success  
 Validate configuration -- Success  
 Validate objects -- Success  
 Validate files -- Success  
 Validate folders -- Success  
 Validate preferences -- Success  
 Validate flags -- Success  
 Validate account settings -- Success  
 Validate Custom Objects against the Account -- Success  
 Validate file cabinet items against the account -- Success  
 Begin deployment  
 Create object -- custkpiScorecard1 (kpiScorecard)  
 2019-01-04 08:47:10 (PST) Installation COMPLETE (0 minutes 5 seconds)

Done



From the target account, you can download a log of the deployment at **Customization > SuiteCloud Development > Deployment Audit Trail**. The log is identified by the deployment name you specified for the copy.

PUBLISHER ID	APP ID	NAME	VERSION	ACTION	STATUS	START DATE	END DATE	USER	ERROR REFERENCE	LOG
		Custom KPI Copy		INSTALL	COMPLETE	1/4/2019 8:47 am	1/4/2019 8:47 am			<a href="#">Download Log</a>



**Important:** In some cases, object support is only partial and only a subset of the fields can be copied.

## Multi-Language Translation Management (Beta)



**Warning:** Translation Collections is a beta feature. The contents of this feature are preliminary and may be changed or discontinued without prior notice. Any change may impact the feature's operation with the NetSuite application. Warranties and product service levels do not apply to this feature or the impact of the feature on other portions of the NetSuite application. We may review and monitor the performance and use of this feature. The documentation for this feature is also considered a beta version and is subject to revision.

NetSuite 2019.1 provides beta support for NetSuite Translation Collections.

A Translation Collection is a customization object that stores translation terms with their translations. A single Translation Collection can contain up to 1,000 translation terms. A translation term is a key/value pair: the key being an identifier, and its value being a translatable string. Keys contain one string that can be translated into multiple languages. You can translate a string into any language supported by NetSuite. For a list of languages supported by NetSuite, see the help topic [Configuring Multiple Languages](#).

If you are a NetSuite developer or NetSuite account administrator, you can create a collection of terms for translation. You can export the collection of terms to a translation vendor in the form of an XLIFF or XLF translation file. After the translation vendor translates the collection of terms, you can import the translation file. You can use the collection of terms to translate labels and messages in the NetSuite UI and in SuiteApps.

You can include Translation Collections in NetSuite bundles. For more information, see [Translation Collection Objects Can Be Included in Bundles](#).

SuiteScript developers can programmatically interact with Translation Collections with the SuiteScript 2.0 N/translation Module (Beta). Developers can load a collection to view the terms within a collection, or get a single string to use in a translation. For more information, see [SuiteScript 2.0 - N/translation Module \(Beta\)](#).

To use Translation Collections, you must have:

- The Multi-Language feature enabled in your NetSuite account. For information, see the help topic [Enable Localization Features](#).
- The Manage Translation permission granted for your role. For information about setting permissions for a role, see the help topic [Set Permissions](#).

In the UI, you manage Translation Collections on the Manage Translations page, accessible from **Customization > Translations > Manage Translations (Beta)**.

Manage Translations (Beta) Import...

[Collections](#) [Strings](#) [Import Jobs](#)

[New](#)

NAME	SCRIPT ID	FROM BUNDLE	DEFAULT LANGUAGE	DESCRIPTION	STRINGS	
*** Phrases	custcollection_phrases		German		4	+
*** Simple strings	custcollection_simplestrings		Spanish		2	
*** Special strings	custcollection_specialstrings		Spanish		4	
*** Full collection, 1000 keys	custcollection_manystrings		Spanish		1001	
*** Collection to test Long values	custcollection_longvalues00000cu...		Spanish		1	

The following table lists translation management tasks and where to find information about each task:

Task	See
Create Translation Collections	Creating a Translation Collection
Modify Translation Collections	Modifying a Translation Collection
Delete Translation Collections	Deleting a Translation Collection
Export collection translation files to send to translation vendors for translation	Exporting a Translation Collection
Import translation files after they have been translated by vendors	Importing a Translation Collection
Manage collection strings	Working with Translation Collection Strings
View information about Translation Collections	About the Manage Translations Page Manage Translations Page Collections Subtab
View information about the strings in collections	Manage Translations Page Strings Subtab
View information about collections that have been imported	Manage Translations Page Import Jobs Subtab
Use collections with SuiteScript	Use Translation Collections with SuiteScript
Include collections in bundles	Creating a Bundle with the Bundle Builder Objects Available in Customization Bundles

## Certificate Storage for Digital Signing

As of 2019.1, a new Certificates menu item is available to account administrators and other users with the appropriate permission. To access the Certificates menu, go to Setup > Company > Preferences. The Digital Certificates page offers storage for PFX and P12 files used to authenticate your identity in jurisdictions where digital signing is required or supported. Developers can now sign sections of XML documents generated from NetSuite, such as invoices, with the digital signature from a certificate they have uploaded on the Digital Certificates page. A new SuiteScript 2.0 Digital Signing API is supported for this purpose.

You can view upcoming expiration dates of certificates and upload multiple certificates for various subsidiaries. You do not need to upload public certificates.

The Server SuiteScript feature must be enabled to access the Digital Certificates page. Two new permissions are available to manage access to the Digital Certificates page. You can add the Certificate

Access permission to a role to give users access to certificates through scripting. Add the Certificate Management permission to give access to the Digital Certificates page in the UI.

Digital Certificates				
<input type="text" value="Search name, description, id, subsidiaries or expiration date"/> <input type="checkbox"/> Expiring soon only <a href="#">Create New</a> <span>&lt;&lt; &lt; 1 of 1 &gt; &gt;&gt;</span>				
NAME	DESCRIPTION	ID	SUBSIDIARIES	EXPIRATION DATE
Brazilian test certificate 1		custcertificatebraztest1	SUB BR(USD)	12/20/2018
China test certificate 1		custcertificatechinaest1	Parent Company, SUB UK, SUB UK, SUB SING, SUB ...	9/12/2027

For more information on the new Digital Signing API, see [SuiteScript 2.0 – Signing API](#).

## Mutual (Two-Way) Authentication for Outbound HTTPS Connections

In some countries and markets, NetSuite customers must comply with government regulations requiring mutual, or two-way, authentication of HTTPS connections. Both parties, the server and the client, can authenticate each other. The need for highly secure communications is typically a requirement for tax-related communications between business and governments or other institutions. Administrators and SuiteScript developers will appreciate the benefits that mutual authentication provides: a more secure communication pathway that any of your applications can use.

## Log of Outbound HTTPS and SFTP Requests Now Available

Previously, it was not possible to view logs for outgoing HTTPS and SFTP requests made from your NetSuite account. The ability to view logs is important for auditing account activity. An audit of a log helps to identify requests that result in errors and requests that are not as efficient as they could be.

An Outbound Requests log is now available in NetSuite, a record of all outbound HTTPS and SFTP requests made by an account. This log includes the URL, the method, the result, and other useful details. SFTP requests issued from SuiteScript are also logged. A link to the script deployment that issued a particular request is also available.

By default, this log is only accessible to users with the administrator role. Administrators can assign the Outbound Request permission to other roles in an account to provide view access to the log to other users.

## Reset of Long-Abandoned Customer Center Passwords

As announced in the 2018.2 release notes, we reset the passwords associated with website customers who met either of the following criteria:

- The website customer had not logged in within the previous three years.
- It had been more than 90 days since the customer registered a login name and created a password, and the customer never logged in again.

The customer, lead, or prospect records associated with reset passwords still exist in your NetSuite account. Only the password was reset on the records. Users whose passwords were reset can still

attempt to log in to your website. These users receive an error message that their password has expired, and that they need to set up a new password. For information on how to customize the expired password error message for your website, see [Customizing Website Text](#).

## Account-Specific Domains in NetSuite

An account-specific domain is a domain that is unique for each NetSuite account, because the account ID is a part of the domain. An account-specific domain does not change. For example, if you were using account-specific domains in your integrations, you would not need to make changes to URLs, even if your account was moved to a different data center.

For the last several releases, account-specific domains have been available in production, sandbox, and Release Preview accounts for SuiteTalk, RESTlets, and a shop subdomain for WSDK websites.

As of 2019.1, there are several new features available related to account-specific domains. See the following for more information about each of these new features:

- [Announcing Account-Specific Domains for the NetSuite UI](#)
- [Account-Specific Domains Listed on Company Information Page](#)
- [Account-Specific Domains for External Forms](#)
- [Account-Specific Domains Now Available for Special Purpose NetSuite Accounts](#)
- [Account-Specific Domains Reap the Benefits of CDNs](#)

## Announcing Account-Specific Domains for the NetSuite UI

A new feature, account-specific domains in the NetSuite UI, will be rolling out in the first half of 2019. This feature will be activated on an account-by-account basis, and account administrators will be notified in advance when the feature will be activated in their accounts. The feature will first become available in sandboxes and 2019.1 Release Preview accounts. Then the feature will be activated in production accounts.

The new account-specific domain is in the following format:

<accountID>.app.netsuite.com

Users will still log in to NetSuite from [system.netsuite.com](#). As soon as authentication completes, users are automatically redirected to their account-specific domain.

Users may notice that the URL in the browser looks different and that the URL contains the account-specific domain. For example, if the account ID was 123456, the domain would be [123456.app.netsuite.com](#). The URL for the home page (the dashboard), for example, would be [https://123456.app.netsuite.com/app/center/card.nl?sc=-29&whence=](#).

The <accountID>.app.netsuite.com domain provides a big advantage. Because the account ID is part of the domain, users can have active sessions in different accounts on the same domain, at the same time, with the same browser. Every account (production, sandbox, Release Preview, and other special purpose NetSuite accounts) has a unique account ID. See the following procedure for instructions on how to start and maintain two active sessions in different accounts.

### Starting and maintaining active sessions in production and sandbox accounts simultaneously:

1. Log in to the production account.

2. Select another role in a sandbox account by right-clicking and selecting the option to open in another tab.
3. Return to the tab with your production role and click **Login**.

## Account-Specific Domains Listed on Company Information Page

Administrators and other users with adequate permissions can go to **Setup > Company > Company Information** and click the **Company URL** tab to view the account-specific domains available in your account. The URLs for account-specific domains are listed for all services where they are available in your account, including:

- Customer Center Login page
- NetSuite UI (new in this release)
- External Forms (new in this release)
- SuiteTalk (web services)
- RESTlets
- Shop (for WSDK sites)

In the following example of the new Company URLs tab, the account ID is 123456.

Addresses	Company URLs	System Notes
CUSTOMER CENTER LOGIN		RESTLETS
<a href="https://123456.app.netsuite.com/app/login/secure/privatelogin.nl?c=123456">https://123456.app.netsuite.com/app/login/secure/privatelogin.nl?c=123456</a>		<a href="https://123456.restlets.api.netsuite.com">https://123456.restlets.api.netsuite.com</a>
NETSUITE UI		EXTERNAL FORMS
<a href="https://123456.app.netsuite.com">https://123456.app.netsuite.com</a>		<a href="https://123456.extforms.netsuite.com">https://123456.extforms.netsuite.com</a>
SUITE TALK (SOAP AND REST WEB SERVICES)		
<a href="https://123456.suitetalk.api.netsuite.com">https://123456.suitetalk.api.netsuite.com</a>		

Save Cancel Reset

Account-specific domains contain the account ID as part of the domain name. The account-specific domain name is not dependent on the data center where an account is hosted, so that the domain does not change, even if an account is moved to a different data center.

Account-specific domains are returned when using dynamic discovery methods, such as the SuiteTalk method `getDataCenterUrls`, The REST roles Service, or a method in the SuiteScript 2.0 `N/url` Module. See the help topic `url.resolveDomain(options)`.

It is possible to use an account-specific domain directly in an integration. However, you should use dynamic discovery methods unless there is a specific reason to use an account-specific domain in your integration.

**Note:** Account-specific domains currently are not available for SuiteAnalytics Connect (ODBC). You can find the host name you should use for your connection in the **Service Host** field on the SuiteAnalytics Connect Driver Download page under **Your Configuration**.

## Account-Specific Domains for External Forms

The following items now link to account-specific domains:

- Links in email, such as email address verification email and success notification email for bulk merge operation

- External forms
- Campaign Subscription Center

For information about account-specific domains, see the help topic URLs for Account-Specific Domains.

## Account-Specific Domains Now Available for Special Purpose NetSuite Accounts

Account-specific domains are now available for special purpose NetSuite accounts. In past releases, account-specific domains were available for REST, SuiteTalk (web services), and WSDK sites, but these domains were not available in special purpose accounts. This release extends support for account-specific domains to special purpose account types, including training, sales demo, trial, SuiteCloud Developer Network, Oracle University, and education accounts.

- Account-specific domains contain the account ID as part of the domain name. The account-specific domain name is not dependent on the data center where an account is hosted, so that the domain does not change, even if an account is moved to a different data center.
- Account-specific domains are returned when using dynamic discovery methods, such as the SuiteTalk method `getDataCenterUrls`, The REST roles Service, or a method in the SuiteScript 2.0 `N/url` Module. For more information, see the help topic `url.resolveDomain(options)`.
- An account-specific domain can also be used directly in an integration.

Administrators and other users with adequate permission can go to **Setup > Company > Company Information** and click the **Company URL** subtab to view their account-specific domains.



**Note:** Account-specific domains are not currently available for SuiteAnalytics Connect (ODBC). You can find the host name to use for your connection in the **Service Host** field on the **SuiteAnalytics Connect Driver Download** page, under **Your Configuration**.

## Account-Specific Domains Reap the Benefits of CDNs

All NetSuite users can enjoy the performance benefits provided by Content Distribution Networks, or CDNs, even when accessing the NetSuite UI using account-specific domains. CDNs cache frequently used content. The presence of CDNs in the global distribution network means faster page load times, especially for users located far from a data center.

## Employee Management

NetSuite 2019.1 includes the following enhancement to Employee Management features:

- Time-Off Management: Accruals Based on Hours Worked for Non-Netsuite Payroll Customers
- Missing Weekly Timesheets
- Foreign Currency Expense Reports
- Employee Status and Employee Type Categories
- Workforce Analytics Enhancements
- Advanced Employee Permissions Enhancements
- Time-Off Expiry Notification Configuration

- Classification for Individual Paycheck Line Items
- Associating Deductions and Earnings Payroll Items with Asset Accounts
- Corporate Card Expenses Enhancements
- Weekly Timesheets Improvements
- Kudos Enhancements.

## Time-Off Management: Accruals Based on Hours Worked for Non-Netsuite Payroll Customers

If you are not a NetSuite Payroll customer, when you create time-off rules within a time-off plan, you can now set up a time-off type to accrue based on hours worked. Previously, accruals based on hours worked were available only to NetSuite Payroll customers.

Accruals based on hours worked require the Time Tracking feature. After supervisors review and approve time records, accrued time off is calculated based on hours worked and the rate indicated in the time-off rule. The accrued time off is then added to employees' time-off balances.



**Important:** To use accruals based on hours worked, time records must be approved by supervisors. In Accounting Preferences, on the Time & Expenses subtab, make sure the **Require Approvals on Time Records** box is checked.

## Missing Weekly Timesheets

The following new fields have been added to the Weekly Timesheet:

- Submitted hours – Sum of pending and approved hours.
- Rejected hours – Sum of hours with rejected status.
- Planned hours – Sum of planned hours. This field is only available when Project Management and Show Planned Time in Time Entry preference are enabled.
- Allocated hours – Sum of allocated hours. This field is only available when Resource Allocations is enabled.
- Work Calendar hours – Sum of expected hours based on the employee work calendar.

All of these new fields are automatically calculated and hidden by default. You must customize your weekly timesheet entry form to show these fields in the user interface.

You can use these fields to create saved searches and add dashboard reminders to track incomplete timesheets. Missing timesheets are now automatically created for the current week and the previous five weeks on the first day of the week for active employees and project resources.


## Foreign Currency Expense Reports

In NetSuite 2019.1, employees can now create expense reports in currencies other than your default currency. The Multiple Currencies feature is required to create foreign currency expense reports.

You can define employee currencies for expense reports on the employee record under Human Resources > Expense Report Currencies. Only currencies available for your company can be added to an employee's expense report currencies.

Currency and Exchange Rate fields have also been added to the expense report form. An employee's default currency is automatically selected. You can select a different currency based on the currencies defined on the employee's record. If you change the currency on a new expense report after entering expense lines, the existing lines are not automatically updated.

When creating a bill payment for an expense report, in the currency field, you can select a currency from the employee's list of defined currencies.

 **Note:** Expenses can be paid through NetSuite Payroll only if the reimbursement currency is set to United States Dollars.

## Employee Status and Employee Type Categories

In NetSuite 2019.1, you can assign a category to an employee status and an employee type. Employee status categories enable Human Resources to classify and track the stages of employment that employees move through in your company. Employee status categories include prehire, actively employed, leave, and terminated. Employee type categories are used to represent the legal relationship between the company and the employee. Employee type categories include contingent, contractor, non-worker, and permanent.

Each category ships with pre-defined employee statuses and types. By default, these statuses and types are marked inactive. To assign them to employees these statuses and types will need to be made active. When a category is assigned to a status or a type it is permanent and cannot be changed. For more information, see the help topic Setting Up Employee Related Lists.

## Workforce Analytics Enhancements

In NetSuite 2019.1, when using the Workforce Analytics feature to measure and analyze your company's headcount, hiring, and turnover trends, you can now filter the information by employee type categories. Employee type categories include contingent, contractor, non-worker, and permanent. For more information about the Workforce Analytics feature, see the help topic Workforce Analytics Overview. For more information about employee type categories, see the help topic Setting Up Employee Related Lists.

## Advanced Employee Permissions Enhancements

In 2019.1, when the Advanced Employee Permissions feature is enabled it now includes the Employee Access permission. A role with this permission can give access and assign roles to employees who fall into the restriction policy defined on their role. This permission is not automatically assigned to any role when the feature is enabled and must be manually added. For more information, see the help topic Employee Access Permission Overview.

## Time-Off Expiry Notification Configuration

In NetSuite 2019.1, you can now specify whether expiry notifications appear for a specific time-off type within a time-off plan. Previously, expiry notifications appeared for all time-off types. When you create a time-off rule, to turn on expiry notifications, you can check the Show Balance Expiry box. Notifications appear in the Employee Center when employees have time off that expires within the current or the next calendar month.



In existing time-off rules that were created before your account is updated to 2019.1, the Show Balance Expiry box is checked by default. To turn off expiry notifications, clear the Show Balance Expiry box.

## Classification for Individual Paycheck Line Items

With NetSuite Payroll, on individual paycheck line items, you can now classify earnings, deductions, taxes, or company contributions by department, location, or class. The Departments, Locations, or Classes features must be enabled in your NetSuite account. Previously, you could classify an entire paycheck, but not individual line items.

To classify individual paycheck line items, you can check the Classify Individual Paycheck Lines box on paycheck records, or you can set a payroll preference so that the box is checked by default.

Also, department, location, and class values from time entries now automatically appear as read-only fields on paycheck records.

## Associating Deductions and Earnings Payroll Items with Asset Accounts

In NetSuite 2019.1, the Expand Account List for Payroll Items preference, which was introduced in 2018.2, has additional functionality. You can now choose to associate deduction and earning payroll items with asset accounts. When deductions are posted to asset accounts, the asset account is credited in the general ledger. When earnings are posted to asset accounts, the asset account is debited in the general ledger.

## Corporate Card Expenses Enhancements

Employees whose companies pay corporate credit card bills directly now have the ability to differentiate personal expenses charged to a corporate card using expense categories.


To use personal corporate card expenses, check the Personal Corporate Card Expense box on expense category records. When employees enter expense reports, they can select any personal corporate card expense category to indicate that the line item is not a company expense. Only one personal expense category may be used on a single expense report.

**Note:** Corporate card expense categories can only use other asset accounts. If your company does not use expanded account lists, the corporate card field on expense categories is disabled. Any expense category attached to an other asset account is automatically designated a corporate card expense. To enable the expanded account list preference, go to Settings > Accounting > Preferences > Accounting Preferences > General Ledger.

## Weekly Timesheets Improvements

In NetSuite 2019.1, the following improvements have been made to Weekly Timesheets:

- When entering time on a weekly timesheet, you can now edit empty or open time entries in rows with entries that are approved or pending approval.
- The Approve Time page now remembers the last view selected. Previously, the Approve Time page loaded with the standard view, requiring any customized views to be selected in the View field.

 **Note:** The Approve Time page has a new URL. Any bookmarks you may have to the previous Approve Time page should be updated.

- The Post Time page now includes a date range filter. Job Costing and Project Budgeting is required for posting time.
- You can now sort time entries on weekly timesheets in view mode only.
- Weekly timesheets are now available in the Recent records menu.

## Kudos Enhancements

In NetSuite 2019.1, you can now rename Kudos in the Employee Center to better reflect your company culture. For more information, see the help topic Kudos.

## Item Record Management

NetSuite 2019.1 includes the following enhancement to Item Record Management features:

- [Commerce Categories on the Item Record](#)
- [CSV Import of Item Location Configuration](#)
- [Fulfill and Receive Service Items](#)

### Commerce Categories on the Item Record

This release brings important Commerce Category information and reporting to item records. You can now see a list of all the Commerce Categories an item is assigned to on the Item Record. This information is located on the Web Store subtab of the Commerce Categories subtab. The following information is listed for each category:

- Site
- Commerce Catalog
- Commerce Category
- Primary Category Assignment Yes/No
- Inactive Category Yes/No
- Category Start Date and Time
- Category End Date and Time

The Item Record search now also lets you include Commerce Category information in the item list and filter the list based on Commerce Categories. You can also create item saved searches with Commerce Category information results and criteria. Fields available for search include the following:

- Commerce Catalog
- Commerce Category
- Commerce Category End Date
- Commerce Category Is Inactive Yes/No
- Commerce Category is Primary Yes/No
- Commerce Category Name

- Commerce Category Start Date

See the help topic [View Commerce Category Assignments for Items](#) for more information.

## CSV Import of Item Location Configuration

Previously, when using the Advanced Item Location Configuration feature, item location attributes had to be set or updated individually and manually for each location. Now, item location attributes can be set or updated using the CSV import process.

Item location attributes may need to be added when a new location is added. If an item has a new vendor lead time, that update may need to be made across locations. Now, you can make these changes more easily by mass updates using CSV Import.

To import CSV records for Item Location Configuration, use the CSV import assistant at Setup > Import/Export > Import CSV Records.

You can still manually update individual items and location attributes, if needed.

## Fulfill and Receive Service Items

As of NetSuite 2019.1, when you use the Projects feature, the following is now true:

- You can create a non-inventory item regardless of whether the Can Be Fulfilled/Received box is checked.
- You can create a service item regardless of whether the Can Be Fulfilled/Received box is cleared.
- You can edit non-inventory and service items and clear the Can Be Fulfilled/Received box, if checked.
- You can edit service items, but you cannot check the Can Be Fulfilled/Received box, if cleared.
- You can edit non-inventory items, and you can check the Can Be Fulfilled/Received box, if cleared.

## Inventory Management

NetSuite 2019.1 includes the following enhancements to Inventory Management features:

- [Inventory Costing Enhancements](#)
- [Control Tower Snapshot Enhancements](#)

## Inventory Costing Enhancements

When using the Inventory feature, the following enhancements have been made for managing inventory costing.

- **Allow Inventory Transactions Dated Outside the Posting Period**  
To ensure your employees adhere to required accounting practices, set the preference that prevents setting a transaction date that is outside the correct posting period. Set the Allow Inventory Transactions Dated Outside the Posting Period preference at Setup > Accounting > Accounting Preferences.
- **Deleting a Standard Cost Item**

When you use the Standard Costing feature, administrators now receive a warning message when deleting an item that has a standard cost, either active or historical. Because items' unit costs are found in inventory revaluation transactions and not on item records, this helps preserve the integrity of the data used to evaluate items' inventory costs.

Before you can delete such an item, you must first delete the standard cost on the inventory revaluation transaction. The warning message displays a link to the revaluation transaction that includes the standard cost.

## Control Tower Snapshot Enhancements

Now, when you use the Supply Chain Control Tower feature, you have better insight to analyze inventory supply and demand and more efficiently plan future purchases and product line production.

To use the new fields below on Supply Chain Snapshots, you must use Advanced Inventory Management with these features enabled: Inventory, Multi-Location Inventory, Supply Chain Control Tower. Inventory must be enabled for Supply Chain Control Tower.

Customize your Supply Chain Snapshot page to use the following new fields:

- Entity – Add the Entity field to the show information about the vendor or customer in the Supply Chain Snapshot.
- Original Transaction Date – Add the Original Transaction Date field to show the Original Transaction Date in the Supply Chain Snapshot.
- Past Due Date – Add the Past Due Date field to show the number of days past due in the Supply Chain Snapshot.
- Status – Add the Status field to show the transaction status in the Supply Chain Snapshot. When your custom snapshot form shows the Status field, you can additionally choose to filter the list by transaction status using the Filters field on the Available Filters subtab.

To create custom Supply Chain Snapshot forms that show these fields, click Customize View. In the Field list, select the appropriate field value and click Add. Then, click Save.

## Manufacturing

NetSuite 2019.1 includes the following enhancements to Manufacturing features:

- Editing Legacy Bills of Material (BOMs)
- Decimal (non-integer) Resource Values in Work Center
- Buildable Quantity Field in Saved Searches
- New Item Record Communications Tab
- CSV Import for BOM and BOM Revisions
- Advanced Manufacturing

## Editing Legacy Bills of Material (BOMs)

After you enable the Advanced BOM feature, existing Bills of Materials (BOM) are automatically converted to read-only legacy BOM records. A legacy BOM is a snapshot of an assembly and its components at the time of conversion.

You might want to use Advanced BOM, but do not want to copy legacy BOMs. As of NetSuite 2019.1, you can now edit legacy BOMs.

After you enable legacy BOM editing, you cannot disable the Advanced BOM feature. You should test this feature in your sandbox account before turning it on in your production account.

To learn more, see the help topic [Migrating to Advanced BOM](#).

## Decimal (non-integer) Resource Values in Work Center

Manufacturing resources, such as labor and machines, often work in more than one work center during a shift.

NetSuite 2019.1 enables you to enter decimal amounts to better represent resource allocation to multiple work centers, which in turn more accurately defines costs and work centers.

For example, Wolfe Manufacturing builds bicycles. Assemblers spend half the day welding steel frames and the other half of the day building bicycles. When entering labor resources, the planner can now allocate 0.5 labor resources to the Welding Work Center and 0.5 to the Bicycle Assembly Work Center.

The screenshot shows the 'Static Employee Group' page for 'Welding center (CZE)'. The 'Manufacturing Work Center Settings' tab is selected. The 'LABOR RESOURCES' field is highlighted with a red box and contains the value '0.5'. Other visible fields include 'SUBSIDIARY' (CZE subsidiary), 'MACHINE RESOURCES' (1), and 'WORK CALENDAR' (9:00 am, 8 hrs: Mo,Tu,We,Th,Fr). The page also includes tabs for 'Members', 'Events', 'Files', 'Notes', 'Bulk Merge', and 'Actions'.

To learn more, see the help topic [Creating Manufacturing Work Centers or Groups](#).

## Buildable Quantity Field in Saved Searches

With NetSuite 2019.1, you can now use the Buildable Quantity field in saved searches to improve visibility into manufacturing analytics. For example, you can search for Work Order Quantity and Buildable Quantity (number of components available) to learn which work orders are ready to be built or can be partially built by.

This feature is available for both Manufacturing Routing Work Orders and Conventional, or non-routing, Work Orders.

The following changes have been made to the user interface:

- A Buildable field now appears on work orders that displays the number of components available for the work order.

- The Buildable field is now an available filter in a transaction search.
- In a transaction search, the Buildable field is now available to select to appear in search results.

## New Item Record Communications Tab

A Communications tab has been added to the 2019.1 Manufacturing item record. This subtab includes Activities and Files subtabs that enable you to share knowledge interdepartmentally, reduce paper, and create daily activity reminders.

For example, you could create one activity to set up the assembly work center, a second activity that reminds you to attach the assembly instructions, and a third to start assembling green bicycles.

EDIT	TITLE	DATE	TIME	OWNER
Edit	Assemble Green Bicycles	12/10/2018	9:00 am	Dan Boylan
Edit	Setup Bicycle Assembly Work Center	12/10/2018	8:00 am	Dan Boylan
Edit	Attach Assembly Instructions	12/10/2018	8:00 am	Dan Boylan

Then, on the Files subtab tab, attach the Bicycle Assembly instructions.

ATTACHED FILES	FOLDER	SIZE (KB)	LAST MODIFIED	DOCUMENT TYPE
Bike Assembly.docx	Attachments Received	44	12/5/2018 6:23 am	Word File

## CSV Import for BOM and BOM Revisions

NetSuite 2019.1 enables customers to use CSV import to update or upload BOM and BOM Revisions.

This enhancement helps improve and accelerate your initial data loads, mass updates, or mass loads of BOMs or BOM Revisions.

To learn more, see the help topic Importing CSV Files with the Import Assistant.

## Order Management

NetSuite 2019.1 includes the following enhancements to order management features:

- Add-On Items for SuiteBilling
- Installment Billing

- [Off-Cycle Modify Pricing Change Orders for SuiteBilling](#)
- [Recurring Amount on SuiteBilling Subscription Lines](#)
- [SuiteBilling Joins for Search and Advanced Search](#)
- [Electronic Bank Payments Enhancements](#)
- [Inbound Shipment Management](#)
- [Electronic Invoicing Enhancements](#)

## Add-On Items for SuiteBilling

The Add-On Items feature lets you add subscription items to any subscription, either at the time-of-sale, or during the subscription term. After the Add-On Items feature is enabled, you can create customized subscriptions without modifying the subscription plan. You set the price for each add-on item as you add it. The Add-On Items feature eliminates the need to create a new subscription plan and subsequent subscription to add items during the subscription term. For details, refer to [Managing Add-On Items](#).

## Installments

The installments feature allows your customers to pay for goods or services over installment terms. Installment payments can be split evenly or have different payment amounts for each installment. The first installment payment includes all taxes associated with the purchase.

### Installment Billing

Installments are created on the term record. Check the Installment box on the term record to create the installment terms. When the Installment box is checked, you can only edit the fields associated with installments. All other fields are unavailable.

Installments are added to sales orders from the Billing subtab. When items are billed and fulfilled, an invoice is generated. For information on creating and billing installments, see the help topic [Creating Installments](#).

### Installment Payments

The Installment Payments release note is located in the Vendors, Purchasing, and Receiving section. To view the Installment Payments release note, see [Installment Payments](#).

## Off-Cycle Modify Pricing Change Orders for SuiteBilling

There is a new SuiteBilling change order. The off-cycle modify pricing change order is similar to the existing modify pricing change order. The difference is that you can now modify prices off-cycle. When you modify pricing off-cycle, you must process billing operations to process charges or a credit memo. For more information, see the help topic [Off-Cycle Invoicing With Modify Pricing Change Orders](#).

## Recurring Amount on SuiteBilling Subscription Lines

You can now view recurring amount data for existing subscription price interval lines and subscription change order lines. On a subscription pricing line, the recurring amount is calculated from your set

values for the Quantity, Price Plan, and Discount fields. The dynamically calculated recurring amount appears in the Pricing subtab and in modify pricing change orders. You can find a recurring amount by entering the subscription line name in a search.

## SuiteBilling Joins for Search and Advanced Search

New joins have been added to help SuiteBilling customers expand their advanced search and saved search capabilities. For example, Price Plan is available as a join from the Price Book record.

The following list indicates the record and new joins:

- Price Book and Price Plan
- Price Book and Subscription Plan
- Subscription and Subscription Line
- Subscription and Subscription Change Order
- Charge and Usage
- Price Plan and Pricing Interval

Joins have an ellipsis (...) after the name of the record. Price Plan... is an example.

The following columns have been added to the Price Plan search:

- Start Date
- Interval Status
- Quantity
- Discount
- Charge Frequency
- Repeat Every

For more information about searches, see the help topic [Defining an Advanced Search](#).

## Projects

NetSuite 2019.1 includes the following enhancements to Projects features:

- [Resource Groups](#)
- [Charge Based Billing Support for Purchases](#)
- [Default Configurations for Advanced Project Profitability](#)
- [Advanced Project Profitability Improvements](#)
- [Project Management Improvements](#)

## Resource Groups

In NetSuite 2019.1, you can now assign a group of resources to a project task at the same time. Resource groups enables you to create a group of resources to be assigned together to a single project task. For example, if you have a group of engineers that typically work on tasks together, you can create a resource group for those engineers. Then, when creating project tasks, you can assign the group to the task instead of each individual engineer.



When assigning groups to a project task, you can choose to divide the estimated work evenly across the members of the resource group or you can assign each member the estimated work entered for the task.

## Charge Based Billing Support for Purchases

Using Charge Based Billing, you can now create purchase charge rules to automatically generate charges for items and services purchased for your projects from purchase orders and vendor bills. Previously, Charge Based Billing did not support purchase transactions.

Project charge rules enable you to add a markup to your generated charges. Adding a markup increases the total charge by the selected amount. You can also define filters to limit which purchase transactions should be included.

## Default Configurations for Advanced Project Profitability

In NetSuite 2019.1, you can now edit and save the standard configuration for Advanced Project Profitability and your default reports are automatically updated. Previously, you could not edit the standard configuration or standard reports. Any custom configurations generated reports in the Saved Reports menu.

When creating a new configuration, the standard configuration is automatically populated eliminating the need to create a configuration from scratch.

## Advanced Project Profitability Improvements

Advanced Project Profitability now supports the addition of any expense category. Previously, expense categories without an item were grouped together and could not be added individually. When defining rows for custom configurations, Expenses without Items has been replaced with Uncategorized Expenses. You can also choose to add all expense categories or individual expense categories.

You can now customize your project profitability reports to include the entity associated with the listed transaction. For example, for time transactions showing on your profitability report, the project resource tracking time would appear in the report.

Improvements have been made to the speed which the project profitability reports appear by preloading and caching the last accessed data. Now, when you open a project profitability report, the last loaded date automatically appears without requiring you to wait for the report to be calculated. All profitability data is automatically calculated once per day. At the bottom of the report, you can see the date and time of the last data calculation. You can also click the Recalculate button to manually trigger a recalculation.

## Project Management Improvements

In NetSuite 2019.1, you can now use the bulk task reassignment functionality without using the Resource Allocations feature. You can also pick the tasks for reassignment directly in the pop up window.

You can now change the customer on an existing project if the project does not have any associated transactions. In Edit mode, click the Customer Change button. You can select a new customer in the popup window and decide to recalculate rates based on the new customer's defined rates. When changing a project's customer, you can only choose customers that support the same currency and subsidiary as the original customer.

When creating projects from sales transactions, opportunities and estimates are now available to generate projects.

## Vendors, Purchasing, and Receiving

NetSuite 2019.1 includes the following enhancements to the vendors, purchasing, and receiving features:

- [Installment Payments](#)
- [Vendor Payment Approvals](#)

### Installment Payments

Previously, each vendor bill identified a transaction date, a single amount, and a single due date. As of NetSuite 2019.1, using the Installments feature, the total amount for a vendor bill can be divided into several parts to be paid in installments. Each individual installment payment can have a distinct due date.

For example, a vendor bill total is \$120. This total can be broken into three installments of \$40 each, as follows:

- Installment 1 – Total due = \$40, Due Date is October 30
- Installment 2 – Total due = \$40, Due Date is November 30
- Installment 3 – Total due = \$40, Due Date is December 30

Previously, the due date was used only for calculating how much of the balance was overdue and for calculating finance charges on late payments. Now, aging is based on the due date, not the transaction date. Single or multiple payments can be made either before or after the due date.

The vendor bill posts to the Accounts Payable account on the payment transaction date, but, now you can pay amounts on different due dates as determined by the defined installment terms.

Enable the Installments feature at Setup > Accounting > Accounting Preferences. Click the Accounting subtab, check the Installments box, and then click Save.

### Vendor Payment Approvals

Previously, SuiteFlow workflows could not be used for vendor bills. Now, SuiteFlow workflows can be used for vendor bills to provide additional flexibility to review and evaluate vendor bills before approving or rejecting them.

When you enable approval routing for use with vendor bills, you can create an approval rule to define approval preferences to prompt approval routing. You can specify a specific vendor bill approver on the employee record and set approval limits on employee records.

## Taxation

NetSuite 2019.1 includes the following enhancements to taxation features:

- [Making Tax Digital for UK VAT](#)

- New Country Tax Reports for SuiteTax
- Malaysia Sales and Service Tax (SST-02) Return

## User Interface

NetSuite 2019.1 includes the following enhancements to the NetSuite User Interface:

- User Interface Enhancements to Dashboards
- Account-Specific Domains Listed on Company Information Page

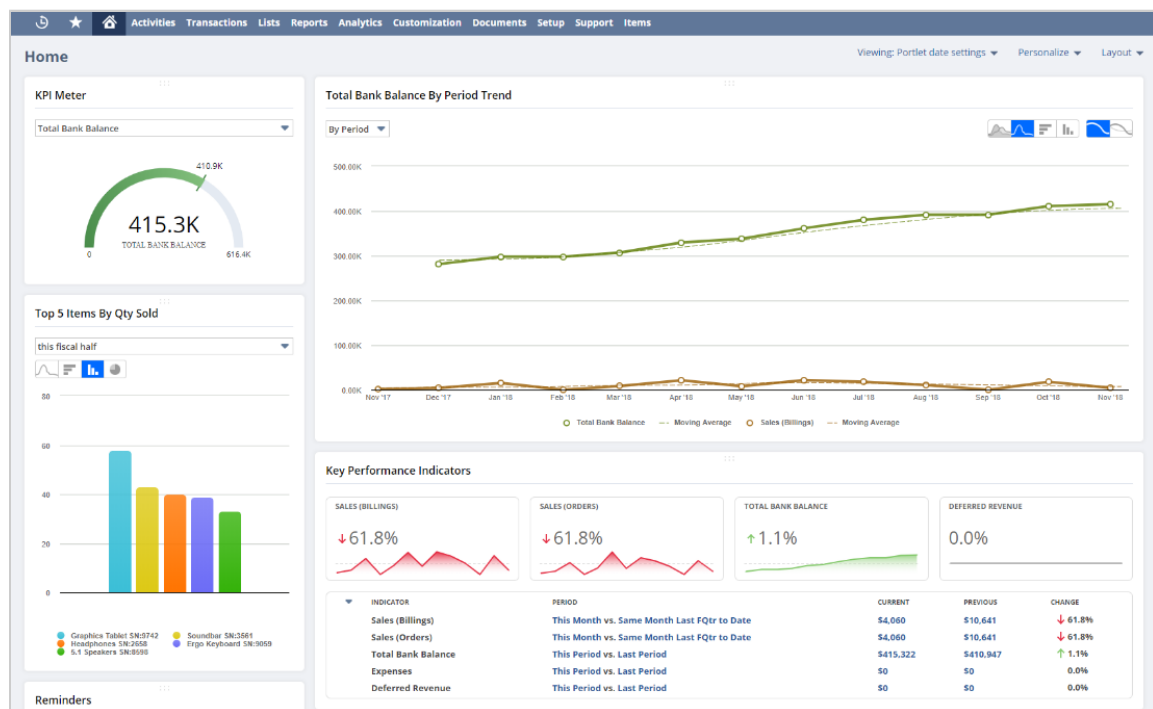
## User Interface Enhancements to Dashboards

As of 2019.1, a number of visual and functional enhancements have been made to NetSuite dashboards. The main changes are the following:

- New Dashboard Look and Feel
- New Analytics Portlet
- Feature Enhancements to Specific Portlets
- Enhancement to Personalize Dashboard Palette Navigation
- Visual Enhancements to Portlets

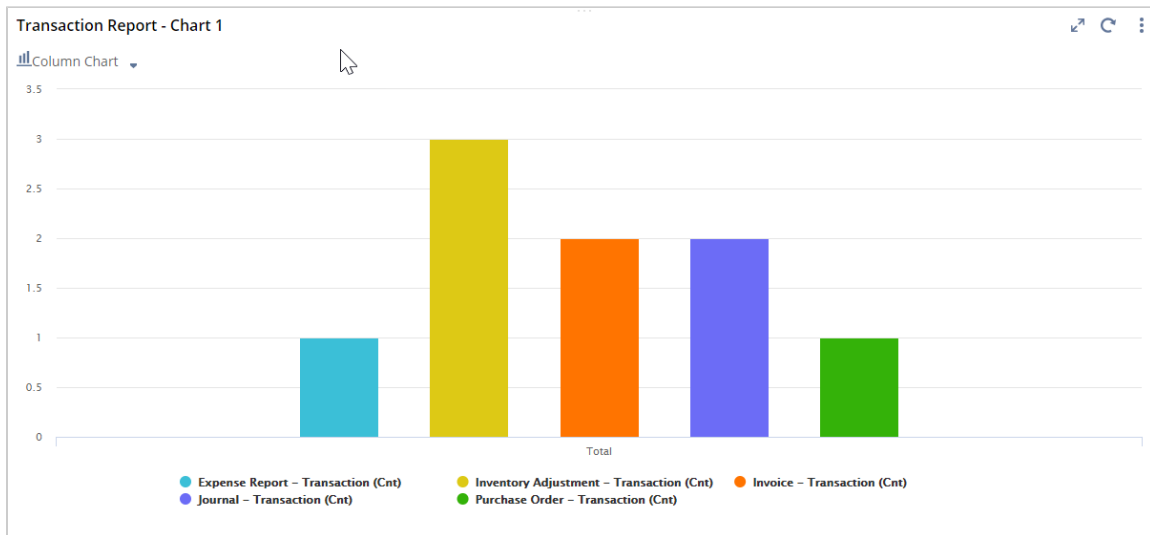
## New Dashboard Look and Feel

The design of the user interface has been refreshed to be more modern. The new design improves readability and enables you to have a visual overview of the data on your dashboard.



## New Analytics Portlet

A new Analytics Portlet enables you to view your chart-based workbook data at a glance on your home dashboard.

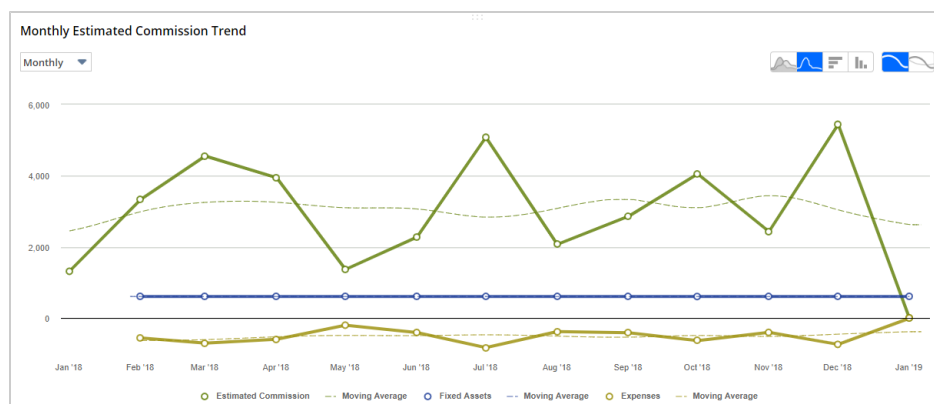


For more information about setting up this portlet, see [New Analytics Portlet for SuiteAnalytics Workbook](#).

## Feature Enhancements to Specific Portlets

The following portlets include functional enhancements as of 2019.1:

- Trend Graph portlet
  - Add up to three KPIs – The comparison capabilities of the portlet have been improved. Prior to this version, the portlet showed the differences in data over time for one Key Performance Indicator (KPI). You can now compare up to three KPIs in a single chart.

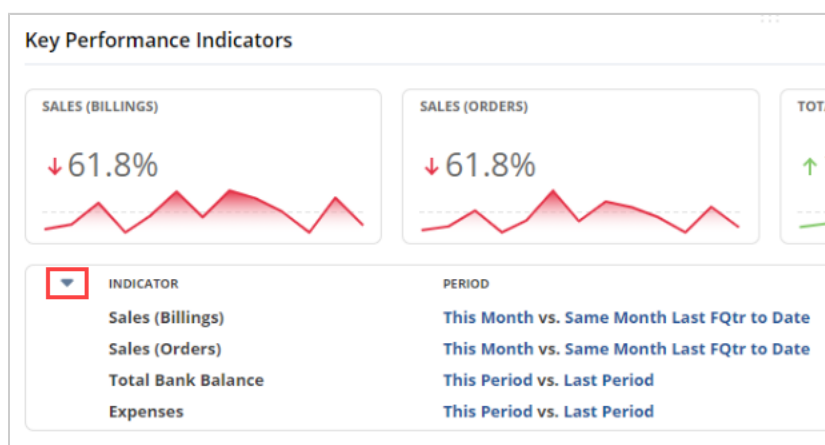


For more information about adding multiple KPIs to the Trend Graph portlet, see the help topic [Trend Graph Portlets](#).

- Key Performance Indicators portlet
  - Quickly add KPIs – Prior to 2019.1, you could only add KPIs to the portlet using the **Set Up** option. Now you have the possibility to add up to four KPIs by clicking the **Add a KPI** icon.



- Trend graphs for all KPIs displayed as headlines – Up to four KPIs can be displayed as headlines to see the data you consider the most relevant. In previous versions, headlines appeared in bold with a red or green arrow. Now, a trend graph is included for each KPI headline.
- Compact format for the list of KPIs – Prior to 2019.1, a horizontal scroll bar was needed to see the hidden data in the portlet rows. This scroll bar is no longer needed as the new condensed format enables you to see all data at a glance.
- Expand/collapse settings – You can now collapse and expand the list of KPIs as needed. Before this release, the complete list of KPIs was displayed with no expand/collapse setting available.

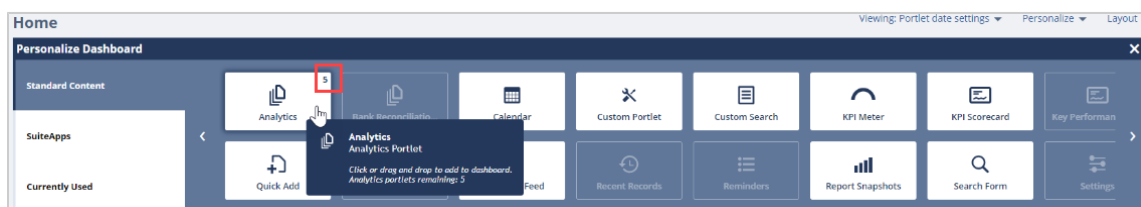


For more information about setting up this type of portlet, see the help topic [Setting Up the Key Performance Indicators Portlet](#).

## Enhancement to Personalize Dashboard Palette Navigation

The number of icons in the Personalize Dashboard palette has been significantly reduced, enabling you to quickly find the portlet that you want to add.

Prior to 2019.1, the palette displayed as many portlet icons as available portlets. As of 2019.1, there is a single icon for each portlet type, which includes a badge count. You can hover over the icon to see the number of available portlets.





This new design also optimizes the palette structure by reducing the maximum number of tabs on the left from five to three. This depends on the assigned role, permissions, and dashboard setup. By default, all users can see the following tabs:

- Standard Content – Includes all available portlets except for the SuiteApps portlets.
- Currently Used – Includes the portlets that are currently used on the dashboard. This tab enables you to remove the currently used portlets quickly.

## Visual Enhancements to Portlets

The following changes align the appearance of portlets with the new look and feel of the dashboard:

- The menu icon for portlets has changed. The three-line menu icon  is now replaced by the three-dot menu icon .
- Prior to NetSuite 2019.1, titles were duplicated in both the portlet and the chart header. The title is now displayed in the portlet header only.
- The semicircular meter of the Key Performance Indicator (KPI) Meter portlet has been enhanced with light colors and a refined design.
- The background color of portlet headers has been removed.
- The portlet borders have been rounded.

## Commerce Applications

The latest version of SuiteCommerce, **2019.1**, includes the following enhancements:

- SCA Release Naming Convention Changes
- Two-Factor Authentication Support
- Theme and Extension Activation Improvements
- Theme and Extension Version Management
- Google Tag Manager Editor
- Site Search Bar Enhancements
- SuiteCommerce Configuration Changes
- SMT Category Visibility Dates Support
- SuiteCommerce InStore Extensions Support
- Legacy Tab Added to SuiteCommerce Configuration Record
- Footer Support
- Newsletter Support
- Node.js Requirement Change
- Extensibility API Updates

Complete release notes are available here: [2018.2 Release of SuiteCommerce](#).

## SuiteCommerce Extensions

SuiteCommerce Extensions provide additional functionalities to your SuiteCommerce web store.



**Important:** SuiteCommerce Extensions are only available if they are provisioned and set up in your account. For more information, see the help topic [NetSuite SuiteCommerce Extensions](#).

Complete release notes are found here: [Extensions Release Notes](#).

## Site Management Tools

This version of SuiteCommerce Site Management Tools includes the following enhancement:

### Published Assets

The Published Assets view gives you more ways to manage your existing content. This new view shows all your currently published assets and lets you edit multiple pieces of content and pages at one time. The Published Assets view is available in Overview mode. Your content is grouped together by the URL. For example, all content items listed on the /about-us page are grouped together and content items on the /back-to-school page is grouped together.

You can filter the view of your assets the following ways:

- **Visibility** – This lets you filter for content that is currently visible or content with a future start date.
- **Content Type** – This lets you filter your content by type. So you can look at just HTML, Image, Text, Page, or other types of content.
- **Location** – This lets you filter by the URL of your content.

Click **Edit Tags** to make changes to your tags and save them. Click **Edit Visibility** to make changes to your visibility dates and save them. Similar to most other content on your site, you must publish the changes before the edits are applied to your content.

See [Published Assets](#).

## Commerce Merchandising

NetSuite 2019.1 includes the following enhancements to commerce merchandising features:

- [Assigning or Removing Items in a Merchandise Hierarchy With the Hierarchy Manager](#)
- [Customer Specific SuitePromotions](#)
- [Enhanced Search Experience with Commerce Search Synonyms](#)

### Assigning or Removing Items in a Merchandise Hierarchy With the Hierarchy Manager

Prior to NetSuite 19.1, users were only able to assign or remove items in a merchandise hierarchy from the item record or via CSV import. This feature enhances the Hierarchy Manager interface allowing users to assign or remove items to a hierarchy node directly from the Hierarchy Manager.

For more information, see the help topic [Assigning Items to a Hierarchy Node](#).

### Customer Specific SuitePromotions

Prior to NetSuite 2019.1, you could create promotions targeted at specific customer categories. Customer Specific Promotions now lets you create a promotion destined for one or more customers, or a customer group.

Customer groups can be either static or dynamic. For dynamic customer groups, to optimize the performance when applying the promotion to transactions, you can choose to use a cached version of the results, or you can run the dynamic customer group every time the promotion is applied.

For more information, see the help topic [Setting Customer Eligibility on SuitePromotions](#).

## Enhanced Search Experience with Commerce Search Synonyms

The Search Synonyms feature is now available to all SuiteCommerce and SuiteCommerce Advanced customers. You can define synonyms in NetSuite to ensure that when a shopper searches for a specific word, the search results also include synonyms for that word.

For example, you define trousers and pants as synonyms. Any shopper searching for the term pants now gets search results for pants and trousers.

For more information, see the help topic [Search Synonyms](#).

## Commerce Platform

Commerce Platform includes platform capabilities that you can use to build and deploy a more interactive and engaging shopping experience for customers. NetSuite 2019.1 includes the following enhancements:

- [Ability to Preview System Email Templates for Web Stores](#)
- [Separate Shopping Cart for Each Business Customer Contact](#)
- [Image Compression for Web Store Images](#)
- [Ability to Track Subscription Email sent to an Entity](#)
- [Shopping Domains in System Email Templates](#)
- [Frequency of Updates to Dynamic Groups used as Audiences](#)
- [Out of Stock Items in Web Store Email](#)
- [CNAME Flattening is now supported in SuiteCommerce](#)
- [Application Publisher Name when using SDF for SSP Applications](#)
- [CMS Page Types](#)

## Ability to Preview System Email Templates for Web Stores

In 2018.2, if you used system email templates for web store email, the only way to identify how the email looked to your web store customers was to sign up as a web store customer and trigger each email to be sent to your email address. To eliminate the need for this lengthy and tedious process, 2019.1 introduces the ability to preview any web store email that uses a System Email Template. Email can be previewed quickly and easily within NetSuite and you can switch between email sent by different websites.

Email can be previewed from the Email tab of the Web Site record. If a system email template is selected in the Select a System Email Template menu, clicking the Preview icon next to it opens the email preview selection window. In this window, you can choose the details of the email you want to see in the email preview. For all email types, you can choose the website from which the email is sent and the language of the email. The other options available depend on the email type. For example,



you can select a sales order number to include in an order confirmation email preview. After you have selected all the options, you can preview the email.

For instructions on previewing email from the Web Site record, see the help topic [Preview System Email Templates](#).

**Note:** Email preview is available only for system email templates for web stores. It is not available for web store email templates or customized text groups because these features will be phased out soon.

## Separate Shopping Cart for Each Business Customer Contact

Website administrators can now choose between two shopping cart options for their business customers:

- **Separate shopping carts for each customer contact** – this option, available from 2019.1, enables each contact defined for a business customer to shop and check out using their own shopping cart. One contact's cart is not visible to any other customer contact. This prevents situations where one contact removes items that another contact has added, or where one contact checks out an order before other contacts have added all the items they need.
- **Shared shopping cart** – this option provides each business customer with a single shopping cart that is shared by all contacts who place orders for that customer. This pre-2019.1 option remains available in 2019.1.

The shopping cart option that is most appropriate depends upon the type of web store. For example, if a web store caters to large corporations that have many contacts placing orders, separate carts enable contacts to order the items they need without affecting each others orders. Shared carts may be more appropriate for other situations, such as small business customers where two or three contacts work together to place orders.

Website administrators can choose which shopping cart option (shared or separate) to use for each website.

Until 2018.2, order-related email were sent only to the contact who placed the order. In 2019.1, if the separate cart option is selected, a new email preference is available, which sends a copy of all order-related email to the main customer email address. This gives business customers greater visibility into orders placed by their contacts. Even if this email preference is not selected, business customers can easily identify who placed a sales order by checking the Relationships tab of the sales order form. The responsible contact is listed there with the new Order Creator role.

For more information, see the help topic [Shopping Cart Options for Business Customers](#).

## Image Compression for Web Store Images

Website administrators can use the new image compression feature to reduce the file size of images used in SuiteCommerce. Compressed images load faster resulting in better web site performance and improved shopper experience. The higher the compression level, the smaller the file size, and the quicker it is to load. Higher compression levels also lower the quality of the image. However, the reduction in quality typically is unnoticeable. The available levels of compressed image quality in SuiteCommerce are:

- Very High (minimum compression)

- Optimum (recommended)
- Standard
- Low (maximum compression)

If image compression settings have been defined for an image, a compressed copy of the image is created the first time it is accessed. The original image is not affected. The compressed copy of the image is cached, either internally or on the CDN, if CDN is enabled for the website.

Image compression settings can be defined at the website level and apply to all images displayed on website domains. Compression settings can also be defined in the File Cabinet for any subfolder of the Web Site Hosting Files folder. Defining compression settings at the folder level, means that images in the folder are compressed regardless of where they are accessed from. For example, images used in SCIS are compressed if they are stored in a folder which has image compression settings defined.

Image compression settings are applied only to images that are:

- JPEG or PNG format
- Between 500KB and 5 MB
- Stored in the NetSuite file cabinet (images stored outside of NetSuite and linked to from the web site are not compressed)
- Not already resized. Resized images are automatically compressed using the 'Optimum' image compression setting regardless of the setting chosen at the site or folder level. See the help topic [Setting Up Image Resizing for SuiteCommerce](#) for information about resizing images.

For more information about image compression settings and how to define them, see the help topic [Setting up Image Compression for SuiteCommerce](#).

## Ability to Track Subscription Email sent to an Entity

The existing Subscription Email feature enables you to send email to customers inviting them to subscribe to marketing email or confirm their existing subscription preferences. The new **Subscription Message History** subtab lists all subscription messages that have been sent to an entity in the past. If you review the information on this subtab before sending opt-in invitation or opt-in confirmation email, you can avoid spamming the entity with repeated or frequent email. The information can also help you to adhere to any local regulations that restrict the quantity of unsolicited email sent to entities.

Campaigns

Subscriptions •

Keywords

Click-Streams

Page Hits

Hosted Page Hits

Referrer

Cart Contents 0.00

GLOBAL SUBSCRIPTION STATUS


Soft Opt-In

Send Subscription Email

Subscription Message History

DATE ▼	SENDER	RECIPIENT	RECIPIENT EMAIL	MESSAGE TYPE	MEMO
11/14/2018 04:13 am	R Wolfe	CAN Cust	cancust@sicstest.com	Invitation	Subscription message based on system email template: Standard Opt-In Invitation Message
11/14/2018 04:14 am	R Wolfe	CAN Cust	cancust@sicstest.com	Confirmation	Subscription message based on system email template: Standard Opt-In Confirmation Message

The **Subscription Message History** subtab is located under the Marketing tab on all entity records. For each opt-in email sent to an entity, the subtab lists the type of subscription email (invitation or confirmation), date and time it was sent, name of the person who sent it, recipient name, recipient email address, and email template used. For more information, see the help topic [Viewing List of Subscription Messages Sent to a Recipient](#).

 **Note:** Subscription message history is available starting from June 20, 2018.

## Shopping Domains in System Email Templates

System email templates can now reliably identify the shopping domain on which an order was placed even if the domain is not marked as the primary domain. The domain name is available in the synthetic field `domain`, which is now included in the default system email templates for web stores. See the help topic [System Email Templates for Web Stores](#) for more information about default email templates.

You can also include the `domain` field in custom scriptable templates. Templates for web store email in the Order and Digital Delivery categories would benefit from having the domain included. See the help topic [Synthetic Fields for Scriptable Templates](#) for more information on creating custom scriptable templates.

## Frequency of Updates to Dynamic Groups used as Audiences

In some cases, dynamic groups are used by NetSuite to determine whether or not a particular entity can access a specific asset. For example, you can restrict a folder in the File Cabinet to a dynamic group. You can also publish a tab or category to a dynamic group using the Audience subtab of the tab or category record. The audience that can see such a folder, tab, or category is updated whenever the folder, tab, or category record is saved. This means that every time such record is saved, the dynamic group is evaluated, new members are added to the audience, and members who no longer met the group criteria are removed.

Until 2018.2, the audience that could see the folder, tab, or category was also updated every 24 hours. From 2019.1, the audience that can see the folder, tab, or category is updated approximately 12 hours from the time it was last updated. This means the list of people who have access to the folder, tab, or category is updated:

- whenever the dynamic group record is saved, and
- 12 hours after the dynamic group record was last updated.

## Out of Stock Items in Web Store Email

The new `itemAvailabilities` synthetic field returns the number of items available for sale, taking into consideration items in warehouses minus items already committed to other orders. You can use this field in system email templates to calculate whether or not an item is out of stock. The exact calculation to obtain this information depends on how you have set up the ordering workflow in NetSuite. You can use the result of the calculation in the template to display whether the item is out of stock or not. For more information about the `itemAvailabilities` synthetic field, see the help topic [Records and Fields Available in Website System Email Templates](#).

## CNAME Flattening is now supported in SuiteCommerce

CNAME Flattening is a feature specific to DNS providers, which when enabled, lets you use a dynamically distributed A record for your root domain. With CNAME Flattening, your website can reap the benefits that a CDN provides while you use your root domain to host several services.

From 2019.1, you can safely use a dynamic A record for your root domain in SuiteCommerce, as opposed to a static A record that points to a fixed IP address. For more information, see the help topic [Website Domains and Email Hosting](#).

**Note:** CNAME Flattening is a feature specific to DNS providers. Therefore, you should choose a DNS provider that offers this feature and set it up for your domain.

## Application Publisher Name when using SDF for SSP Applications

If you use SuiteCloud Development Framework (SDF) to develop SSP applications, you must use the Application ID as the Application Publisher name. For information about Application IDs, see the help topics SuiteApp Application ID and for information on Application Publishers, see the help topic The URL Root and its Components.

## CMS Page Types

The CMS Page Type record lets SMT extension developers create page types that can be used by the extension. The page type defines a set of attributes specific to that type. These attributes include the following:

- **Base URL Path** – The base URL path lets you customize the URL for all pages of that type. For example, if you have a page type of blog and a base URL path of blog, all blog pages are accessed by `mysite.com/blog/[page url]`.
- **Custom Record Type** – This is a group of settings and attributes you can set for each page type.
- **Active or Inactive** – If the page type is inactive, existing pages of that type still display, but you cannot create new pages of that type.
- **CMS Creatable** – If set to yes, you can create instances of this page type in SMT. If set to no, the page type is hidden in SMT.

CMS Page Type records are defined in NetSuite at Lists > Web Site > CMS Page Type. The CMS Page Type is dependent on the 19.1 release of SuiteCommerce.

See [CMS Page Types](#).

## SuiteApp Distribution

SuiteApp distribution includes SuiteBundler and SuiteApp Listing capabilities that you can use to distribute customizations to accounts. NetSuite 2019.1 includes the following changes:

- [Bundle Support during Release Phasing](#)
- [SuiteApp Marketplace Permission Replaces SuiteBundler Permission](#)
- [Translation Collection Objects Can Be Included in Bundles](#)
- [New Location for Installing SDF SuiteApps](#)

## Bundle Support during Release Phasing

Bundle support during phasing of 2019.1 is consistent with the support provided during previous releases. During phasing of 2019.1, some accounts continue to use 2018.2 at the time that other accounts are upgraded to 2019.1. Therefore, you may be using a version different from some of the accounts where your bundles are installed.

Review the description below for a reminder of how bundles from different versions are handled during release phasing.

- Bundles developed with 2018.2 can be installed into accounts that are already using 2019.1.
- Bundles developed with 2019.1 can be installed into accounts that are still using 2018.2, but note the following limitations:
  - When a user in a 2018.2 account installs a bundle from a 2019.1 account, the bundle installation stops if there are object types in the bundle that are not supported in 2018.2.
  - A bundle with a SuiteScript that uses a new API available only in 2019.1 can be installed into a 2018.2 account, but the script may not function correctly because 2018.2 does not support the API.

## SuiteApp Marketplace Permission Replaces SuiteBundler Permission


As of 2019.1, the new SuiteApp Marketplace permission replaces the existing SuiteBundler permission. The SuiteApp Marketplace permission includes all of the previous SuiteBundler permission capabilities, and adds:

- Access to the SuiteApp Listing page in NetSuite
- The ability to install SDF SuiteApps from the SuiteApp Listing page
- The ability to uninstall SuiteApps from the Installed SuiteApps page
- The ability to view the Deployment Audit Trail page

For more information, see the following:

- To use the SuiteApp Marketplace permission, see the help topic [Permissions Documentation](#).
- To learn about the SuiteApp Listing page, see [New Location for Installing SDF SuiteApps](#) and [SuiteApp Listings in NetSuite](#).
- To install SDF SuiteApps from the SuiteApp Listing page, see the help topic [SuiteApp Installation](#).

## Translation Collection Objects Can Be Included in Bundles

 **Warning:** The Translation Collections is a beta feature. The contents of this feature are preliminary and may be changed or discontinued without prior notice. Any change may impact the feature's operation with the NetSuite application. Warranties and product service levels do not apply to this feature or the impact of the feature on other portions of the NetSuite application. We may review and monitor the performance and use of this feature. The documentation for this feature is also considered a beta version and is subject to revision.

As of 2019.1, Translation Collection objects can be included in bundles using the Bundle Builder.

Translation Collections are custom objects comprised of translated terms. The Translations Collection object includes terms and their translations in the specified locale. For more information about Translation Collections, see [Multi-Language Translation Management \(Beta\)](#) and [NetSuite Localization Features](#).

You can select Translation Collection objects in the Bundle Builder from the Select Objects tab, under the Translation Collections in the Object Types list. For more information about including objects in bundles, see the help topic [Creating a Bundle with the Bundle Builder](#).


The Multi-Language feature must be enabled in both the source and target accounts, to support the bundling of Translation Collection objects and the successful installation of bundles containing these objects.

For more information, see the Translation Collections object type documentation in Objects Available in Customization Bundles.


## New Location for Installing SDF SuiteApps

As of NetSuite 2019.1, there is a new location for installing SDF SuiteApps.

The SuiteApp Listing page provides a location in NetSuite for you to find and install SuiteApps created using the SuiteCloud Development Framework, otherwise known as SDF SuiteApps. SuiteApps can include custom objects and configuration settings that are useful to your organization. This feature is directed at NetSuite administrators and users who have permission to install SuiteApps in their accounts. If you are a developer and you are interested in creating SDF SuiteApps, see the help topic SuiteApp Projects.

 **Important:** For 2019.1, only SuiteApps from the com.netsuite publisher ID are available on the SuiteApp Listing page. These are all managed SuiteApps.

To view the SuiteApp Listing page, go to **Customization > SuiteCloud Development > SuiteApp Listing**. This page lists SDF SuiteApps available for installation to your account.

 **Note:** Access to the SuiteApp Listing page, and the ability to install SuiteApps to your account, requires the **SuiteApp Marketplace** permission.

For information about using the SuiteApp Listing page, see the following topics:

- Viewing SuiteApp Listings
- Identifying SuiteApp Incompatibility
- Requesting Access to a SuiteApp
- SuiteApp Installation

## SuiteBuilder - Customization

NetSuite 2019.1 includes the following enhancements to SuiteBuilder features:

- Address Scripting Enhancements to Support Transaction Tax Calculations
- Advanced Printing Enhancements for Additional Language Support
- Applied Custom Segments Visible on the Custom Record Type Configuration Page
- Ability to Include Custom Record Names in Saved Search Results
- Custom Sublist Translation Field Length Increased
- Unified ID Applied to All New Custom Segments

## Address Scripting Enhancements to Support Transaction Tax Calculations

NetSuite 2019.1 includes changes to script processing of custom address values on transactions. These changes enhance the accuracy of tax calculations for transactions that have custom addresses.

These enhancements include the following:

- Synchronization of address text values on subrecord and parent record

- Elimination of code workarounds required to ensure accurate nexus and tax recalculation
- Enhanced override logic
- Enhanced validation of country and state combinations
- Avoidance of unnecessary form refreshes

Some existing scripts may include code to work around previous tax calculation limitations for transactions with custom addresses. These scripts are likely to have unexpected behavior after the 2019.1 upgrade.

To avoid any issues, you should review your existing scripts as soon as possible, to determine which scripts set custom address values on transactions. You may need to update these scripts to ensure that they continue to function correctly after the upgrade. You can test updated scripts in your 2019.1 Release Preview account, before your production account is upgraded.

For details about these changes, recommended actions to adapt your scripts, and sample code updates, see the help topic [2019.1 Address Scripting Changes to Support Transaction Tax Calculations](#).

## Advanced Printing Enhancements for Additional Language Support

The following advanced printing enhancements have been made to support languages that are read from right to left:

- [Arabic and Hebrew Languages Supported in Advanced PDF/HTML Templates](#)
- [Multiple Languages Supported in Advanced PDF/HTML Templates](#)
- [Updated BFO Library for Advanced PDF/HTML Templates](#)

### Arabic and Hebrew Languages Supported in Advanced PDF/HTML Templates

You can now print advanced templates in Hebrew and Arabic.

For example, to set up your template to print in Arabic, enter a line that resembles the following as the first line in the `<head>` section:

```
<link name="NotoSansArabic" type="font" subtype="opentype" src="{nsfont.NotoSansArabic_Regular}" src-bold="{nsfont.NotoSansArabic_Bold}" bytes="2" subset="false"/>
```

For more information about configuring your template to print in another language, see the help topic [Languages for Printed Forms that Use Advanced Templates](#).

### Multiple Languages Supported in Advanced PDF/HTML Templates

You can now use multiple languages in one advanced template. When printing a template, only one locale is selected. However, you can use other locales in the document as long as the required fonts are linked and the `lang` attribute is set correctly.

To use multiple languages in a template, configure the template as follows:

1. Use the `<link>` element to load all required fonts.
2. Create a CSS selector to pair the language and font.

3. Set the lang attribute on elements that have a language different from the language set in the template.

For more information about configuring your template to print in another language and an example, see the help topic [Languages for Printed Forms that Use Advanced Templates](#).

## Updated BFO Library for Advanced PDF/HTML Templates

Advanced PDF/HTML templates now use updated BFO libraries.

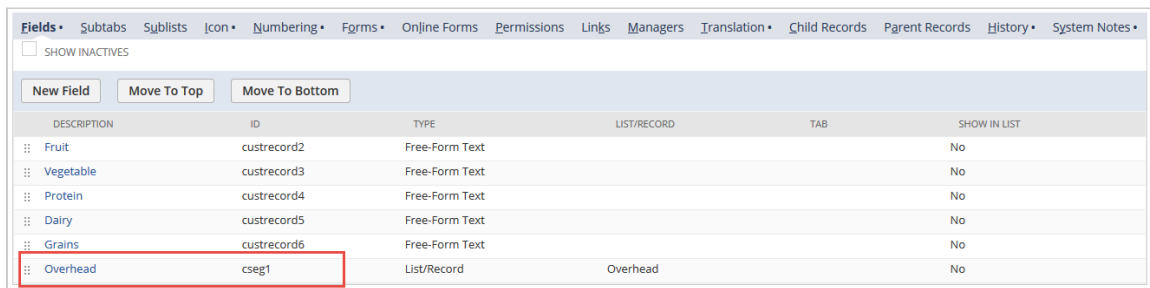
BFO version 1.1.63 provides printing support for languages that are read from right to left, including Arabic and Hebrew.

For more information, see [The Big Faceless Report Generator User Guide](#).

## Applied Custom Segments Visible on the Custom Record Type Configuration Page

Previously, custom segments applied to a custom record type were not listed on the custom record type configuration page.

With this change, custom segments that are applied to a custom record type are listed on the Fields subtab of the custom record type configuration page.



DESCRIPTION	ID	TYPE	LIST/RECORD	TAB	SHOW IN LIST
:: Fruit	custrecord2	Free-Form Text			No
:: Vegetable	custrecord3	Free-Form Text			No
:: Protein	custrecord4	Free-Form Text			No
:: Dairy	custrecord5	Free-Form Text			No
:: Grains	custrecord6	Free-Form Text			No
:: Overhead	cseg1	List/Record	Overhead		No

## Ability to Include Custom Record Names in Saved Search Results

You can now include the translated name and language fields in custom record saved search results. On the Results subtab of the saved search definition, two new fields are available: Display Name (Translated) and Language. Include these fields in your search to return all translated name and language fields for the custom record instances.

If you include the Display Name (Translated) and Language fields in your search results, enter Language as a filter on the Criteria subtab. When you enter Language on the Criteria subtab, the saved search results are filtered by the user's language preference.

For more information about creating a saved search, see the help topic [Defining a Saved Search](#).

## Custom Sublist Translation Field Length Increased

Previously, the length of the Translation fields for custom sublists was not consistent for all languages. In 2019.1, the custom sublist Translation fields for all languages support up to 50 characters.



## Unified ID Applied to All New Custom Segments

The unified ID is now used on all new custom segment definitions. The unified ID lets you use one ID in your customizations to refer to all of the record types for one custom segment. With the unified ID, you are not required to know the applied record type when referring to a custom segment field on a specific record.

As of 2019.1, the unified ID is applied to all new custom segment definitions. When you create a new custom segment, the **Use as Field ID** box is not visible on the Custom Segment definition page.

For custom segments created before 2019.1, the **Use as Field ID** box is available on the Custom Segment definition page. The box was not checked on custom segment definitions created before 2018.2 because existing scripts would fail. For more information, see the help topic [Creating a Custom Segment](#).

## SuiteAnalytics (Dashboards, Reporting, and Search)

NetSuite 2019.1 includes the following enhancements to SuiteAnalytics:

- [SuiteAnalytics Workbook Feature Now Generally Available](#)
- [New Analytics Portlet for SuiteAnalytics Workbook](#)
- [New Multi-Series Chart for Trend Graph Portlet](#)
- [User Interface Enhancements to Dashboards](#)

## SuiteAnalytics Workbook Feature Now Generally Available

In 2018.2, SuiteAnalytics Workbook was available as a beta feature. In 2019.1, SuiteAnalytics Workbook is generally available in all NetSuite implementations. To watch an introduction to SuiteAnalytics Workbook, [click here](#).

Earlier versions of NetSuite offered searches and reports as separate analytical tools, each with their own user interfaces, authoring processes, and data sources. The different data sources have resulted in some inconsistencies in field naming and exposure between the two tools. These differences have caused challenges for users, including confusion over which tool to use, and difficulty locating fields. Additionally, both tools lack support for multilevel joins and have limitations on formatting options.

In 2019.1, SuiteAnalytics Workbook adds a new analytical tool to all NetSuite accounts. With SuiteAnalytics Workbook you can create highly customizable workbooks that combine queries, pivot tables, and charts using a single tool that leverages a new, unified data source. This new data source is designed to ensure that fields are consistently exposed in SuiteAnalytics Workbook, with consistent results across all components of the workbook. SuiteAnalytics Workbook also uses a new user interface that is designed so that users with limited knowledge of record schemas and query language can still create complex workbooks through actions such as drag-and-drop editing. The interface also makes SuiteAnalytics Workbook ideal for ad hoc diagnostic analysis, with options for instant formula validation, data refreshment, and drilling down through query results. Additionally, a range of customization options have also been added to the interface to enable rich formatting and visualizations of your data.

Support for multilevel joins has also been added to SuiteAnalytics Workbook, enabling you to author workbooks using field data from multiple record types, including custom records. Custom formula

fields are also supported in SuiteAnalytics Workbook, so you can create and add fields with dynamically calculated values to your workbooks. Finally, SuiteAnalytics Workbook also offers multiple display options for hierarchical fields, so you can easily view data for fields with parent/child relationships.

By default, SuiteAnalytics Workbook is enabled in all NetSuite accounts. To ensure that it has been activated in your account, go to Setup > Company > Setup Tasks > Enable Features. On the **Analytics** subtab, under **SuiteAnalytics Workbook**, verify that the **SuiteAnalytics Workbook** box has been checked and click **Save**.

When the feature is enabled, most roles are given access to the tool. You can also enable specific users to edit and monitor the workbooks created in your account by adding the Analytics Administrator permission to their roles. For more information about access to SuiteAnalytics Workbook, or for steps to assign the Analytics Administrator permission to different roles in your account, see the SuiteAnalytics Workbook Overview.

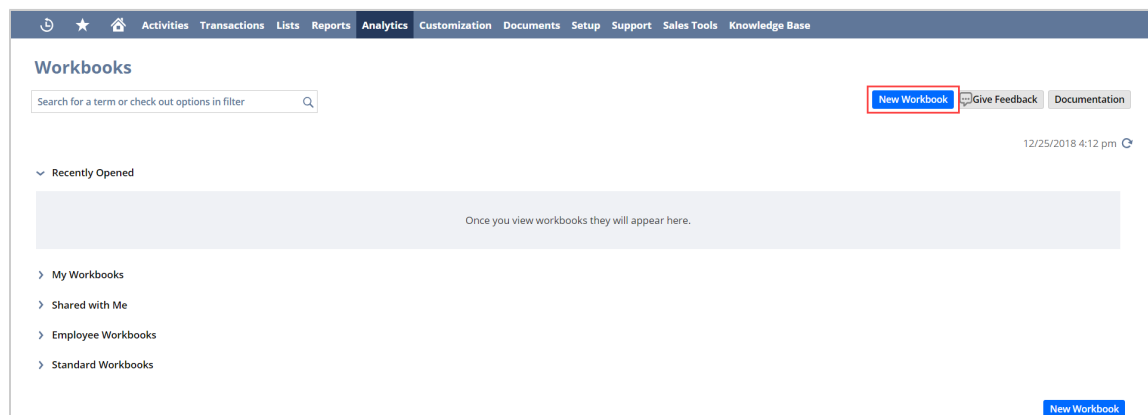
- [Finding Records and Fields Using SuiteAnalytics Workbook](#)
- [Creating a Workbook](#)
- [Elements of the SuiteAnalytics Workbook Interface](#)
- [Multilevel Joins in SuiteAnalytics Workbook](#)
- [Supported Workbooks](#)
- [Additional Features](#)

## Finding Records and Fields Using SuiteAnalytics Workbook

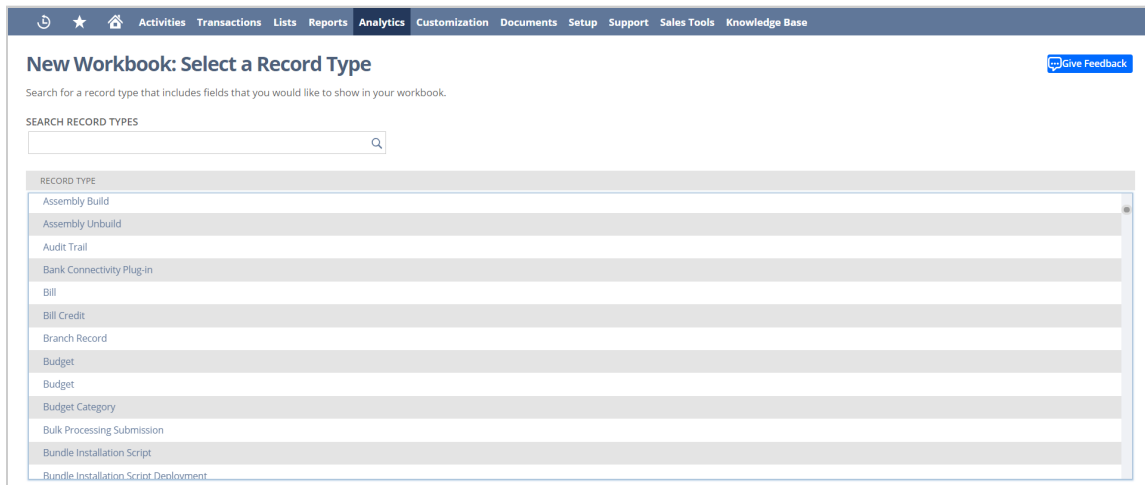
SuiteAnalytics Workbook uses a new data source which might require different fields, records, joins, or formulas to replicate your existing saved searches and reports. Review the *Unified Data Source Overview* for more information, including a list of available records and fields, and sample workbooks you can use to replicate your searches and reports.

## Creating a Workbook

After the SuiteAnalytics Workbook feature is enabled in your account, the NetSuite navigation menu includes a new Analytics tab. To create a workbook, click the **Analytics** tab to open the Analytics dashboard. On the Analytics dashboard, click **New Workbook**.



You are prompted to select a record type for the workbook.



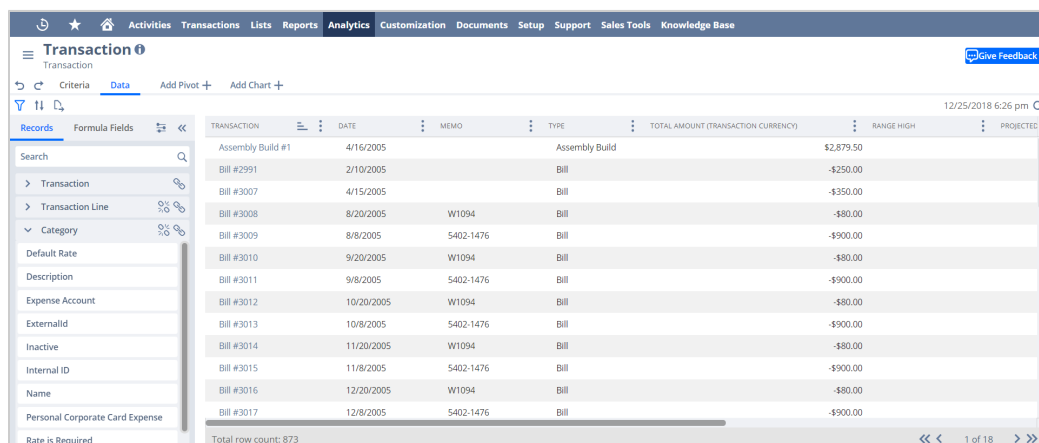
Select a record type from the list to open the **Data** tab and begin the authoring process.

To learn how to create your own custom workbooks, see *Custom Workbooks*. This section includes steps for defining, filtering, and pivoting your workbook source data, as well as procedures for how to create custom formula fields and charts. You can also complete the *SuiteAnalytics Workbook Tutorial* which guides you through the creation of a sample Transaction workbook.

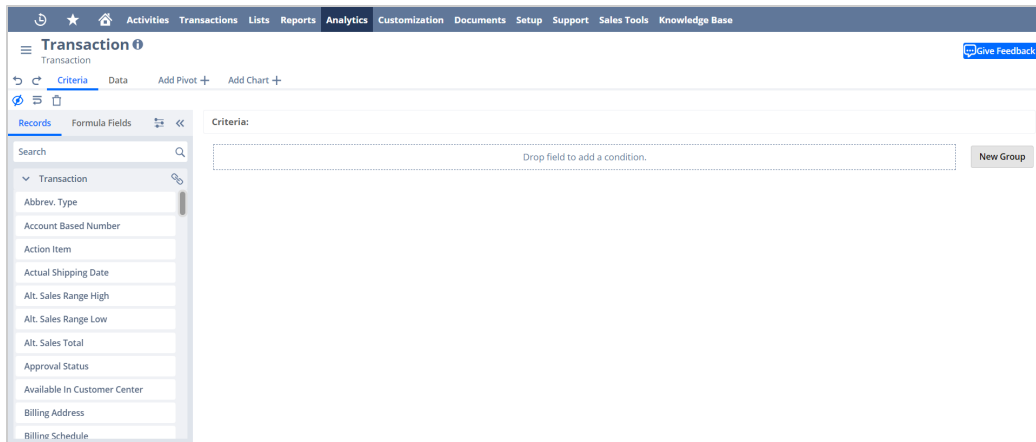
## Elements of the SuiteAnalytics Workbook Interface

After you click New Workbook and choose a root record, you define the workbook in the SuiteAnalytics Workbook interface. This interface is divided into four tabs:

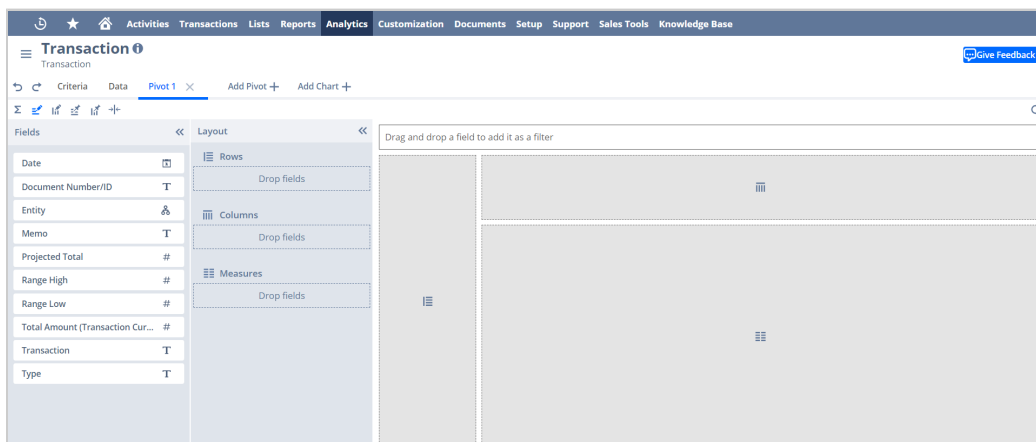
- The **Data Tab**, where you define the source data for your workbook by creating a query. The data available for a query includes fields from the selected root record, as well as fields from multiple levels of related records. You can also create custom formula fields on the Data tab. For more information about formula fields, see *Formula Fields in SuiteAnalytics Workbook*.



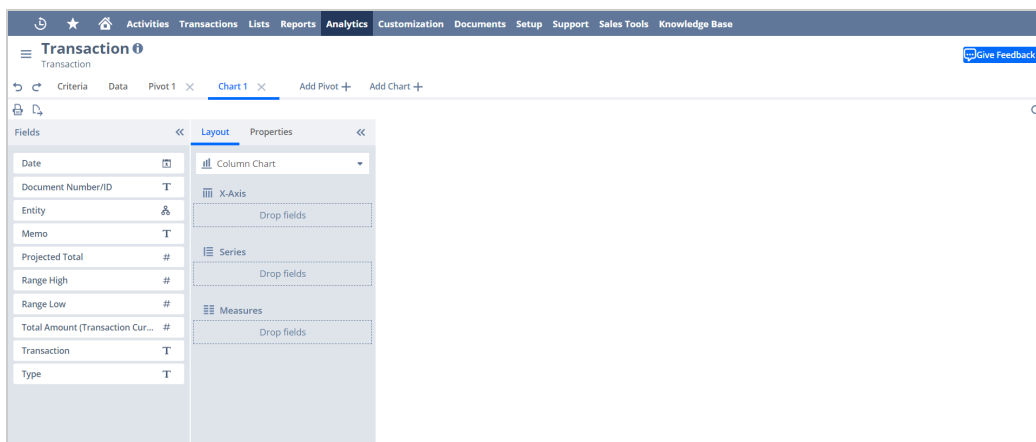
- The **Criteria Tab**, where you apply filter conditions to the source data for your workbook.



- The *Pivot Tab*, where you define the layout for formatting, summarizing, and pivoting your source data.




- The *Chart Tab*, where you define the layout for presenting your source data as a chart.

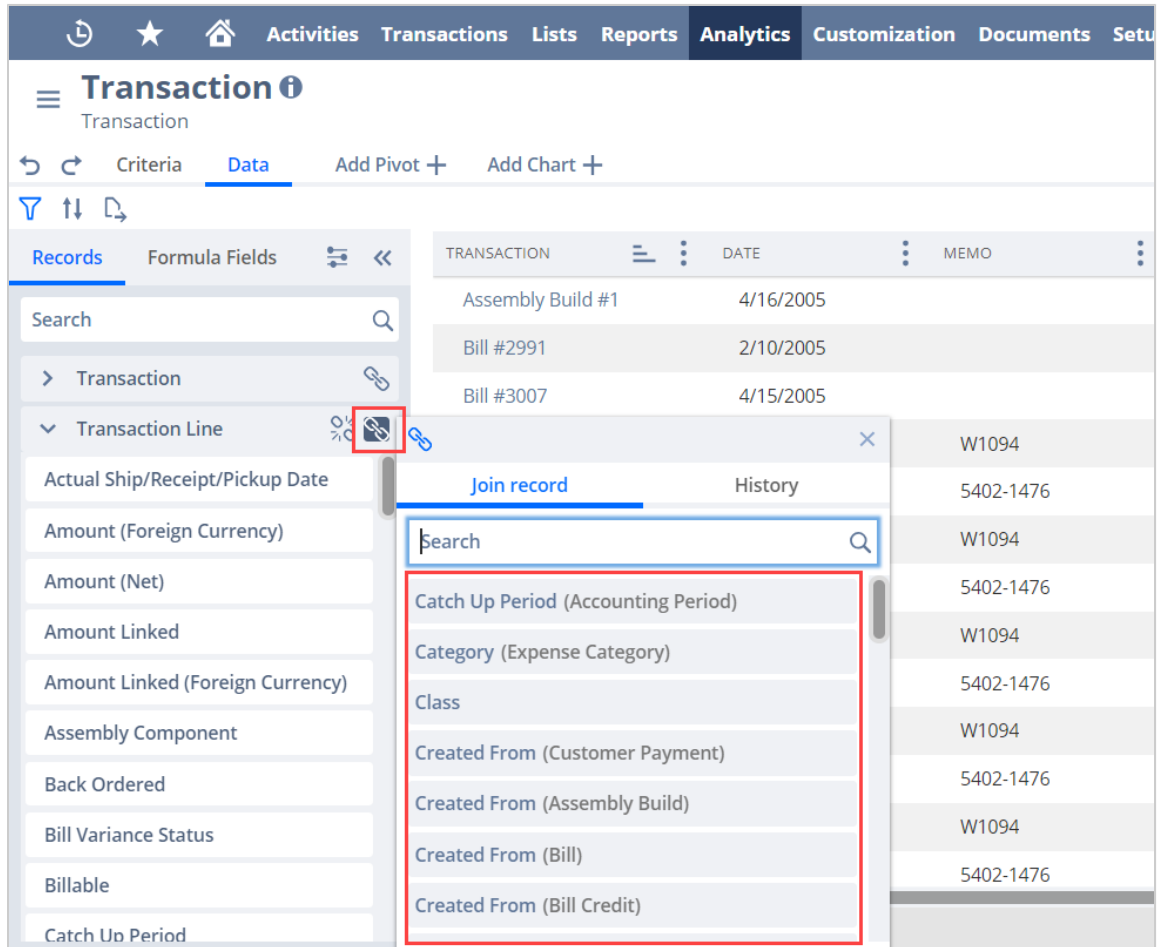


For more information about the SuiteAnalytics Workbook user interface, see *Navigating SuiteAnalytics Workbook*. This topic provides detailed descriptions about the elements on each tab of the SuiteAnalytics Workbook interface.

## Multilevel Joins in SuiteAnalytics Workbook

At any point during the authoring process, you can join additional related records to your workbook. This includes records which are multiple levels away from the root record of the workbook.

To do so, click the **Join Record** icon  next to any record listed in the **Available Field List** on the **Data** tab.



The screenshot shows the SuiteAnalytics Workbook interface. The top navigation bar includes tabs for Activities, Transactions, Lists, Reports, Analytics (selected), Customization, Documents, and Setup. The main header displays 'Transaction' with a sub-header 'Transaction'. Below this, there are tabs for Criteria, Data (selected), Add Pivot, and Add Chart. The left sidebar shows a tree view with 'Transaction' and 'Transaction Line' (expanded). The 'Transaction Line' section has a 'Join Record' icon (a chain link) next to it. A popup window titled 'Join record' is open, showing a search field and a list of available records to join. The list includes 'Catch Up Period (Accounting Period)', 'Category (Expense Category)', 'Class', 'Created From (Customer Payment)', 'Created From (Assembly Build)', 'Created From (Bill)', and 'Created From (Bill Credit)'. The main data table on the right shows columns for TRANSACTION, DATE, and MEMO, with rows for 'Assembly Build #1', 'Bill #2991', and 'Bill #3007'.

All possible joins are listed in the popup window.

- To join a record to the workbook, click the record name.
- To search for a specific record, type the record name in the Search field.
- To join a record that is more than one level away from the root record of the workbook, click the join record icon next to any previously joined record.

For more information about multilevel joins in SuiteAnalytics Workbook, see *Defining Workbook Source Data*.

## Supported Workbooks

SuiteAnalytics Workbook currently does not support standard workbooks that can be generated based on prebuilt definitions, except for the Sales Workbooks (Beta). With the Sales Workbooks

(Beta), the source data, criteria, and layouts for specific charts and pivot tables are predefined. Use the Sales Workbooks (Beta) to view Sales By Item, Sales By Customer, and Sales By Sales Rep data for the invoices and orders in your account. To open the Sales Workbooks (Beta), click the **Standard Workbooks** link on the Analytics dashboard and click the **Sales (Invoiced) Workbook (Beta)** or **Sales (Ordered) Workbook (Beta)** links.

Workbook Name	Description	Owner	Last Run Date	Last Modified	Root Record	Fields and Criteria	Actions
Sales (Invoiced) Workbook (Beta)		System			Sales (Invoiced)	> Details	
Sales (Ordered) Workbook (Beta)		System			Sales (Ordered)	> Details	



**Important:** The **Sales (Invoiced) Workbook (Beta)** and **Sales (Ordered) Workbook (Beta)** workbooks are currently in a beta state. The fields, records, formatting, and data displayed in each of these workbooks are subject to change.

For more information about predefined workbooks, see *Standard Workbooks*.

For steps on how to replicate some of your existing saved searches and reports using SuiteAnalytics Workbook, see *Saved Search Replication Examples*.

## Additional Features

As of 2019.1, the following features have been added to SuiteAnalytics Workbook:

- **Additional currency conversion options:** In 2018.2, the beta version of SuiteAnalytics Workbook supported currency consolidation, but you could only consolidate amounts to the currency of your parent subsidiary. In 2019.1, SuiteAnalytics Workbook supports currency conversion to any currency set up in your account.

For more information, see <Currency Conversion in SuiteAnalytics Workbook>.

- **Filters based on measure values:** As of 2019.1, you can filter workbook pivot table data using measure values. This enables you to quickly view different subsets of data directly from the Pivot tab without having to create new workbook filters on the Criteria tab.

For more information, see <Pivot Table Filters>.

- **Workbook-based portlets:** Starting in 2019.1, you can add workbook-based portlets to your NetSuite dashboards. However, only charts are currently supported in the portlet.

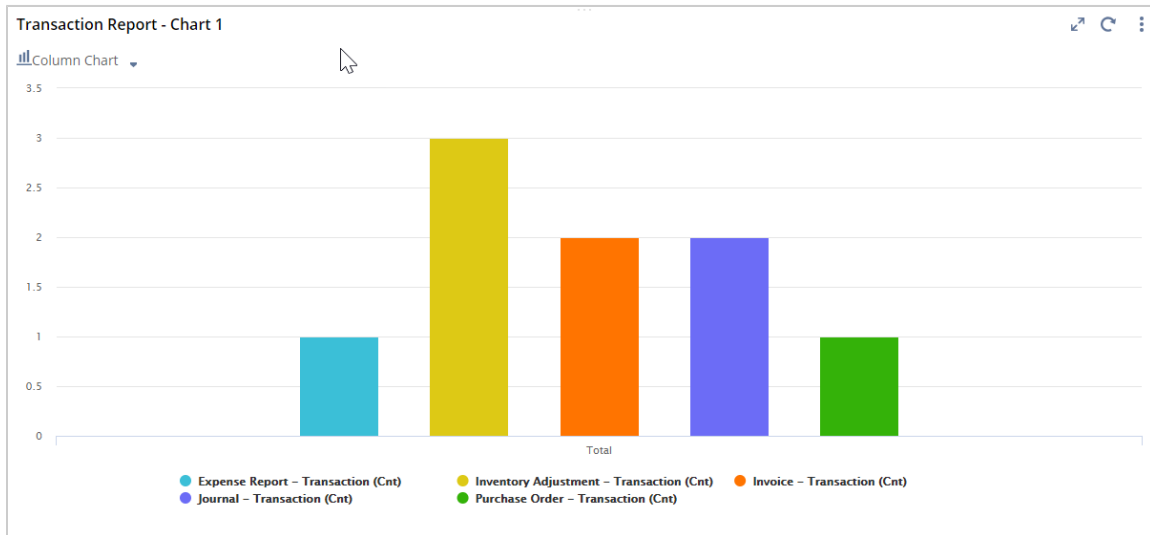
For more information, see [New Analytics Portlet for SuiteAnalytics Workbook](#).

- **Expanded formula functions:** SuiteAnalytics Workbook now includes a more comprehensive version of the CASE formula function, including support for WHERE and WHEN clauses in your formula definitions.

For more information, see *Formula Fields*.

## New Analytics Portlet for SuiteAnalytics Workbook

A new Analytics Portlet enables you to view your chart-based workbook data at a glance on your home dashboard.



You can display up to five Analytics Portlets on your home dashboard. After adding the portlet, you must select which chart you want to view by clicking **Set Up** in the menu. The Analytics popup lists the workbooks available in your account that have at least one chart defined. You will see your chart-based workbooks and those shared with you.

You can set layout options for the displayed portlets, such as the portlet size, chart type, and portlet title. These settings apply only to the portlet.

The New Analytics portlet also gives you quick access to your workbook. To edit a workbook, click **Open in Workbook** in the portlet menu.

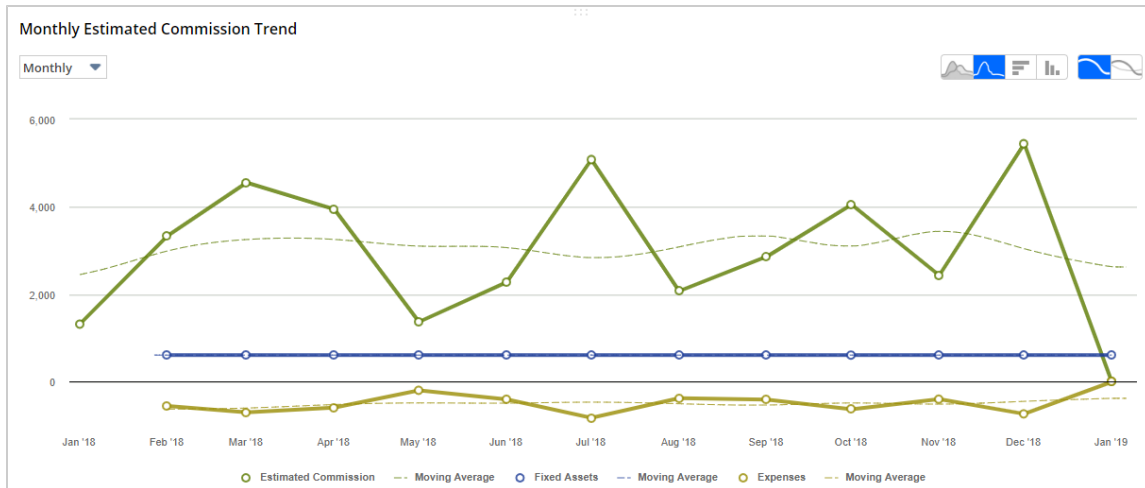
**Note:** To set up Analytics portlets on your dashboard, the SuiteAnalytics Workbook feature must be enabled.

For more information about setting up the portlet, see the help topic [Setting Up the Analytics Portlet](#).

## New Multi-Series Chart for Trend Graph Portlet

Prior to 2019.1, the Trend Graph portlet displayed one chart to show the differences in data over time for a specific Key Performance Indicator (KPI).

As of 2019.1, the Trend Graph portlet can now support up to three KPIs. This capability enables you to compare the differences in data for multiple KPIs in a single chart. The design and user interface elements of the trend graph portlet have also been aligned with the new look and feel of the NetSuite dashboard.



For more information about adding multiple KPIs to the Trend Graph portlet, see the help topic [Trend Graphs](#).

For more information about the new look and feel of the NetSuite dashboard, see [User Interface Enhancements to Dashboards](#).

## User Interface Enhancements to Dashboards

The user interface has been refreshed with visual and functional enhancements. For more information on the new design, see [User Interface Enhancements to Dashboards](#).

## CSV Import

NetSuite 2019.1 includes the following enhancement to CSV Import:

### Newly Supported Record Types for CSV Import

Record Type	Notes
Period End Journal Entry	<p>Period End Journal is a transaction record that posts subsidiary consolidation and year-end closing to the general ledger. Period end journals are generated automatically when you complete the Create Period End Journals task on the Period Close Checklist.</p> <p>This record is part of the Period End Journal Entries feature, which is available only in NetSuite OneWorld accounts. The Accounting Periods feature is a prerequisite for the Period End Journal Entries feature.</p> <p>To import period end journal entry data, in the Import Assistant, set the import type to Transactions, and the record type to Period End Journal Entry.</p>

## SuiteFlow (Workflow Manager)

NetSuite 2019.1 includes the following enhancements to SuiteFlow features:

- Enhancements to Release Status



- [New Create Line Action](#)
- [Enhancement to Set Field Mandatory Action](#)
- [Enhancement to Set Field Display Label Action](#)
- [Translation Support for Workflow Actions](#)
- [Enhanced Ability to Identify Workflow Actions in a Workflow Log](#)

## Enhancements to Release Status

As of 2019.1, several enhancements have been made to the Release Status property of workflows.

### Change to the Default Release Status

Prior to 2019.1, by default, the Release Status property of workflows was set to **Not Running**. As of 2019.1, by default, the Release Status property of workflows is set to **Testing**. You can change the Release Status of workflows on the workflow definition page. For more information, see the help topic [Release Status](#).

### Renamed Release Status

Prior to 2019.1, there were three Release Status options available for workflows: **Not Running**, **Released**, and **Testing**. As of 2019.1, **Not Running** has been renamed to **Not Initiating**. This change was made to better align the label with the task and to help prevent confusion. The way that Release Status options work has not changed. When you select **Not Initiating**, new workflow instances do not initiate but workflow instances that are already running will continue to do so. For more information, see the help topic [Release Status](#).

### New Release Status

The **Suspended** Release Status option has been added to SuiteFlow. This new option provides you with greater control over workflows, along with the ability to disable workflow execution. When you set the Release Status of a workflow to **Suspended**, the following is true:

- No new instances of the suspended workflow are created.
- No existing instances of the suspended workflow are executed.
- If the suspended workflow includes scheduled workflows, transitions, or actions, none of them will be executed.
- It is not possible to initiate a suspended workflow from SuiteScript, or by using the Initiate Workflow or Mass Update actions in SuiteFlow.

To resume a suspended workflow, change the Release Status to **Released**. Suspended workflows resume at the point the workflow was at when it was suspended.

### New Create Line Action

As of 2019.1, a new workflow action, Create Line, has been added to SuiteFlow. You can use the Create Line workflow action to add a new line to a sublist and specify the default values for line fields. The Create Line action is available in workflow definitions on record types with a sublist SuiteFlow supports. Currently, SuiteFlow only supports the Items sublist on Transaction Record types.

The addition of the Create Line action enables you to customize sublist-related processes by adding lines to the sublist, and permits greater customization without having to use SuiteScript. The Create

Line workflow action includes the standard action fields, including Basic Information, Condition, and Schedule. You can execute the Create Line action in the following:

- Server triggers Before Load, Before Submit, and After Submit.
- Scheduled triggers.

The Create Line action does not support client triggers.

For more information, see the help topics [Working with Workflows and Workflow Actions](#).

## Enhancement to Set Field Mandatory Action

The Set Field Mandatory action has been extended to support the setting of a line field in a sublist as mandatory. This enhancement provides you with a greater ability to customize workflows based on your business needs.

You can use the Set Field Mandatory action on record types with a sublist SuiteFlow supports. Currently, SuiteFlow only supports the Items sublist on Transaction Record types. The Set Field Mandatory action is available at the record level, but cannot be applied to the sublist action group.

For more information, see the help topics [Actions Reference](#) and [Set Field Mandatory Action](#).

## Enhancement to Set Field Display Label Action

The Set Field Display Label action has been extended to support changes to the label of a sublist column. This enhancement allows users to change and customize the sublist column label according to business needs.

You can use the Set Field Display Label action on record types with a sublist SuiteFlow supports. Currently, SuiteFlow only supports the Items sublist on Transaction Record types. The Set Field Display Label action is available at the record level, but cannot be applied to the sublist action group. If necessary, you can leave the label field blank. If the multi-language feature is enabled on your account, you can also enter translations for the new label.


For more information, see the help topics [Actions Reference](#) and [Set Field Display Label Action](#).

## Translation Support for Workflow Actions

As of 2019.1, if multi-language support is enabled on your account, you will be able to translate custom workflow action text and messages. When multi-language support is enabled on an account, a standard section for translations is displayed for workflow actions. You can enter translations for every active language on the account. This enhancement allows you to easily develop international customizations without having to create language-specific workflows.

The following workflow actions support translation:

- Set Field Display Label
- Confirm
- Show Message
- Return User Error

 **Note:** The translation support for the Add Button action has not changed and is still available for you to use.

For more information, see the help topics [Working with Actions and Enabling Features](#).

## Enhanced Ability to Identify Workflow Actions in a Workflow Log

As of 2019.1, if the Show Internal IDs preference is enabled in your account, you can see the internal ID for workflow actions in the following locations:

- Workflow logs
- Context panel
- Action Group and Sublist Action Group detail pages
- State Definition form

This enhancement makes it easier to quickly identify every executed action in context. The ability to quickly identify workflow actions is designed to assist you with debugging workflows.

When the Show Internal IDs preference is enabled, you can view the internal ID for actions in the following locations:

- In the Context panel, when you hover over an action.
- In the list of actions and transitions, on the State detail dialog.
- In the list of actions in the Action Group and Sublist Action Group, on the State detail dialog.
- If you have selected the Show ID box on the Log dialog, in the Workflow Execution log.


For more information, see the help topic [Enabling the Show Internal IDs Preference](#).

## SuiteScript

Refer to the following sections for details on SuiteScript updates for NetSuite 2019.1:

- [SuiteScript 2.0 – N/translation Module \(Beta\)](#)
- [SuiteScript 2.0 – Bulk Actions \(Beta\)](#)
- [SuiteScript 2.0 – Query API Enhancements](#)
- [SuiteScript 2.0 – Enhancement for N/currentRecord Module](#)
- [SuiteScript 2.0 – N/format/i18n Module](#)
- [SuiteScript 2.0 – Enhancement for N/file Module](#)
- [SuiteScript 2.0 – Signing API](#)
- [Address Scripting Enhancements to Support Transaction Tax Calculations](#)
- [Ability to Execute Installation Scripts in a SuiteApp Project Deployment](#)

### SuiteScript 2.0 – N/translation Module (Beta)

 **Warning:** The N/translation module is a beta feature. The contents of this feature are preliminary and may be changed or discontinued without prior notice. Any change may impact the feature's operation with the NetSuite application. Warranties and product service levels do not apply to this feature or the impact of the feature on other portions of the NetSuite application. We may review and monitor the performance and use of this feature. The documentation for this feature is also considered a beta version and is subject to revision.

The SuiteScript 2.0 N/translation module provides SuiteScript developers a programmatic way to interact with NetSuite translation collections. Both the N/translation module and Translation Collections are beta features in 2019.1.

Translation collections are customization objects that store translation terms with their translations. For more information about NetSuite translation collections, see [Multi-Language Translation Management \(Beta\)](#).

The terms stored in translation collections can be accessed in SuiteScript 2.0 with the N/translation Module (Beta). Translation collections are managed in the NetSuite UI. You cannot create or modify translation collections in SuiteScript. The N/translation module provides read-only access to translation collections. For information about how translation collections are managed in the UI, see the help topic Translation Collection Overview.

## N/translation Module APIs

Translation collections are encapsulated in the N/translation module's translation.Handle object. A translation.Handle object is a hierarchical object; each node in the object is either another translation.Handle object or a translation.Translator function. Translator functions combine strings with parameters to return strings with the values you pass in for the parameters. Consider the following code snippet:

```
// key HELLO_1 = 'Hello, {1}'

message: translation.get({
  collection: 'custcollection_my_strings',
  key: 'HELLO_1'
})({
  params: ['NetSuite']
})
```

In the snippet, if the specified key's string value is "Hello, {1}", the translation.Translator function combines the string with the options.params parameter value and returns, "Hello, NetSuite". For information about the way strings are added to and formatted in collections, see the help topic Working with Translation Collection Strings.

Use translation.load(options) to load one or more collections, and use translation.get(options) to get specific key strings in a collection.

You can load collections in different language locales with the translation.load(options) – options.locales property and translation.selectLocale(options).

To see a complete list of the objects and methods in the N/translation module, see the help topic N/translation Module Members.

## N/translation Module Script Sample

The following example shows how you can load a translation collection in SuiteScript using the N/translation module. The example loads a collection and uses terms in the collection for two N/ui/message module messages.

```
/**
 *@NApiVersion 2.x
 */
require(['N/ui/message', 'N/translation'],
function(message, translation) {
  var localizedStrings = translation.load({
    collections: [{
      alias: "myCollection",
      collection: "custcollection_my_strings"
```

```

    }
  });

  var myMsg = message.create({
    title: localizedStrings.myCollection.MY_TITLE(),
    message: localizedStrings.myCollection.MY_MESSAGE(),
    type: message.Type.CONFIRMATION
  });

  // Message disappears after 5 seconds
  myMsg.show({
    duration: 5000
  });

  // Every node is a translation.Handle object or a translation.Translator function
  var collection = localizedStrings.myCollection;

  var myMsg2 = message.create({
    title: collection.MY_TITLE(),
    message: collection.MY_MESSAGE(),
    type: message.Type.CONFIRMATION
  });


  // Message disappears after 5 seconds
  myMsg2.show({
    duration: 5000
  });

});

```

For other examples of ways you can use the N/translation module, see the help topic [N/translation Module Script Samples](#).

## SuiteScript 2.0 – Bulk Actions (Beta)

 **Warning:** Bulk Actions is a beta feature. The contents of this feature are preliminary and may be changed or discontinued without prior notice. Any change may impact the feature's operation with the NetSuite application. Warranties and product service levels do not apply to this feature or the impact of the feature on other portions of the NetSuite application. We may review and monitor the performance and use of this feature. The documentation for this feature is also considered a beta version and is subject to revision.

The 2019.1 Bulk Actions beta release previews APIs that are currently in development for SuiteScript 2.0.

In 2018.2, you could only execute an N/action Module action for a single record instance. As of 2019.1, you can use SuiteScript 2.0 bulk action APIs to execute an action on multiple record instances of the same type, either with the same or different parameters.

The 2019.1 bulk action API beta offers previews of the following SuiteScript 2.0 N/action Module APIs:

- **Action.executeBulk(options) (Beta)** – executes an asynchronous bulk record action and returns its task ID for status queries with **Action.executeBulk(options) (Beta)**.
- **Action.getBulkStatus(options) (Beta)** – returns the current status of **Action.executeBulk(options)** for the specified task ID. The bulk execution status is returned in a status object.

- `action.executeBulk(options)` (Beta) – executes an asynchronous bulk record action and returns its task ID for status queries with `Action.executeBulk(options)` (Beta).

In addition to the new APIs in the N/action module, there are two new record action task objects available for beta preview in the SuiteScript 2.0 N/task Module:

- `task.RecordActionTask` (Beta) – encapsulates a record action task.
- `task.RecordActionTaskStatus` (Beta) – encapsulates the status of a record action task.

Use the N/task module to create record action tasks and place them in the internal NetSuite scheduling or task queue.

A new beta preview enum, `task.ActionCondition` (Beta), is also added to the N/task module for actions.

For more information about SuiteScript 2.0 actions, see the help topic [Overview of Record Action and Macro APIs](#).

## SuiteScript 2.0 – Query API Enhancements

2019.1 includes the following features related to the Query API:

- [Query API Now Generally Available](#)
- [Query Support for Map/Reduce Scripts](#)
- [New Operators for Polymorphic and Inverse Joins](#)
- [Relative Dates and Date Ranges for Conditions](#)
- [Columns with Consolidations](#)
- [Script ID Support for Loading Queries](#)

### Query API Now Generally Available

As of 2019.1, SuiteAnalytics Workbook and the Query API are no longer considered beta features and are generally available. For more information, see the help topics [SuiteAnalytics Workbook](#) and [N/query Module](#).

### Query Support for Map/Reduce Scripts

NetSuite 2019.1 adds support for queries in the `getInputData` stage of map/reduce scripts. The `getInputData` stage generates the input data and returns it as one of several types. Previously, you could return the input data as an array, a generic Object, a `search.Search` object or object reference, or a `file.File` object or object reference. Now, you can create or load a query to generate the input data and return the data as a `query.Query` object, object reference, or result set. Using a query to generate input data lets you take advantage of the added power of the SuiteAnalytics Workbook query engine.

To return a `query.Query` object from the `getInputData` stage:

```
function getInputData() {
    var myInputQuery = query.create({
        type: query.Type.CUSTOMER
    });

    // Add columns, conditions, and other properties to the query, as needed

    return myInputQuery;
}
```

```
}
```

To return a query that is loaded using `query.load(options)`:

```
function getInputData() {
    var myInputQuery = query.load({
        id: 'custworkbook237'
    });

    return myInputQuery;
}
```

To return a `query.Query` object reference:

```
function getInputData() {
    return {
        type: 'query',
        id: 'custworkbook1234'
    };
}
```

For more information about map/reduce scripts, see the help topic [SuiteScript 2.0 Map/Reduce Script Type](#).

## New Operators for Polymorphic and Inverse Joins

NetSuite 2019.1 includes new operators to access fields in joined record types. Use the new `^` operator to access fields in record types that are joined using `Query.joinTo(options)` or `Component.joinTo(options)`. This type of join is also known as a polymorphic join. Use the new `<` operator to access fields in record types that are joined using `Query.joinFrom(options)` and `Component.joinFrom(options)`. This type of join is also known as an inverse join. These new operators are designed to make it easier and more intuitive to access fields in joined record types.

Use the new `^` and `<` operators in formulas when you create query columns and conditions. You can use these operators when working with formulas in SuiteScript or the NetSuite UI. You can also place whitespace characters and parentheses around these operators to improve the readability of your formulas. For more information, see the help topics [Formulas in the N/query Module](#) and [Formulas in Search](#).

The `^` and `<` operators replace the `#polymorphic` and `#inverse` operators that were used in previous releases. Use the following table to decide which new operator to use:

Join Type	Previous Operator	New Operator
Polymorphic using <code>Query.joinTo(options)</code> or <code>Component.joinTo(options)</code>	<code>#polymorphic</code>	<code>^</code>
Inverse using <code>Query.joinFrom(options)</code> and <code>Component.joinFrom(options)</code>	<code>#inverse</code>	<code>&lt;</code>

## Relative Dates and Date Ranges for Conditions

NetSuite 2019.1 adds support for relative dates and date ranges in query conditions. A new object, `query.RelativeDate`, represents a date range relative to the current date, which means

that the current date is used as one of the boundaries of the date range. A new method, `query.createDateRange(options)`, creates a `query.RelativeDate` object. You can use values in the new `query.DateRangeId` enum to specify the type of range to create. For example, to create a date range that includes dates from three weeks ago until the current date:

```
var myDateRange = query.createDateRange({
  dateRangeId: query.DateRangeId.WEEKS_AGO,
  value: 3
});
```

To use this date range in a query condition:

```
var myCondition = myQuery.createCondition({
  fieldId: 'trandate',
  operator: query.Operator.WITHIN,
  values: myDateRange
});
```

Other operators in the `query.Operator` enum are also supported for use with relative date ranges, such as `BEFORE`, `AFTER`, `ON_OR_AFTER`, and `BEFORE_NOT`.

You can also use the `query.RelativeDate` object and the `WITHIN` operator to specify complex date ranges. Complex date ranges do not use the current date as one of the boundaries. A new enum, `query.RelativeDateRange`, can help you to construct these types of date ranges. This enum contains predefined date ranges, and you can use the `start` and `end` properties of these ranges to define other ranges. For example, to create a condition that matches dates from the start of this fiscal year until the end of yesterday:

```
var myComplexCondition = myQuery.createCondition({
  fieldId: 'trandate',
  operator: query.Operator.WITHIN,
  values: [query.RelativeDateRange.THIS_FISCAL_YEAR.start, query.RelativeDateRange.YESTERDAY.end]
});
```

For more information, see the help topics `query.createDateRange(options)` and `query.RelativeDate`.

## Columns with Consolidations

NetSuite 2019.1 adds a new boolean property, `Column.consolidated`, to the `query.Column` object. When you create a column using `Query.createColumn(options)` or `Component.createColumn(options)`, you can use the `options.consolidated` parameter to indicate whether the column should use consolidated currency amounts. For example:

```
var myTransactionColumn = myQuery.createColumn({
  fieldId: 'netamount',
  consolidated: true
});
```

## Script ID Support for Loading Queries

NetSuite 2019.1 changes the way that you load queries using `query.load(options)`. Previously, you loaded a query by specifying the internal ID of the query as a number. Now, you load a query



by specifying the script ID of the query as a string. The script ID of a query usually starts with `custworkbook`, but some do not (such as queries for predefined system workbooks). For example:

```
var myLoadedQuery = query.load({
  id: 'custworkbook237'
});
```

## SuiteScript 2.0 – Enhancement for N/currentRecord Module

In 2019.1, `options.forceSyncSourcing` replaces the `options.fireSlavingSync` parameter in the following SuiteScript 2.0 N/currentRecord Module methods:

- `CurrentRecord.setText(options)`
- `CurrentRecord.setValue(options)`
- `CurrentRecord.setCurrentSublistText(options)`
- `CurrentRecord.setCurrentSublistValue(options)`
- `CurrentRecord.setCurrentMatrixSublistValue(options)`
- `CurrentRecord.setMatrixHeaderValue(options)`

This boolean parameter determines whether dependent values for sublist fields are sourced synchronously. It is set to `false` by default. If `options.forceSyncSourcing` is set to `true`, dependent values for sublist fields are sourced synchronously. If `options.forceSyncSourcing` is set to `false`, dependent values for sublist fields are not sourced synchronously.

Scripts that use the `options.fireSlavingSync` parameter will continue to run as expected; you do not need to update scripts that use `options.fireSlavingSync`. However, you should use `options.forceSyncSourcing` in your scripts beginning in 2019.1. Note that if you use both `options.fireSlavingSync` and `options.forceSyncSourcing` in the same script, the setting for `options.forceSyncSourcing` takes precedence.

## SuiteScript 2.0 – N/format/i18n Module

2019.1 adds a new sub module to the SuiteScript 2.0 format module, `i18n`. You can use the N/format/i18n's module `format.spellOut(options)` method to spell out numbers as strings in a specific language. The method takes two parameters, `options.number` and `options.locale`:

```
/**
 *@NApiVersion 2.x
 */
require(['N/format/i18n'],
  function(format) {
    var spellOut = format.spellOut({number: 12345, locale: "DE"});
    log.debug(spellOut);
  });
```

The `options.locale` parameter can be specified with an ISO 639-1 alpha-2 language code. The example above specifies "DE", the ISO 639-1 alpha-2 language code for German. The language specified in the `options.locale` parameter is not related to the language specified for a NetSuite account. You can specify any language for the `options.locale` parameter; you do not have to specify a NetSuite supported language.

For more information, see the help topic [N/format/i18n Module](#)

## SuiteScript 2.0 – Enhancement for N/file Module

You can use the new Reader object in the N/file module to perform special read operations, such as reading until a specified character is reached and reading a specified number of characters.

## SuiteScript 2.0 – Signing API

A Digital Signing API is now available. Marketed for Brazil and China in NetSuite 2019.1, the Digital Signing API enables a secure connection with authorities requiring digital signatures in communication to authenticate your identity. You can create a scheduled script to sign transactions in XML format with your certificate, which you can upload on the Digital Certificates page. The script sends the signed XML to the appropriate authority for verification and then sends it on to the recipient.

Three new SuiteScript 2.0 modules are added to support signing: N/crypto/certificate, N/https/clientCertificate, and N/certificateControl.

For more information on storing digital certificates in NetSuite, see [Certificate Storage for Digital Signing](#).

For more information on making https connections for the Signing API, see [Mutual \(Two-Way\) Authentication for Outbound HTTPS Connections](#).

## SuiteTalk (Web Services) Integration

NetSuite 2019.1 includes the following enhancements to SuiteTalk features:

- [Release Preview Version of the 2019.1 WSDL](#)
- [Araxis Merge Diff File for the 2019.1 Endpoint](#)
- [2019.1 SuiteTalk Schema Browser](#)

## Release Preview Version of the 2019.1 WSDL

The 2019.1 WSDL is not yet available, but this section provides information about working with the beta version of web services endpoints.

When your implementation is upgraded to 2019.1, the 2019.1 WSDL becomes available in your production account. However, this version is considered a beta version. During the time that the WSDL is a beta version, additional changes are still gradually made to the endpoint. Some of these changes may be backward incompatible. You should use the beta version for testing and development purposes only.

Before the WSDL becomes generally available, use one of the earlier generally available versions in your production account. You do not need to upgrade your WSDL as soon as a new version is generally available. NetSuite supports each endpoint for three years. For information about the supported generally available versions, see the help topic [Support for Existing WSDL Versions](#).

After the WSDL becomes generally available, you can upgrade your other client applications. The general availability of the WSDL is announced in the Integration Newsletter.

You are able to access the new WSDL during your Release Preview period. Click [here](#) to view the 2019.1 Release Preview (beta) WSDL.



**Important:** When you attempt to access the beta version of the WSDL, you may receive the following error. To avoid this error and ensure that you receive the correct response, either use your account-specific domain for your request for the data center URL, or use the `c` parameter in your request to specify your account ID. The routing depends on the version of your NetSuite account, and not the version of the WSDL you use.

#### Service Unavailable

No service is available at this URL. If you expect this service to be available for your account, ensure your account number appears in the URL as request parameter "c".  
Example: [https://webservices.netsuite.com/services/NetSuitePort\\_X\\_X?c=12345](https://webservices.netsuite.com/services/NetSuitePort_X_X?c=12345)



**Note:** Previously, you accessed the Release Preview WSDL in the beta domain. As of 2018.1, you must access it on the NetSuite domain. This change is the result of the transition of Release Preview accounts from the beta domain to the NetSuite domain. The NetSuite domain is the domain used by production accounts.

## Araxis Merge Diff File for the 2019.1 Endpoint

The Araxis Merge Diff file will highlight 2018.2 - 2019.1 schema changes. The diff file is not yet available, but this section provides details about the types of information it will include.

- [About the Araxis Diff File](#)
- [Using the Araxis Diff File](#)

### About the Araxis Diff File

NetSuite publishes an Araxis Diff File for every new endpoint. Depending on the scope of the release, changes described in the Araxis Diff File may include:

- New record types
- Elements (fields) that have been added, removed, or changed
- New sublists (lists)
- New joins
- New search filters and search return columns
- New platform operations

### Using the Araxis Diff File



**Important:** The figures in this section are for illustrative purposes **only**. They do not reflect changes related to any specific endpoint.

The SuiteTalk diff file is generated using Araxis Merge. When you click the diff file link (when it is available), a page appears that offers an overview of all schema changes.

The following screenshot shows how this summary page looks. In this example, the rows highlighted in purple indicate that an XSD has been modified. The integers at the center indicate the number of

changed lines in the file. To see the exact differences, click the Report link in the column at the right, or click the name of the file in either column.

<a href="#">activities.scheduling.xsd</a>	3	<a href="#">activities.scheduling.xsd</a>	<a href="#">Report 1</a>
<a href="#">activities.schedulingTypes.xsd</a>	1	<a href="#">activities.schedulingTypes.xsd</a>	<a href="#">Report 2</a>
<a href="#">documents.fileCabinet.xsd</a>	0	<a href="#">documents.fileCabinet.xsd</a>	<a href="#">Report 3</a>
<a href="#">documents.fileCabinetTypes.xsd</a>	2	<a href="#">documents.fileCabinetTypes.xsd</a>	<a href="#">Report 4</a>
<a href="#">general.communication.xsd</a>	3	<a href="#">general.communication.xsd</a>	<a href="#">Report 5</a>
<a href="#">general.communicationTypes.xsd</a>	0	<a href="#">general.communicationTypes.xsd</a>	<a href="#">Report 6</a>
<a href="#">lists.accounting.xsd</a>	32	<a href="#">lists.accounting.xsd</a>	<a href="#">Report 7</a>
<a href="#">lists.accountingTypes.xsd</a>	5	<a href="#">lists.accountingTypes.xsd</a>	<a href="#">Report 8</a>
<a href="#">lists.employees.xsd</a>	0	<a href="#">lists.employees.xsd</a>	<a href="#">Report 9</a>
<a href="#">lists.employeeTypes.xsd</a>	0	<a href="#">lists.employeeTypes.xsd</a>	<a href="#">Report 10</a>
<a href="#">lists.marketing.xsd</a>	0	<a href="#">lists.marketing.xsd</a>	<a href="#">Report 11</a>
<a href="#">lists.marketingTypes.xsd</a>	0	<a href="#">lists.marketingTypes.xsd</a>	<a href="#">Report 12</a>
<a href="#">lists.relationships.xsd</a>	10	<a href="#">lists.relationships.xsd</a>	<a href="#">Report 13</a>
<a href="#">lists.relationshipTypes.xsd</a>	1	<a href="#">lists.relationshipTypes.xsd</a>	<a href="#">Report 14</a>
<a href="#">lists.supplyChain.xsd</a>	0	<a href="#">lists.supplyChain.xsd</a>	<a href="#">Report 15</a>
<a href="#">lists.supplyChainTypes.xsd</a>	0	<a href="#">lists.supplyChainTypes.xsd</a>	<a href="#">Report 16</a>
<a href="#">lists.support.xsd</a>	2	<a href="#">lists.support.xsd</a>	<a href="#">Report 17</a>
<a href="#">lists.supportTypes.xsd</a>	0	<a href="#">lists.supportTypes.xsd</a>	<a href="#">Report 18</a>

When you click any of these links, the diff file shows a page with two columns. The previous version of the file is displayed on the left, and the new version on the right. Changed elements are highlighted.

For example, the following screenshot shows an excerpt from the report on `platform.commonTypes.xsd`. Notice the addition of two values to the `PermissionCode` enumeration: `_accessPaymentAuditLog` and `_advancedPDFHTMLTemplates`.

500 <!-- PermissionCode/start -->	500 <!-- PermissionCode/start -->
501 <simpleType name="PermissionCode">	501 <simpleType name="PermissionCode">
502 <restriction base="xsd:string">	502 <restriction base="xsd:string">
503 <enumeration value="_accountDetail"/>	503 <enumeration value="_accessPaymentAuditLog"/>
504 <enumeration value="_accountingBook"/>	504 <enumeration value="_accountDetail"/>
505 <enumeration value="_accountingLists"/>	505 <enumeration value="_accountingBook"/>
506 <enumeration value="_accounts"/>	506 <enumeration value="_accountingLists"/>
507 <enumeration value="_accountsPayable"/>	507 <enumeration value="_accounts"/>
508 <enumeration value="_accountsPayableGraphing"/>	508 <enumeration value="_accountsPayable"/>
509 <enumeration value="_accountsPayableRegister"/>	509 <enumeration value="_accountsPayableGraphing"/>
510 <enumeration value="_accountsReceivable"/>	510 <enumeration value="_accountsPayableRegister"/>
511 <enumeration value="_accountsReceivableGraphing"/>	511 <enumeration value="_accountsReceivable"/>
512 <enumeration value="_accountsReceivableRegister"/>	512 <enumeration value="_accountsReceivableGraphing"/>
513 <enumeration value="_accountsReceivableUnbilled"/>	513 <enumeration value="_accountsReceivableRegister"/>
514 <enumeration value="_adjustInventory"/>	514 <enumeration value="_accountsReceivableUnbilled"/>
515 <enumeration value="_adjustInventoryWorksheet"/>	515 <enumeration value="_adjustInventory"/>
516 <enumeration value="_admindocs"/>	516 <enumeration value="_adjustInventoryWorksheet"/>
517 <enumeration value="_adpImportData"/>	517 <enumeration value="_admindocs"/>
518 <enumeration value="_adpSetup"/>	518 <enumeration value="_adpImportData"/>
519 <enumeration value="_advancedAnalytics"/>	519 <enumeration value="_adpSetup"/>
520 <enumeration value="_allocationSchedules"/>	520 <enumeration value="_advancedAnalytics"/>
521 <enumeration value="_allowNonGLChanges"/>	521 <enumeration value="_advancedPDFHTMLTemplates"/>
	522 <enumeration value="_allocationSchedules"/>
	523 <enumeration value="_allowNonGLChanges"/>

The diff file also shows changes to data types. The following screenshot is a snapshot of `transactions.sales.xsd`. Notice that the `chargeType` element changed from an enumeration to a `RecordRef`.

1054 <element name="vaseDelivered" type="xsd:boolean" minOccurs="0"/>	1054 <element name="vaseDelivered" type="xsd:boolean" minOccurs="0"/>
1055 <element name="chargeType" type="platformCore:ChargeRuleType" minOccurs="0"/>	1055 <element name="chargeType" type="platformCore:RecordRef" minOccurs="0"/>
1056 <element name="chargesList" type="platformCore:RecordRefList" minOccurs="0"/>	1056 <element name="chargesList" type="platformCore:RecordRefList" minOccurs="0"/>
1057 <element name="customFieldList" type="platformCore:CustomFieldList" minOccurs="0"/>	1057 <element name="customFieldList" type="platformCore:CustomFieldList" minOccurs="0"/>
	1058 <element name="customFieldList" type="platformCore:CustomFieldList" minOccurs="0"/>

## 2019.1 SuiteTalk Schema Browser

The 2019.1 SuiteTalk Schema Browser is not yet available.

## SuiteCloud IDE Plug-ins

SuiteCloud IDE plug-ins can be installed in integrated development environments (IDEs) for NetSuite platform development.


SuiteCloud IDE plug-ins for 2019.1 include the following features and behavior changes:

- [2019.1 Plug-in for Eclipse is Not Yet Available for Download](#)
- [2019.1 Plug-in for WebStorm is Not Yet Available for Download](#)

Generally, 2019.1 plug-in behavior changes are designed to support the SuiteCloud Development Framework. In addition, SuiteCloud IDE plug-ins for versions 2017.1 and later have compatibility requirements. The version of your plug-in must match the version of your NetSuite account before you can use the plug-in to create SuiteCloud Development Framework (SDF) projects. For information about additional features that impact SuiteCloud IDE plug-ins, see the release note for [SuiteCloud Development Framework](#).


## 2019.1 Plug-in for Eclipse is Not Yet Available for Download

The 2019.1 Eclipse plug-in is targeted to be released in February 2019.

 **Important:** When your account is upgraded to 2019.1, your instance of the plug-in is not updated automatically to 2019.1. After your account upgrade, you must manually upgrade the plug-in to the latest version. For more information, see the help topic [Updating Eclipse for Use with SuiteCloud IDE](#).

## 2019.1 Plug-in for WebStorm is Not Yet Available for Download

The 2019.1 WebStorm plug-in is targeted to be released in February 2019.

 **Important:** When your account is upgraded to 2019.1, your instance of the plug-in is not updated automatically to 2019.1. After your account upgrade, you must manually upgrade the plug-in to the latest version. For more information, see the help topic [Adding the SuiteCloud IDE to WebStorm](#).

## SuiteCloud Development Framework

SuiteCloud Development Framework (SDF) is a development framework and deployment mechanism. Customers and partners can use SDF to create customization projects for internal use within their organizations or for commercial distribution. For more information about SDF, see the help topic [SuiteCloud Development Framework Overview](#).

For a complete list of custom records and customizations that are supported by SDF, see the help topic [Customizations Supported by SuiteCloud Development Framework](#).

With the release of SuiteCloud Development Framework, the SuiteCloud Terms of Service were updated in September 2016 to specifically include SuiteCloud Development Framework as one of the listed SuiteCloud Technologies and to make other clarifying changes. You can review the complete updated terms at <http://www.netsuite.com/termservice>.

 [View the SuiteCloud Development Framework 2018.2 New Feature Training.](#)

NetSuite 2019.1 includes the following enhancements to SuiteCloud Development Framework features:

- [New Standard Role for Developer](#)
- [Ability to Execute Installation Scripts in a SuiteApp Project Deployment](#)
- [Installation Preferences Now Support File and Folder Locking in SDF SuiteApps](#)
- [SDF Now Supports Custom Content Type Records for SuiteCommerce Site Management](#)
- [Roles in SDF Now Support Restrictions](#)
- [New Workflow Enhancements Supported in SDF](#)
- [SDF SDK 2019.1 is Not Yet Available for Download](#)
- [Copy to Account \(Beta\): Copy a Custom Record from One Account to Another](#)


Generally, SDF features are supported by SuiteCloud IDE plug-ins. SuiteCloud IDE plug-ins for versions 2017.1 and later have compatibility requirements. The version of your plug-in must match the version of your NetSuite account before you can use the plug-in to create SuiteCloud Development Framework (SDF) projects. For information about additional features that may impact SDF, see the release notes for [SuiteCloud IDE Plug-ins](#).

## New Standard Role for Developer

In previous releases, NetSuite did not include a standard Developer role to use with SDF. To use SDF with your account, you either had to be assigned the administrator role or an administrator had to create a custom role and provide access to several permissions that SDF requires.

As of 2019.1, administrators can assign or customize the new Developer role and assign it to SDF users. To find the Developer role, go to **Setup > Users/Roles > User Management > Manage Roles (Administrator)** and choose **Developer** from the list of roles.

The new Developer role includes all permissions required to work with SDF. Administrators should enable SDF-supported features before customizing the Developer role for SDF users. See the help topic [Enabling SDF in Your NetSuite Account \(Admin Only\)](#).

 **Note:** You must customize the Developer role when working with SDF projects that either impact standard record types or require additional permissions that are not included with the standard Developer role. The customized role must have the appropriate permissions enabled for all the standard record types your project affects.

For more information, see the following:

- [NetSuite Roles Overview](#)
- [Assigning the Developer Role \(Admin Only\)](#)

## Ability to Execute Installation Scripts in a SuiteApp Project Deployment

Prior to 2019.1, only bundle installation scripts were available for running SuiteScripts during a bundle installation. You could add bundle installation script entry points to run scripts before or after an installation or update. A script type to run during SuiteApp installations was not available. If you used SDF to deploy a SuiteApp project, you could not execute your installation scripts.

As of 2019.1, installation scripts for SuiteApp projects are supported with the new SDF installation script type. You can add run elements to the deploy file in your SuiteApp project to trigger execution of SDF installation scripts.

For information about using SDF installation scripts in a SuiteApp project, see the following topics:

- [Changing the SuiteApp Deploy File](#)
- [Using an SDF Installation Script](#)

## Changing the SuiteApp Deploy File


Within the run element, you can reference the installation file path and script ID of the deployment record for the script you want to execute. The location of the run element within the deploy file determines the order that the deployment runs.

The following is an example of a deploy file with a run element that contains references to the SuiteScript file path and the script ID of the deployment record for the referenced SuiteScript:

```
<deploy>
  <run>
    <script>
      <path>~/Objects/customscript_install_script.xml</path>
      <deployment>customdeploy1</deployment>
    </script>
  </run>
</deploy>
```

In the following example, the run element indicates that the following actions will occur for each of the three scripts when they are executed:

1. The script file is uploaded.
2. The script record and deployment is created from the XML definition.
3. The script is executed.

 **Note:** Installation scripts are executed as the role you used to deploy the SuiteApp project.

```
<deploy>
  <files>
    <path>~/FileCabinet/SuiteApps/com.example.scriptdemo/*</path>
  </files>
  <run>
    <script>
      <path>~/Objects/customscript_execute.xml</path>
      <deployment>customdeploy_before_objects</deployment>
    </script>
  </run>
  <objects>
    <path>~/Objects/*</path>
  </objects>
  <run>
    <script>
      <path>~/Objects/customscript_execute2.xml</path>
      <deployment>customdeploy_1</deployment>
    </script>
    <script>
      <path>~/Objects/customscript_execute.xml</path>
      <deployment>customdeploy_after_objects</deployment>
    </script>
  </run>
</deploy>
```

```

</script>
</run>
</deploy>

```

## Using an SDF Installation Script

NetSuite 2019.1 introduces a new server-side SuiteScript 2.0 script type called SDF installation script. You can create script records and script deployments for instances of this new script type the same way you can for other SuiteScript 2.0 scripts.

Use this script type when you want to write code that performs tasks during an SDF deployment to your target account. Tasks include setup, configuration, and data management tasks that would otherwise have to be completed by account administrators. The following are some examples:

- Trigger code to verify the account
- Customize the installation
- Set up the target account
- Prevent installation if proper setup has not occurred
- Migrate existing data

To execute the script during your SuiteApp project deployment, the script must be associated with a script record and deployment record. Script records and deployments can be created in your project as XML representations. For more information, see the help topic SuiteCloud Development Framework XML Reference.

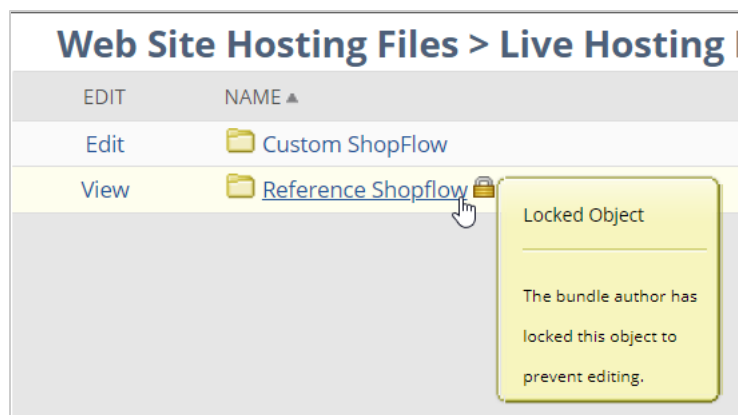
SDF installation scripts are governed by a maximum of 10,000 units per execution. For more information, see the help topic Script Usage Unit Limits.

## Installation Preferences Now Support File and Folder Locking in SDF SuiteApps

Support for installation preferences was added in 2018.1. It included the ability to hide files or folders and lock most custom objects.

As of 2019.1, locking installation preferences are extended to files and folders.

A locked file in a NetSuite account is protected from being edited, copied, or downloaded as XML. When you lock a folder, you lock all files and folders it contains.





You can list the path and name of a single file that you want to lock when your project is deployed in the `locking.xml` file in the `InstallationPreference` folder. To lock multiple files when your project is deployed, you can use the path and name of a folder, an `appliesTo` attribute, and a wildcard in the `locking.xml` file.

From the `Installation` folder of a SuiteApp project, the `locking.xml` file uses the following lines:

```
<preference type="LOCKING" defaultAction="UNLOCK">
  <apply action="LOCK">
    <path> ~/FileCabinet/SuiteApps/com.example.mysuiteapp/file132.js</path> <!--lock a single file-->
  </apply>
</preference>
```

The example above sets the preference type to `LOCKING`, the default action to `UNLOCK`, the apply action to `LOCK`, and references those preferences to apply to `file132.js`.

To include folder contents, such as all of the files in your SuiteApp, you must include a wildcard (\*) and the `appliesTo` attribute in the path:

```
<path appliesTo="FILES">~/FileCabinet/SuiteApps/com.example.myfiles/*</path> <!--locks all the files under the ~/
FileCabinet/SuiteApps/com.example.myFiles folder-->
```

If you reference a folder path that uses a wildcard, you must also set the `includeRoot` attribute:

```
<path appliesTo="FILES_AND_FOLDERS" includeRoot="F">~/FileCabinet/SuiteApps/com.example.myfiles/folderA/*</path> <!--locks
all the files and folders within the ~/FileCabinet/SuiteApps/com.example.myfile/ folder-->

<path appliesTo="FILES_AND_FOLDERS" includeRoot="T">~/FileCabinet/SuiteApps/com.example.myfiles2/folderA/*</path> <!--locks
all the files and folders of ~/FileCabinet/SuiteApps/com.example.myfiles2/ including the folder specified-->
```

This locking preference can be applied to items in folders supported by SDF:

- SuiteApps. For example, `~/SuiteApps/<application-ID>/<subfolder-name>`.
- Web Site Hosting. For example, `~/FileCabinet/Web Site Hosting Files/<hosting-root-folder-name>/SSP Applications/<application-ID>`.

You must apply content protection for each project deployment to apply the installation preferences you specified in the `InstallationPreferences` folder of a SuiteApp project.

For more information, see the following topics:

- Locking Files in an SDF SuiteApp Project
- Installation Preferences in a SuiteApp Project
- Setting Installation Preferences
- Using the Content Protection Option to Apply Installation Preferences

## SDF Now Supports Custom Content Type Records for SuiteCommerce Site Management

As of 2019.1, SDF supports CMS content type records for use with site management tools. In NetSuite, these records are located under **Lists > Web Site > CMS Content Types**. For more information, see the help topics [Custom Content Type](#) and [CMS Content Type Record](#).

The following is an example of a custom content type record object in SDF that uses all available fields:

```
<cmscontenttype scriptid="custcontenttype_sample">
  <customrecordid>[scriptid=customrecord_childdatetime]</customrecordid>
  <description>This is the description of the content type.</description>
  <iconimagepath>/netsuite.com/sample_image.svg</iconimagepath>
  <label>Sample CCT</label>
  <name>Sample Custom Content Type</name>
</cmscontenttype>
```

For more information, see the following:

- CMS Content Types as XML Definitions
- cmscontenttype

## Roles in SDF Now Support Restrictions

You can now apply any type of restriction to custom roles in SDF. Restrictions define the set of records that users of an assigned role can view or edit for specific record types, such as employees. For more information, see the help topic [Permissions and Restrictions](#).

SDF now supports the following restriction fields for custom roles:

- The Employee Restrictions field, including the ability to view employee records that are not available for editing.
- The Do Not Restrict Employee Fields field, which determines whether users can select any employee.
- The Restrict Time and Expenses field, which determines whether users can view or edit those fields.
- The Restrictions sublist, where you can select a segment, a segment restriction, whether to allow viewing, and whether to apply restrictions to items.

The following is an example of a custom role object in SDF that uses the new restriction fields:

```
<role scriptid="customrole_restrictsample">
  <centertype>ACCOUNTCENTER</centertype>
  <name>Role Restriction Sample</name>
  ...
  <employeeerstriction>UNASSIGNED</employeeerstriction>
  <employeeviewingallowed>T</employeeviewingallowed>
  <restricttimeandexpenses>T</restricttimeandexpenses>
  ...
  <recordrestrictions>
    <recordrestriction>
      <segment>LOCATION</segment>
      <restriction>OWNONLY</restriction>
      <itemrestricted>T</itemrestricted>
      <viewingallowed>T</viewingallowed>
    </recordrestriction>
    <recordrestriction>
      <segment>DEPARTMENT</segment>
      <restriction>DEFAULTTOWN</restriction>
      <itemrestricted>F</itemrestricted>
      <viewingallowed>F</viewingallowed>
```

```

</recordrestriction>
<recordrestriction>
  <segment>CLASS</segment>
  <restriction>UNASSIGNED</restriction>
  <itemrestricted>T</itemrestricted>
  <viewingallowed>F</viewingallowed>
</recordrestriction>
</recordrestrictions>
</role>

```

For more information, see the following:

- Roles and Permissions as an XML Definition
- role

## New Workflow Enhancements Supported in SDF


The following 2019.1 SuiteFlow feature enhancements are supported in SDF so that they can be used with custom Workflow objects:

- [New Create Line Action](#). A new createlineaction structure has been added to the workflowactiongroup and workflowactions structures.
- [Enhancements to Release Status](#). The new SUSPENDED Workflow Release status is available. In addition to the new release status, the NOTRUNNING status has been renamed to NOTINITIATING. The NOTRUNNING status is still supported for backwards compatibility.
- [Enhancement to Set Field Display Label Action](#).
- [Enhancement to Set Field Mandatory Action](#).

For more information, see the following:

- Workflows as XML Definitions
- workflow

## SDF SDK 2019.1 is Not Yet Available for Download

 **Important:** SDF SDK 2019.1 is targeted for release in the middle of February 2019.

SDF SDK contains the SDF command line interface (SDF CLI). You can use SDF CLI with your own integrated development environment (IDE) to create SDF projects, including SDF SuiteApps. You can also create batch and shell scripts that use CLI commands to automate your project validation and deployment processes. When used with your own IDE, CLI acts as an alternative to SuiteCloud IDE. For more information about SDF CLI, see the help topic Command Line Interface Guide.

SDF SDK is supported on Windows, Linux, and Mac OS X. For more information, see the help topic SDF SDK Installation Prerequisites.

## SuiteApps (Bundles) Released by NetSuite

NetSuite 2019.1 includes the following enhancements to SuiteApps released by NetSuite:

- [Accounting SuiteApps](#)
- [Order Management SuiteApps](#)
- [Manufacturing SuiteApps](#)
- [Taxation SuiteApps](#)

## Accounting SuiteApps

Following is the 2019.1 accounting enhancement to SuiteApps:

### SuiteApprovals V3.0

SuiteApprovals version 3.0 includes the following enhancements:

- **Support for Vendor Bill and Purchase Order Record Types** – SuiteApprovals now supports vendor bill and purchase order record types, in addition to journals and engineering change orders.  
Using SuiteApprovals, you can now create approval rules for purchase order and vendor bill records. You can design approval rules for these records in two ways:
  - Using the total line amount as basis and then selecting and building an approval routing type: employee hierarchy or custom approval chain.
  - Specifying an approval chain regardless of the total amount on the record.
 For vendor bill records, you can specify exception criteria to execute within the approval workflow.
- **Super Approval** – The Super Approval feature applies to all supported record types: journal, engineering change order, purchase order, and vendor bill records. Super Approval is a capability by which an employee, designated as a Super Approver, can approve and finalize, or reject a record. The Super Approver's action bypasses the approval chain in the running approval rule.  
The Super Approver role is set on the employee record. Any employee or team in urgent need of a record's approval can directly contact the Super Approver with details and link to the record.
- **Skip Approval** – An additional feature to creating approval rules for all supported record types, Skip approval can be applied to any rule that has the **Route Approvals Based on Amount** setting enabled. Skip approval is enabled by selecting the **Require One Level of Approval Based on Approver's Approval Limit** option under the Approval Routing section of the rule record.  
When enabled, the affected record is automatically routed to the approver who has the required approval limit relative to the record's amount. That approver's action determines final approval or rejection of the record.
- **Multi-Language Support for SuiteApprovals** – SuiteApprovals supports multiple languages.

For more information, see the help topic SuiteApprovals V3.0.


## Order Management SuiteApps

Following are the 2019.1 order management enhancement to SuiteApps:

- [Electronic Bank Payments Enhancements](#)
- [Inbound Shipment Management](#)
- [Electronic Invoicing Enhancements](#)

## Electronic Bank Payments Enhancements

Electronic Bank Payments version 2019.1 includes the following features:

 **Note:** These features are targeted to be available in January 2019.

### ■ SuiteTax Support on Electronic Bank Payment File Creation

The Electronic Bank Payments SuiteApp uses the tax information on the entity record when processing payments and generating bank payment files. To ensure compatibility with the SuiteTax feature, a new field has been added to the Payment File Template form that will source the default tax registration of the entity record.

If you are using SuiteTax on your account, the value from the new SuiteTax Bank File Template field will be used by default when processing payments and generating bank files. If this field is blank, the value from the Bank File Template field will be used.

For more information, see the help topic [Payment File Template Changes in NetSuite Electronic Bank Payments 2019.1](#).

### ■ Support SuiteCloud Processors in Electronic Payments Queue Management

In addition to supporting script deployments using script queues, you can also configure the Electronic Payments Queue Management to use script deployments configured for the SuiteCloud Processors. This will ensure more tasks are processed in shorter time frame without any need for complicated settings, and promote effective use of resources.

Using the SuiteCloud Processors in Electronic Bank Payments, you can set the number of processors assigned to a map/reduce script deployment record through the **Concurrency Limit** field. The SuiteCloud Processors will automatically divide processing of the scripts used by the Electronic Bank Payments SuiteApp for generating payment files.

### ■ Direct Debit Processing to use SuiteScript 2.0

As of 2019.1, all functions for Direct Debit processing will use SuiteScript 2.0.

- As part of upgrading the Electronic Bank Payments to SuiteScript 2.0, setting up multiple queues for script deployments exclusive to Direct Debit functions will no longer be possible.
- Instead, you can assign processors through the Concurrency Limit field of the map/reduce script deployment record for Direct Debit.

### ■ NetSuite SuiteApps License Client to Replace Advanced Electronic Bank Payments SuiteApp

As of 2019.1, the Advanced Electronic Bank Payments SuiteApp is deprecated and will be replaced by the NetSuite SuiteApps License Client SuiteApp. As part of this change, new error handling and license validation has been added to the following advanced features of Electronic Bank Payments:

- **Advanced Electronic Bank Payment license is now required for Generate Bill and Customer Payment File features** – As of 2019.1, the generation of instant electronic bank payment file through Generate Bill or Customer Payment File page (accessed from Payments > Bank File Generation) will have the same restriction, based on your license, as with Bill and Invoice Payment Processing page.

Without an active license	With an active license
<p>If your account does not have an active Advanced Electronic Bank Payments license, the <b>Company Bank Account</b> list will not include a company bank account that uses the following:</p> <ul style="list-style-type: none"> <li>■ A company bank detail record that uses standard templates that is not based on your account's country of operation.</li> </ul>	<p>If you have an active Advanced Electronic Bank Payments license, the <b>Company Bank Account</b> list will include company bank accounts that uses standard and custom templates regardless of your country of operation.</p>

Without an active license	With an active license
<ul style="list-style-type: none"> <li>■ A company bank detail record that uses custom templates.</li> </ul>	

- **Advanced Electronic Bank Payments license is now required to use Electronic Bank Payment APIs** – As of 2019.1, the Electronic Payments API will only be available if your account has an active Advanced Electronic Bank Payment license. If you use the Electronic Bank Payments API to create custom Bill Payment Processing pages without an active license, you will receive an error message and will not be able to submit payment transactions using the custom Bill Payment Processing page.
- **Enhancements to Payment Batch Processing** – As of 2019.1, additional restrictions have been added when using the Payment Batch Processing feature. If you do not have an active license, you will not be able to perform the following using Electronic Bank Payments.
  1. Manually refresh payment batches through Payment Batch List page. The Bank Account field will be disabled, and an error message will be displayed if you access the page without an active license.
  2. Payment batches that are scheduled to be created, updated or closed automatically according to a payment schedule will not be processed. Instead, an email notification is sent to all account Administrators to inform that the payment schedule failed.
- **Enhancements to Japan Bank Fee Calculation for Payment Transactions**  
 In Electronic Bank Payments SuiteApp 2019.1, you can calculate the bank transfer fee based on the associated bank fee schedule when paying multiple vendor bills using Pay Bills. Generate the payment file for electronic bank payment to reflect the payment amount with the bank fee applied. For more information, see the help topic Calculating Zengin Bank Fees when Processing Bill Payments.

## Inbound Shipment Management

NetSuite 2019.1 updates the Inbound Shipment Add PO Items form to include user interface enhancements.

Collapsible headers enable you to better manage screen space by hiding or displaying some or all selected PO Items.

The screenshot shows the 'Add PO Items' form. At the top, there are dropdowns for 'Vendor' (set to 'US Vendor JPY') and 'Purchase Order' (set to 'PO#1'). Below these is a table with the following columns: PO, ITEM, DESCRIPTION, VENDOR, RECEIVING LOCATION, QUANTITY EXPECTED, QUANTITY REMAINING, and UNIT. The first row of the table is expanded, showing 'PO#1 (1)' in the PO column and 'PO#1' in the ITEM column, with a checkmark in the first column. The rest of the table is empty. Below the table is a large gray area. At the bottom of the form are 'OK' and 'Cancel' buttons.

Within the PO Item header, you can select which PO Items to include or exclude in the shipment. This feature also enables you to edit column details, such as Quantity Expected or Expected Rate.

To learn more, see the help topic [Using Inbound Shipment Management](#).

## Electronic Invoicing Enhancements

The Electronic Invoicing SuiteApp version 4.0 includes the following new features and enhancements:

- [Custom Plug-in Implementations](#)
- [E-document Certification in Outbound E-document Process](#)
- [Multi-subsidiary Customer and Vendor in Outbound E-document Process](#)
- [Restrict Editing of Transactions based on E-document Status](#)
- [Change to the View XML button](#)

### Custom Plug-in Implementations

Custom plug-in Implementations are supported for the following:

- **E-document sending method** - On a new sending method record, a new **E-Document Sending Method Plugin Implementation** field is available where you can select the sending method custom plug-in implementation to use. For more information, see the help topic [Creating a Custom Plug-in Implementation for Sending E-Documents](#).
- **Inbound e-document validation** - On a new inbound validation plug-in record, you can select a custom validation plug-in from the new **Inbound E-Document Validation Plugin Implementation** field. For more information, see the help topic [Creating a Custom Plug-in for Inbound E-Document Validation](#).
- **Custom data source for e-documents** - On a new e-document template record, a new **Custom Data Source Plugin Implementation** field is available. In this field, you can select the custom data source plug-in implementation to add more field values to e-documents that will be generated. For more information, see the help topic [Creating a Custom Plug-in Implementation for E-Document Custom Data Source](#).

Existing scripts for sending methods and inbound validation will continue to work. But you must convert these scripts into plug-in implementations by the 2019.2 release of NetSuite. After the 2019.2 release, sending method and inbound validation scripts will not be supported anymore.

### E-document Certification in Outbound E-document Process

E-document certification is now supported in the outbound e-document process. You can send e-documents to a certification authority or tax agency to be certified. The administrator can create a sending method to be used for certification by checking the new **Sending Method for Certification** box on a sending method record. A generated e-document with the associated certification sending method will display a **Certify E-Document** button, which when clicked sends the e-document to the certification authority. The XML file of successfully certified e-documents can be viewed by clicking a link from the **E-Document** subtab under **Certified E-Document**. New e-document statuses describe the progress of the e-document in the certification process. For more information, see the help topic [E-Document Certification in the Outbound Process](#).

### Multi-subsidiary Customer and Vendor in Outbound E-document Process

Multi-subsidiary customer and vendor is supported in the outbound e-document process. A new **Subsidiary** field on outbound e-document template and sending method records enables the administrator to select multiple subsidiaries. In addition, if only one outbound template or one sending

method is associated with a customer or vendor, automatic selection of that template and sending method can be enabled on the transactions of the customer or vendor. To do this, you can check the new **Template and Sending Method Auto-selection** box on the **E-Document** subtab of a customer or vendor record. The template and sending method will be automatically selected as the default value of the **E-Document Template** or **E-Document Sending Method** field on the transaction records of the customer or vendor. For more information, see the help topic *Multi-subsidiary Support in the Outbound Process*.

## Restrict Editing of Transactions based on E-document Status

The administrator can restrict the editing of transactions based on the E-document status. On an outbound e-document template record, e-document statuses can be selected from the new **Restrict Editing of Transactions with E-document Status** field. Transactions with the selected e-document status will be locked for editing if the e-document template is associated with them.

## Change to the View XML button

The **View XML** button on generated e-documents will no longer be available and will become a link on the **E-Document** subtab of the transaction record.

# Manufacturing SuiteApps

Following is the 2019.1 manufacturing enhancements to SuiteApps:

## Advanced Manufacturing

The Advanced Manufacturing SuiteApp version 2019.1 includes the following enhancements and incorporates fixes to several customer-reported issues.

- [Production Unit of Measure](#)
- [Tablet Non-Routing Work Order Support](#)

## Production Unit of Measure

NetSuite Advanced Manufacturing 2019.1 enables you to identify units of measure (UOM) for shop floor reporting at the assembly or work order level. When the tablet is in normal mode, the production unit of measure is displayed, prompting the operator to enter the appropriate production and scrap quantities. The Advanced Manufacturing SuiteApp then converts the units to provide NetSuite with transactions that have the correct base unit quantities.

To learn more, see the help topic *Assemblies and Units of Measure*.

## Tablet Non-Routing Work Order Support

NetSuite Advanced Manufacturing 2019.1 enables you to prioritize and execute conventional work orders (work orders without routings) in the Advanced Manufacturing shop floor tablet interface. Cleaner, more intuitive forms enable operators to record assembly production. The system automates the associated transaction processing.

Reconfigurable plugins automate inventory detail generation related to bin location and lot/serial numbers used in manufacturing. This can reduce shop floor data entry and help enforce rules for item consumption and production with respect to lot/serial information.



- Serialized assemblies is a beta feature. The contents of this feature are preliminary and may be changed or discontinued without prior notice. Any changes may impact the feature's operation with the NetSuite application. Oracle warranties and product service levels shall not apply to the feature or the impact of the feature on other portions of the NetSuite application. Oracle may review and monitor the performance and use of this feature. The documentation for this feature is also considered a beta version and is subject to revision.

Limited testing has been completed on plugin serial number retrieval and validation. You should test this feature in your sandbox account and report any issues so that subsequent releases can completely handle serialized items.

- Repeating the same work order component item multiple times (duplicate line item) is not supported by the default plugin implementations.

To learn more, see the help topic [Setting up Conventional Work Orders](#).

## Taxation SuiteApps

Following are the 2019.1 taxation enhancements to SuiteApps:

- [Making Tax Digital for UK VAT](#)
- [New Country Tax Reports for SuiteTax](#)
- [Malaysia Sales and Service Tax \(SST-02\) Return](#)

### Making Tax Digital for UK VAT

Beginning April 1, 2019, all UK VAT-registered businesses with a taxable turnover above £85,000 must use the Making Tax Digital (MTD) system as mandated by Her Majesty's Revenue and Customs (HMRC).

In NetSuite, UK VAT-registered companies can use the Making Tax Digital for VAT feature to digitally record VAT data and submit the UK VAT100 Return online to HMRC.

Using the MTD for VAT feature, you can:

- Digitally store and maintain VAT data using MTD API
- Generate and submit the UK VAT100 return online to HMRC
- Retrieve previously submitted VAT100 returns from HMRC
- View the MTD VAT return submission history
- Export the VAT return in an Excel file (.xls)

This feature requires the International Tax Report SuiteApp. For more information about this SuiteApp, see the help topic [International Tax Reports](#).

To know more about the Making Tax Digital for VAT feature, see the help topic [Making Tax Digital for VAT](#).

### New Country Tax Reports for SuiteTax

The SuiteTax Reports SuiteApp enables you to generate localized tax reports by providing editable templates. Using this SuiteApp, you can choose the transactions that you want to include in your tax reports. Supported reports include VAT/GST returns, supplementary VAT/GST reports, EU Cross-Border reports, and Tax Audit Files. To see the full list of country tax reports supported by SuiteTax Reports and read other information about this SuiteApp, see the help topic [SuiteTax Reports](#).

## Malaysia Sales and Service Tax (SST-02) Return

International Tax Reports version 3.103.0 now includes the following country forms for Malaysia Sales and Service Tax Returns:

- **Malaysia Sales Tax Return (SST-02)** – This worksheet automatically generates details and related values for Part A: Registered Manufacture / Registered Person Particulars and Part B: Value of Tax Payable for Goods (Sales, Disposed, Own Use).
- **Malaysia Service Tax Return (SST-02)** – This worksheet automatically generates details and related values for Part A: Registered Manufacture / Registered Person Particulars and Part B2: Value of Tax Payable for Services (Services Performed, Own Use).

For more information, see the help topic Malaysia SST-02 Return.