



CPQ

2205 What's New

Hotfix 2205.0.1

Hotfix 2205.0.2

Hotfix 2205.0.3

Hotfix 2205.0.4

Hotfix 2205.0.5

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Disclaimer

This document is published and updated before the SAP CPQ releases are deployed, so it is subject to change. To ensure that you have the latest copy of this document, please check the Community for the most up-to-date version.

Revision History

Version	Date	Summary of Changes
1	April 26, 2022	The SAP CPQ 2205 What's New is published.
2	April 28, 2022	The following note and a breaking change announcement have been added to the file: <ul style="list-style-type: none"> • Improvement for Displaying Quote Error Messages on Quote 2.0 • Quote Error Messages Breaking Change Fix
3	April 29, 2022	The following resolved support issues have been added to the file: <ul style="list-style-type: none"> • The field Modified Date now uniformly displays the same date and time based on the user time zone, both in the Global Scripts lists, and in the Script Definition section when the script is edited. • The issue that caused custom translations of Setup sections in the menu to revert to default dictionary values has been resolved. The missing dictionary keys are now properly defined, and menu items are translated as expected. • Users are now allowed to copy companies on the Management of companies page only if the administrator enables them to do so by selecting the Can Create New Companies checkbox in Delegation of authority > User management > Management of companies. • The issue that occurred with the date picker in the sections of the Setup has been successfully resolved. Previously, after administrators selected the start and end year of a fixed time range in the past and attempted to browse back through years by clicking the navigation arrow, a string <i>Undefined</i> would appear next to the start year. Now, users can select and browse a fixed time range in the past with both the start and end year displaying properly. <p>Additionally, the following note has been added to the file:</p> <ul style="list-style-type: none"> • Creating New Tabs in Product Configuration Layout.
4	May 11, 2022	The document is updated with resolved issues pertaining to the 2205.0.1 hotfix:

		<ul style="list-style-type: none"> The time and date of changes made on custom tables are now properly recorded in the audit trail in the date and time format of the respective logged-in administrator.
5	May 11, 2022	<p>The document is updated with additional resolved issues pertaining to the 2205.0.1 hotfix:</p> <ul style="list-style-type: none"> Users landing from Salesforce to SAP CPQ Quote 2.0 can now successfully create quotes. Errors are no longer displayed or logged if a user clicks on the Request Approval action while there is a required custom field in a custom tab for which the user doesn't have the access rights.
6	May 13, 2022	<p>The document is updated with resolved issues pertaining to the 2205.0.2 hotfix:</p> <ul style="list-style-type: none"> When the values of the Date Modified column in Setup > Product Catalog > Custom Tables are sorted, they now appear in the correct order. All date formats now work correctly in custom table columns with the type Date. In addition, all new custom table date entries in a two-digit year format are now created with the correct century as determined by the application parameter Set boundary for two-digit year resolving. In scripts that are looping through quote item custom fields whose type is autocomplete attribute sourced from a custom table, and multiple fields have the same attribute value selected, the system now returns the value of the attribute, for each field, instead of its attribute value code.
7	May 18, 2022	<p>The document is updated with a resolved issue pertaining to the 2205.0.3 hotfix:</p> <ul style="list-style-type: none"> The issue with copying translations from the original product to the product alias has been resolved. Accordingly, product aliases can now be successfully saved.
8	May 20, 2022	<p>The document is updated with resolved issues pertaining to the 2205.0.4 hotfix:</p> <ul style="list-style-type: none"> Attribute hints and custom labels are now successfully deployed in the target environment.

		<ul style="list-style-type: none"> The issue with the Display to Users option on product alias attributes has been resolved and attributes can now be successfully saved. Performance is no longer impacted when the system executes a script with an extensive number of uninterrupted empty lines.
9	May 20, 2022	<p>The document is updated with resolved issues pertaining to the 2205.0.4 hotfix:</p> <ul style="list-style-type: none"> Formulas in attribute change triggers can now be successfully saved. The order of tabs in product administration layout is now properly retained in the configuration preview, as well as in the Configurator. <p>In addition, limitations for the 2205 release can now be accessed from this document.</p>
10	June 10, 2022	<p>The document is updated with a resolved issue pertaining to the 2205.0.5 hotfix:</p> <ul style="list-style-type: none"> Using <code>quoteItem.SelectedAttributes</code> inside loops in scripts no longer negatively impacts system performance.

Release Dates

All Lower Environments (Development, Sandbox and Test):

- **Saturday, May 7, 2022**
- **Thursday, May 12, 2022**
- **Saturday, May 14, 2022**
- **Thursday, May 19, 2022**
- **Saturday, May 21, 2022**

Production:

- **Saturday, May 21, 2022**
- **Saturday, June 11, 2022**

[Release Schedule and Dates for 2022](#)

What's New in SAP CPQ 2205?

We are pleased to announce the release of SAP CPQ 2205. This release brings new features and enhancements to the existing functionalities in SAP CPQ:

- The new integration with CX AI (former Thunderbridge AI) enables price recommendations for simple products and cross-sell scenarios in SAP CPQ, in both Quote 1.0 and Quote 2.0.
- Administrators can now resynchronize a pricing procedure in the **Setup**, while users can recalculate the pricing procedure used on a quote.
- Pricing attribute determination is now available on all Quote 2.0 environments where the Variant Configuration integration is enabled. In addition, the way pricing attribute determination functions has been modified.

- The support for pricing procedure data in scripting and CTX tags has been extended.
- Administrators are now provided with an improved way of managing the versions of products synchronized from a back-office system.
- Improvements are introduced for the Variant Configuration integration.
- Improvements are introduced for the integration with SAP Cloud for Customer.
- Improvements are introduced for the External Configurator integration.
- The redesigned Margin Health feature is now available in Quote 2.0 tenants. Unlike Quote 1.0, Quote 2.0 supports margin health only on quote items, and not on product types and totals.
- Administrators can now use the newly added document generation tag `SECTION_PRODUCTS` inside the existing `SECTION_LOOP` tag to retrieve all products within a section in the **Solution Design** tab in Quote 2.0.
- Permissions for accessing and editing business partners can now be defined for multiple business partners at once, by creating rules in the new **Setup** section.
- An improved way of browsing and adding existing business partners to an involved party on the quote is now available to users.
- The support for using business partner fields in IronPython scripting has been expanded.
- Custom fields of type attribute are now supported in Quote 2.0. Their behavior is the same as in Quote 1.0.
- The Information, structures, and relationships topic of the SAP Accessibility Standard is introduced to the user side of Quote 2.0 tenants to further assist users with disabilities.
- Some **Setup** subsections have been removed from Quote 2.0 as they pertain to features that are obsolete in the new engine.
- More than one error message can now display on the quote at the same time when using the Quote 2.0 engine.
- The new pricebooks endpoint POST `/api/v1/admin/Pricebooks/SavePricebookEntries` allows administrators to

insert or update multiple pricebook entries at once by sending the pricebook ID in the call.

- The `Calculations` API has been improved for the Quote 2.0 engine.
- The `RestClient` method in IronPython scripting has been enhanced with new options.
- The maximum length of scripting messages has been extended to 1000 characters on the Quote 2.0 engine.
- Scripting messages are now visible on all quote tabs in both quote engines, except for Inline Frame custom tabs.
- As of the 2205 release, the .NET namespace `System.Diagnostics` is no longer allowed in IronPython scripting.
- Administrators can now define quote deletion rules by combining the quote status and the quote owner's company with the deletion period, using the new option **Delete Quotes by Status and Company**.
- Some improvements have been made to the process of granting access to the SAP CPQ Support team from within SAP CPQ.
- The **View Prices** option now opens an overview of all the prices available for the respective product, including the dates when each price is effective.
- Administrators are now able to decide whether the products for the promotions are searched by the exact match or the like match by selecting the value of the new application parameter **Search exact product part number for promotions**.
- A redesigned advanced search is available throughout the **Setup**. Instead of being performed in the modal, the search is now conducted directly in column headers.
- As of this release, the improved Categories are the default in SAP CPQ. Consequently, the old Categories are no longer in use.
- The formats selected for **Date Format** and **Date Separator** on the user administration page in the **Setup** or the **User Page** for the logged-in administrator now apply to every instance where date and time appear on **Custom Tables** in the **Setup**.

- When editing a product, administrators can now see the number of the product version which is being edited in the **Product Definition** tab. This improvement is introduced for both Quote engines.
- The option for creating new tabs directly in product configuration layout which was removed in the previous release is now available again.
- Data binding for the product description field has been changed from HTML to text in some responsive templates. Depending on whether administrators have customized these templates before this release or not, they need to take one of the described actions.
- When using a Quote 2.0 environment in which the Variant Configuration integration is enabled, it is necessary to implement a fix before the deployment of 2205 code, to ensure that the information in quotes remains correct.
- With the 2205 release of SAP CPQ, IronPython scripts which take more than 20 minutes to execute will be automatically canceled. Administrators need to search their log for warnings caused by scripts exceeding the 20-minute time limit now to determine if such scripts exist on their environment.
- As of the 2205 release of SAP CPQ, the size of IronPython scripts will be limited to 40,000 characters. Administrators need to review their existing scripts before the 2205 release and make sure that they aren't longer than 40,000 characters.
- As of the 2205 release, when referenced by container attributes, products whose extended price is zero will be listed as line items on the quote only if the checkbox **List as line item when price is zero** is selected in the attribute values section of product attribute settings.
- Any currently used permissions which are defined on individual business partner level will no longer be valid as of the 2205 release, and it will only be possible to use the new feature for managing business partner permissions after this time.
- The `Try-Except-Continue` construct is now forbidden in IronPython scripting.
- If customizations have been created for the **Involved Parties** page, or the page was frozen to a previous version, the new option **Add Existing Business Partner** won't be

accessible after the deployment of 2205 code. Consequently, administrators need to apply a fix to retain the functionality.

- Scripting messages are now visible on all quote tabs in both quote engines, except Inline Frame custom tabs. If customizations were created for any quote tabs or the **Sections/Notifications** template, or the **Cart** page was frozen to the previous version, administrators need to implement a fix.
- More than one error message can now display on the quote at the same time when using the Quote 2.0 engine. Due to this improvement, administrators who have previously created any kind of quote messages using IronPython scripting need to implement the fix described below for the messages to continue working correctly.

2205 New Feature Overview

New Feature	Workspace(s)	Impacts End Users	Impacts Administrators	Requires Administrator Action*
New CX AI Integration	Integrations	✓	✓	
Resynchronize Pricing Procedure and Recalculate Quote After Pricing Procedure is Modified	Integrations	✓	✓	
Pricing Attribute Determination Improvement	Integrations	✓	✓	✓
Support for Pricing Procedure Data in Scripting and CTX Tags	Integrations		✓	
Improved Management of Synchronized Product Versions	Integrations		✓	
Variant Configuration Integration Improvements	Integrations		✓	
SAP Cloud for Customer Integration Improvements	Integrations	✓		

<u>External Configurator Integration Improvement</u>	Integrations		✓	
<u>Redesigned Margin Health for Quote 2.0</u>	Quote 2.0	✓	✓	
<u>Document Generation Tag for Section Products in Quote 2.0</u>	Quote 2.0	✓	✓	
<u>Business Partner Permissions</u>	Quote 2.0	✓	✓	✓
<u>Improvement for Adding Existing Business Partners to the Quote</u>	Quote 2.0	✓		
<u>Improved Scripting Support for Business Partners</u>	Quote 2.0		✓	
<u>Attribute Custom Fields Supported in Quote 2.0</u>	Quote 2.0	✓	✓	
<u>Accessibility: Information, Structures and Relationships</u>	Quote 2.0	✓		
<u>Removed Obsolete Pages from Quote 2.0</u>	Quote 2.0		✓	

Improvement for Displaying Quote Error Messages on Quote 2.0	Quote 2.0		✓	
New Pricebook API Endpoint	API		✓	
Calculations API Improvement for Quote 2.0	API		✓	
RestClient Method Improvements in IronPython Scripting	Scripting		✓	
Scripting Message Maximum Length Extended in Quote 2.0	Scripting		✓	
Scripting Messages Visible on All Quote Tabs	Scripting	✓	✓	
System.Diagnostics Namespace Forbidden in Scripting	Scripting		✓	
Deleting Quotes by Status and Company	Security		✓	

<u>Grant Access to Support Improvements</u>	General	✓	✓	
<u>View Prices Shows all Prices and Effective Dates</u>	General		✓	
<u>Improved Performance of Promotions Search in Quote 1.0</u>	General	✓	✓	
<u>Advanced Search Redesigned</u>	General		✓	
<u>New Categories now Default</u>	General		✓	
<u>Custom Table Date and Time Format Matching User Format</u>	General		✓	
<u>Product Version Displayed in Product Definition</u>	General		✓	

<u>HTML Data Binding Changed to Text in Responsive Templates</u>	General		✓	✓
<u>Creating New Tabs in Product Configuration Layout</u>	General		✓	
<u>HTML Data Binding Changed to Text in Responsive Templates</u>	Breaking Changes		✓	✓
<u>Pricing Attribute Determination Fix for Quote 2.0</u>	Breaking Changes		✓	✓
<u>Automatic Cancellation of Scripts Exceeding 20 Minute Time Limit</u>	Breaking Changes		✓	✓
<u>Character Limit Introduced for Scripts in 2205</u>	Breaking Changes		✓	✓
<u>List as Line Item When Price is Zero Option on Container Attributes in 2205 Release</u>	Breaking Changes	✓	✓	✓

New Business Partner Permissions Feature	Breaking Changes		✓	✓
Try-Except-Continue Construct Forbidden in Scripting	Breaking Changes		✓	✓
Involved Parties Page Breaking Change	Breaking Changes	✓	✓	✓
Scripting Message Breaking Change Fix	Breaking Changes		✓	✓
Quote Error Messages Breaking Change Fix	Breaking Changes		✓	✓

* Action implies that this feature is not automatically available/present in the SAP CPQ user interface. These features must be enabled or configured prior to use.

2205 Browser Support

SAP CPQ 2205 is supported on the following browsers:

- The latest version of Mozilla Firefox ®
- The latest version of Google Chrome ®
- The latest version of Microsoft Edge ®
- The latest version of Safari

For SAP CPQ to function properly, enable cookies and Javascript for all browsers.

Integrations

New Features and Improvements

New CX AI Integration

The new integration with CX AI (former Thunderbridge AI) enables price recommendations for simple products and cross-sell scenarios in SAP CPQ, in both Quote 1.0 and Quote 2.0. Compared to the old CX AI integration, the new integration provides more administrative flexibility and a more streamlined flow for end users.

Note: The old integration with CX AI will be available only by request and only for the duration of this release. After the release 2208, the integration will be obsolete and no longer available.

The administration of the CX AI integration is managed on the new page in **Providers > Providers > SAP > CX AI**. The **General Settings** tab contains the options for enabling the integration and the available scenarios. Additionally, the following mapping needs to be defined:

- ingestion mapping – determines which quotes are sent to CX AI based on their status and whether standard or custom quote item data is sent. CX AI gets data updates every day and uses them to train its models so that it's able to provide relevant recommendations.
- inference mapping – determines the way quote, quote item and product data are mapped in SAP CPQ when CX AI sends its response.


Mappings are predefined and administrators should change them only in case they don't wish to use the standard mappings.

CX AI will provide price recommendations only if the specified [requirements](#) are met.

On the user side, sales representatives get a clear visual indication if a product is recommended to be added to the quote, or if a discount can be applied to a product.

Resynchronize Pricing Procedure and Recalculate Quote After Pricing Procedure is Modified

The scenario where SAP Variant Configuration and Pricing is used as the source of pricing data, and pricing conditions are synchronized between SAP S/4HANA and SAP CPQ, has been enhanced with additional options. Administrators can now resynchronize the pricing procedure in the **Setup**, while users can recalculate the pricing procedure used on a quote.

If a pricing procedure, which was synchronized to SAP CPQ, is subsequently modified in SAP S/4HANA, administrators can resynchronize that pricing procedure by selecting **Resync** in **Setup > Pricing/Calculations > Pricing Procedures > Actions > ** and ensure that the new version of the procedure is used.

In addition, it is possible for a pricing procedure to be used on a quote and then subsequently modified, either in SAP S/4HANA or in SAP CPQ **Setup**. In that case, a message appears to the user on the quote, informing them that the pricing information on that quote is no longer correct. Users can resolve this issue and ensure that the prices on the quote are correct by executing the quote action **External Reprice**, in order to update the existing quote with the new pricing information from SAP S/4HANA.

Pricing Attribute Determination Improvement

Pricing attribute determination is now available on all Quote 2.0 environments where the Variant Configuration integration is enabled.

In addition, the way pricing attribute determination functions has been modified for the 2205 release. Previously, whenever a quote field was edited, the system would check every quote field for changes that could require updating the pricing attribute. If such a change was

detected, the pricing attribute was updated on the respective quote and the **Reconfigure** action was executed.

As of the 2205 release, the system no longer checks all quote fields for changes that may trigger pricing attribute determination. Instead, only the fields selected in **Setup > Providers > Providers > General Attribute Mappings > Set Determination Events** are checked. The determination of pricing attributes is triggered by default every time users edit the fields **Market**, **Pricebook** or **Contract Duration**. However, any quote custom fields or quote item custom fields that affect pricing attributes must now be included in the list of determination events.

Previously, any time the quote was edited, the system compared the current state of every quote field with the information from the payload of the latest edit to check if a pricing attribute has changed for that quote. If that was correct, the **Reconfigure** action was executed. However, as a result of this improvement, the system now only checks the fields and partner functions selected in the list of determination events, instead of every quote field. Consequently, managing Variant Configuration items on the quote is now faster.

Once the 2205 release is deployed, administrators using the Variant Configuration integration on Quote 2.0 environments should add all fields used in pricing attribute formulas to the list of pricing attribute determination events, as explained in [Pricing Attribute Determination Fix for Quote 2.0](#).

Support for Pricing Procedure Data in Scripting and CTX Tags

On SAP CPQ tenants where pricing procedures are synchronized from SAP S/4HANA and quote pricing data is obtained from SAP Variant Configuration and Pricing, the following information, which is related to pricing procedures, can now be retrieved by IronPython scripts and CTX tags:

- pricing procedure name
- customer procedure name

- document procedure name
- division
- pricing document ID
- calculation status

Improved Management of Synchronized Product Versions

Administrators are now provided with an improved way of managing the versions of products synchronized from a back-office system.

In the **Product Version** overview on a synchronized product in the **Setup**, the administrator is now informed about the version which is active on that day via the new column **Active Today**. For synchronized products, all versions are active simultaneously, but the version visible in the **Catalog**, which is marked in the new column **Active Today**, is determined by the back-office effective date. The old column **Active**, which denotes the active version, is no longer visible on synchronized products but remains on non-synchronized products and works the same as before. In addition, the number of the product version active on that day and the back-office effective date are now visible in the product definition of synchronized products.

As a result of this change, it is now possible to control which version of a synchronized product appears in the **Catalog** in an easier and more efficient way.

In addition, the column names displayed on the user interface on the product version screen have been modified in the following ways:

- **SAP Effective Date > Back-Office Effective Date**
- **SAP Knowledge Base ID > Knowledge Base ID**
- **SAP Knowledge Base Version > Knowledge Base Version**
- **SAP Knowledge Base Build Number > Knowledge Base Build Number**

- **SAP Hashing Version > Back-Office Hashing Version**

These improvements are introduced for both quote engines.

Variant Configuration Integration Improvements

Disable Daily Knowledge Base Synchronization

Administrators now have the option to disable the automatic daily knowledge base synchronization jobs, which are used for retrieving knowledge bases from SAP Variant Configuration and Pricing. This allows administrators, for example, to run daily synchronization jobs only during weekends and to disable them during workdays, or to use only manually initiated jobs. Administrators can manage this option by selecting or unselecting the checkbox **Enable Daily Knowledge Base Synchronization** under **Knowledge Base Synchronization Settings** on the provider page for SAP Variant Configuration and Pricing. This improvement is introduced in both quote engines.

Performance Enhancement for Synchronizing Data to SAP CPQ

Performance has been improved when synchronizing knowledge bases from SAP Variant Configuration and Pricing to SAP CPQ. The initial synchronization of products and characteristics and their values into SAP CPQ is now moderately faster. In addition, the subsequent synchronization jobs (used to retrieve new versions) and the synchronization of translations are now significantly faster.

SAP Cloud for Customer Integration Improvements

Quote Owner Separate from Logged-In User

Users who create an SAP CPQ quote from SAP Cloud for Customer can now make another user the owner of the SAP CPQ quote.

Previously, the logged-in user who created the quote was automatically assigned as the owner of that quote in SAP CPQ. With this improvement, the user creating a quote in SAP Cloud for Customer can select another user in the quote creation screen. The selected user is then identified as the owner of the quote in SAP CPQ, using their email address as an identifier. If the provided email can't be found in SAP CPQ, the logged-in user is set as the quote owner by default. This improvement is introduced for both quote engines.

Legacy Actions Removed from Tenants Using New Integration

Actions that are used in the legacy integration between SAP CPQ Quote 1.0 and SAP Cloud for Customer are now only visible on tenants that are using the legacy integration. Consequently, these actions are removed from tenants where the new integration with SAP Cloud for Customer is used, on both Quote 1.0 and Quote 2.0.

The following actions are no longer visible in **Actions**, **Workflow**, and **Workflow Permissions** sections of the **Setup** unless the legacy integration is enabled:

- **Update SAP Opportunity**
- **Create/Update SAP Sales Quote**
- **Update Opportunity and Create/Update SAP Sales Quote**
- **Attach Document to SAP Opportunity**
- **Attach Document to SAP Sales Quote**
- **Attach Document to SAP Opportunity And Sales Quote**

External Configurator Integration Improvement

Administrators can no longer save products with the configuration type **External** if there are IronPython scripts, rules, triggers, code matches or validation messages defined on those products, since these properties aren't supported in the scope of this integration. In addition, if those properties are defined on an existing product, it is no longer possible to change the configuration type to **External**.

Resolved Support Issues

1. Validation of values users enter in characteristics synchronized from the back end on the quote is now working as expected. The issue existed on characteristics synchronized from the back end with more than one allowed range of values.
2. If landing to SAP CPQ via federated single sign-on using a direct link (`{env}/fed/{tenant}/quotation/LoadQuote.aspx`), the page now opens in whichever design is selected for the logged-in user (responsive or classic).
3. SAP Subscription Billing products can no longer be referenced in product attributes, nor can they be referenced in send/deploy packages.
4. When recording the opportunity name in the recently visited objects, the system now truncates the name to 252 characters followed by the ellipsis character (...), if the name is longer than 255 characters, and successfully saves the changes. Consequently, there are no longer any issues with opening quotes with the opportunity name longer than 255 characters.
5. Users are no longer logged out randomly on environments using federated single sign-on when the sign-out method is set to custom.
6. Synchronized attribute values which are flagged as preselected in the back-end system can no longer be deselected in the SAP CPQ **Configurator**.

7. If the quantity of a product is determined by a synchronized attribute, the system now uses that value as quantity and no longer overrides it with the quantity from the quote.
8. If a user lands to the SAP CPQ quote from SAP Cloud for Customer, and then goes back to SAP Cloud for Customer without saving the quote in SAP CPQ, the market code now remains correct.
9. If a synchronized knowledge base contains an attribute with multiple values as a dropdown, and in a subsequent knowledge base, the attribute type is changed to free input with no defined values, the values are no longer copied from the previous knowledge base.
10. Custom fields of the type attribute that are mapped in SAP Cloud Integration now work correctly in the integration between SAP CPQ and SAP Cloud for Customer.
11. Users landing from Salesforce to SAP CPQ Quote 2.0 can now successfully create quotes.

Quote 2.0

New Features and Improvements

Redesigned Margin Health for Quote 2.0

The redesigned Margin Health feature is now available in Quote 2.0 tenants. With margin health, SAP CPQ provides a possibility for sales representatives to get a visual indication of whether their profit margin is within the limits of what the administrator marked as a healthy profit margin. It provides a user-friendly way for sales representatives to discount an item while protecting its profitability margin.

Unlike Quote 1.0, Quote 2.0 supports margin health only on quote items, and not on product types and totals.

Other than this limitation, margin health works in the same way in Quote 2.0 as it does in Quote 1.0, with a couple of additional improvements:

- margin health permissions, the editability and quote visibility of the field are managed like all other Quote 2.0 fields in **Quotes > Fields, Calculations, Layout**.
- administrators can set up the calculations that are triggered when the margin health value is changed.
- the look and feel of the margin health slider on the quote has been redesigned to match the rest of the SAP CPQ user interface.

Document Generation Tag for Section Products in Quote 2.0

Administrators can now use the newly added document generation tag `SECTION_PRODUCTS` inside the existing `SECTION_LOOP` tag to retrieve all products within a section in the **Solution Design** tab in Quote 2.0. Below is a template example with the new tag.

```
<<SECTIONS>>

<<SECTIONS_HEADER>>

This is the document header.

<<SECTIONS_HEADER_END>>

<<SECTIONS_LOOP>>

<<C_TAG(<*CTX(Quote.Sections.CurrentSection.Name)*>>>

<<SECTION_PRODUCTS>>

<<C_TAG(<*CTX(Quote.CurrentItem.ProductInfo.ProductName)*>>>

<<SECTION_PRODUCTS_END>>

<<SECTIONS_LOOP_END>>
```

<<SECTIONS_FOOTER>>

This is the document footer.

<<SECTIONS_FOOTER_END>>

<<SECTIONS_END>>

Business Partner Permissions

Permissions for accessing and editing business partners can now be defined for multiple business partners at once, by creating rules in **Setup > Business Partners > Business Partner Permissions**. The new feature allows administrators to define rules which apply to selected permission groups. For example, by enabling the option **All business partners are visible to selected groups**, administrators can grant permissions for all business partners to the selected permission groups. However, if that option is disabled, it is possible to create a more complex rule with formula conditions based on either the standard fields on business partners, or business partner custom fields.

For example, you can define the following formula to make sure that a logged-in user belonging to a selected permission group can only access business partners from their own country:

- `Country Equals <* CU_INFO(COUNTRY_ABBREVIATION) *>`

Consequently, it is no longer possible to specify permissions for each business partner individually, and the **Permissions** tab is removed from business partner administration. In addition, after the release of the 2205 version, no business partners will be initially visible to any users, and a rule needs to be created to make business partners available to all users. For additional information on how to adjust your system to this change, see [New Business Partner Permissions Feature](#).

Improvement for Adding Existing Business Partners to the Quote

An improved way of browsing and adding existing business partners to an involved party on the quote is now available to users.

Previously, when creating an involved party by adding an existing business partner, users could only search for existing business partners using the business partner name, partner ID or external ID. However, the new feature for adding existing business partners allows users to search for business partners using standard business partner fields as search filters. This includes the fields **Business Partner**, **First Name**, **Last Name**, **Address Name**, **E-mail**, and **External ID**. The new search feature opens in a dialog that is separate from the **Add New Business Partner** dialog, which continues to work the same as before. The previously available search feature remains available to users in the form of a **Quick search**, which is available in the new dialog window for adding existing business partners.

If customizations have been created for the **Involved Parties** page, or the page was frozen to a previous version, a fix needs to be implemented to retain the functionality of this feature. Please refer to [Involved Parties Page Breaking Change](#) for more information on how to adapt to this change.

Improved Scripting Support for Business Partners

The support for using business partner fields in IronPython scripting has been expanded in the following ways:

- Business partner custom fields can now be accessed via indexer in scripting. For example, the following script returns a business partner custom field by name:

```
bp = BusinessPartnerRepository.GetById(20) ["customFieldName"];
```

- Additional fields are now listed in the response when calling a business partner in scripting. For example, if the administrator uses the following script to call a business partner: `bp = BusinessPartnerRepository.GetByExternalId("BP1") ;`, the following fields now appear in the response in addition to the previously displayed fields: **PartnerId, Address3, Address4, TaxJurisdiction, FormOfAddress, District, HouseNumber, StreetName, TransportZone, POBox, StreetPrefixName, StreetSuffixName, AdditionalStreetPrefixName, AdditionalStreetSuffixName, POBoxPostalCode, CorrespondenceLanguage, MobilePhone.**

Attribute Custom Fields Supported in Quote 2.0

Custom fields of type attribute are now supported in Quote 2.0. Their behavior is the same as in Quote 1.0.

Accessibility: Information, Structures and Relationships

The Information, structures, and relationships topic of the SAP Accessibility Standard is introduced to SAP CPQ to further assist users with disabilities.

This topic, as well as previous topics from the SAP Accessibility Standard, is implemented on the user side of SAP CPQ for the Quote 2.0 engine.

Now, the content structure and formatting of page elements in SAP CPQ are organized in a more logical and consistent way. The result of this improvement is a coherent and predictable interface that is easily identified by assistive technologies. All SAP CPQ features and the user interface itself remain unchanged and fully functional.

Removed Obsolete Pages from Quote 2.0

The following **Setup** subsections have been removed from Quote 2.0 as they pertain to features that are obsolete in the new engine:

- **Cross Ref Products**
- **Cart Level Aggregates**
- **Key Attributes**
- **Reports**
- **Product Configuration Templates**
- **Custom Category UI**

- **Product Details Template**
- **Promotions/Special Pricing**

Improvement for Displaying Quote Error Messages on Quote 2.0

More than one error message can now display on the quote at the same time when using the Quote 2.0 engine. The error messages appear in every tab of the affected quote and remain as long as the issue causing them to appear exists on the quote.

Administrators who created any kind of quote messages via IronPython scripting need to [implement a fix](#) in order for the messages to continue working correctly.

Resolved Support Issues

1. The issue with rearranging the structure of parent/child items using the **Move up** and **Move down** options is now resolved. The issue existed in Quote 2.0.
2. Rolled-up list price of root items is now properly calculated considering the quantity of line items. `RolledUpListPrice` is now calculated as a sum of $\text{LineItemRolledUpListPrice} * \text{LineItemQuantity} / \text{RootItemquantity}$. This issue existed only in Quote 2.0.
3. Issues with the quote approval process in Quote 2.0 have been resolved, specifically those that occurred when the delegation of approvals was enabled for the approval parent.
4. A revision can now be successfully set as active if the **Make Primary** action is attached to the **Set as Active** action in Quote 2.0.
5. The formula for the calculation **Item One-Time Discount Amount (from One-Time extended amount)** has been corrected to $\text{Item.DiscountAmount} = (\text{Item.ListPrice} - \text{Item.ExtendedAmount} / \text{Item.Quantity}) *$

`Item.Quantity`. The previous incorrect formula was `Item.DiscountAmount = Item.ListPrice - Item.ExtendedAmount / Item.Quantity`.

6. When attempting to delete an involved party from the quote, if the quote is not loaded, an appropriate error message now appears to the user.
7. Selecting a state is no longer mandatory on business partners if a country with states is selected for that business partner.

API

New Features and Improvements

New Pricebook API Endpoint

The new pricebooks endpoint POST

`/api/v1/admin/Pricebooks/SavePricebookEntries` allows administrators to insert or update multiple pricebook entries at once by sending the pricebook ID in the call (`/api/v1/admin/Pricebooks/SavePricebookEntries?pricebookId={id}`).

Previously, administrators would need to make one API call for each entry they needed to update. Now all pricebook entries can be inserted or updated in one call.

Calculations API Improvement for Quote 2.0

The nodes `ExecuteOnAddUpdate` and `Rank` of the Calculations API can now be edited using the following endpoints:

- POST `/api/script/v1/calculations`
- PUT `/api/script/v1/calculations/{id}`

This improvement is introduced for the Quote 2.0 engine.

Resolved Support Issues

1. The issue with filtering product categories retrieved via the API `/api/products/v1/categories` has been resolved. The issue existed when the category name in the filter contained the string **and**.
2. The API snippets `BusinessPartnerRepository` and `PartnerFunctionRepository` are moved to the dictionary `FirstLevelScriptingPropertiesWithoutCustomers` and now correctly appear in **Setup > Script Workbench > API snippets** on Quote 2.0 environments.
3. The issue with bearer token API authentication has been resolved, so it's now possible to successfully upload different types of documents to **Manage Content Documents** via `POST /api/v1/admin/files/ContentFile`.
4. The issue that prevented adding multiple items with quantity higher than 1 via the API has been resolved. The issue existed and has been resolved in Quote 2.0.

Scripting

New Features and Improvements

RestClient Method Improvements in IronPython Scripting

The `RestClient` method in IronPython scripting has been expanded with the option to set the content type for the request sent from an SAP CPQ script. The content type can be set as a string parameter to any of the content types supported by the HTTP protocol. Previously, the only supported content type for scripting requests was `application/json`.

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In addition, administrators can now compress the request body payload which is sent using the `RestClient` method. The `IRestClient` interface is extended with the overload of the `POST` method which has a flag for determining whether the payload is compressed. If the method parameter `compressBody` is set to **TRUE**, the body of the HTTP request is compressed by the GZip algorithm and the HTTP header `Content-Type` is automatically added to the request body with the value `GZip`. This improvement results in improved performance in cases when requests with extensively large bodies are sent via IronPython scripting.

Scripting Message Maximum Length Extended in Quote 2.0

The maximum length of scripting messages has been extended to 1000 characters. This improvement is introduced for the Quote 2.0 engine.

Scripting Messages Visible on All Quote Tabs

Scripting messages are now visible on all quote tabs in both quote engines, except for Inline Frame custom tabs. Previously, scripting messages were visible only on the **Quotation** tab. As a result of this improvement, users working on the quote are now able to see the scripting message on the tab in which they are working, the moment the message is triggered by a script.

Example: the user is working on a tab other than the **Quotation** tab, and meanwhile, the value of a custom field which determines the number of a certain item on the quote is changed. A script attached to that custom field sends a query to an external system to check if the item in question is in stock. The response for that query, which determines the delivery time for the quote, is now displayed as a scripting message in SAP CPQ in the same tab where the user is working at that moment.

In regard to responsive template customizations, if any quote tabs or the **Sections/Notifications** template have been customized, or the **Cart** page has been frozen, [a](#)

[fix needs to be implemented](#) before the 2205 version is released to productive environments to ensure there are no issues with the responsive templates after the deployment.

System.Diagnostics Namespace Forbidden in Scripting

As of the 2205 release, the .NET namespace `System.Diagnostics` is no longer allowed in IronPython scripting. This change is implemented with the aim of additionally enhancing security.

Resolved Support Issues

1. When selecting values from custom tables used as source for autocomplete attributes through quote item scripting, the system now selects the exact match instead of the first partial match from the **CpqTableEntryId** column.
2. Names of global scripts can no longer contain commas. This limitation has been introduced to prevent errors during quote creation and editing.
3. The field **Modified Date** now uniformly displays the same date and time based on the user time zone, both in the **Global Scripts** lists, and in the **Script Definition** section when the script is edited.
4. In scripts that are looping through quote item custom fields whose type is autocomplete attribute sourced from a custom table, and multiple fields have the same attribute value selected, the system now returns the value of the attribute, for each field, instead of its attribute value code.
5. Performance is no longer impacted when the system executes a script with an extensive number of uninterrupted empty lines.
6. Using `quoteItem.SelectedAttributes` inside loops in scripts no longer negatively impacts system performance.

Security

New Features and Improvements

Deleting Quotes by Status and Company

In **Data Deletion**, administrators can now define quote deletion rules by combining the quote status and the quote owner's company with the deletion period, using the option **Delete Quotes by Status and Company**. If a rule is created using the new option, after the defined period expires, all quotes of the selected status which are created by the user from the specified company will be permanently deleted.

Additionally, if there are rules already set for the default deletion period and the deletion based on the quote status, they will be overruled by the ones defined by this feature. In general, quote deletion rules are now executed in the following order of priority with those of higher importance overruling the succeeding ones:

1. **Delete Quotes by Status and Company**
2. **Delete Quotes by Status**
3. **Default Deletion Period**

The possibility of selecting the user's company as a deletion parameter ensures compliance with the regional data retention laws of the quote owner's country.

This feature is implemented in both Quote 1.0 and Quote 2.0 engines.

General

New Features and Improvements

Grant Access to Support Improvements

The following improvements have been made to the process of granting access to the SAP CPQ Support team from within SAP CPQ:

- Administrators now have the possibility to grant access to the SAP CPQ Support team from the **Setup**. For this purpose, the **Grant Access to support** toggle with a calendar and a **Ticket Number** field has been added on user administration pages in the **Setup**.
- On the **User Page**, in addition to granting access, users can now add the ticket number for which they are specifically requesting assistance.
- Whether access to support is granted or revoked, all changes made on the **User Page** are reflected in the **Setup** and vice versa.
- The grid with the list of existing users on the **Users** page in the **Setup**, now contains an additional **Grant Access to support** column, which specifies whether access to a user's account has been granted to the support or not. Accordingly, users can now be filtered based on whether access to support is given or not.
- All changes made to granting access are now logged in the **Audit Trail** (for example, granting and revoking access, duration of the granted access, ticket number, and so on). Accordingly, all activities performed by the support are recorded and clearly distinguished from actions carried out by the user.

View Prices Expanded to Show all Prices and Effective Dates

The **View Prices** option now opens an overview of all the prices available for the respective product, including the dates when each price is effective. This option is available in the **Pricing**

tab of product administration and when editing a product from the **Manage Simple Products** page, only for products using the **Pricing Lookup** pricing mechanism.


Before this release, the **View Prices** option contained only the last product price, not all of them.

Improved Performance of Promotions Search in Quote 1.0

Administrators are now able to decide whether the products for the promotions are searched by the exact match or the like match by selecting the value of the new application parameter **Search exact product part number for promotions**. Setting this parameter to **TRUE** speeds up the search of promotion products on the quote in cases when their name is not defined in **Setup > Pricing/Calculations > Promotions/Special Pricing**, only their part number. Since Promotions are not supported in Quote 2.0, this improvement has been made in Quote 1.0 only.

Note: The new parameter is by default set to **FALSE** to avoid potential breaking changes in existing SAP CPQ tenants. Before changing the value of this parameter to **TRUE**, revise the existing promotions and make sure that all products have unique part numbers.

Advanced Search Redesigned

A redesigned advanced search is available throughout the **Setup**. Instead of being performed in the modal, the search is now conducted directly in column headers. By default, pages display a quick search field which lets administrators perform a brief search based on a limited number of filters. To enable the advanced search by columns, administrators should click . Now, every column in the grid will contain a dedicated search box, while the search results will be displayed in the corresponding columns.

New Categories now Default

In the previous release we have announced that the redesigned new Categories were released but available only by request. As of this release, the improved Categories are the default in SAP CPQ. Consequently, the old Categories are no longer in use.

Even though most old functionalities remain the same in the new Categories, the user interface and performance are enhanced to maintain the latest technology standards and increase productivity.

Custom Table Date and Time Format Matching User Format

The formats selected for **Date Format** and **Date Separator** on the user administration page in the **Setup** or the **User Page** for the logged-in administrator now apply to every instance where date and time appear on **Custom Tables** in the **Setup**.

The following improvements are introduced:

- In **Setup > Product Catalog > Custom Tables**, in the **Date Modified** column of the custom table list, the information is displayed in the user's selected format.
- When viewing the entries for a specific custom table, the date and time in the table header (**Created by:** and **Modified by:**) are now displayed in the user's selected format.
- Custom table columns with the column type **DATE** or **DATETIME** now support only data in the user's selected format. Values can be saved only if they match the selected format and filtering the column values must be performed using the selected format.

Product Version Displayed in Product Definition

When editing a product, administrators can now see the number of the product version which is being edited in the **Product Definition** tab. This improvement is introduced for both quote engines.

Creating New Tabs in Product Configuration Layout

The option for creating new tabs directly in product configuration layout which was removed in the previous release is now available again. The issues that existed before and that interfered with seamless user experience have been resolved.

Resolved Support Issues

1. If a promotion is defined for more than one product in the **Setup**, that promotion is now successfully applied to all those products in the quote.
2. Description of attributes with the radio button display type now displays properly on the quote in both quote engines.
3. Custom actions now work as expected on all quote tabs in both quote engines, not only the **Quotation** tab.
4. Additional level of validation is added when SAP CPQ is trying to send an email notification to an approval, ordering or managing parent. The system now checks whether the user is active to avoid errors in the system if the user is inactive. This improvement is implemented in both quote engines.
5. It is now possible to use Cyrillic letters in the names of new quote revisions in both quote engines.
6. Users can now successfully change base items to optional using the **Manage Items** option in Quote 1.0.

7. Validation messages on the quote caused by leaving required quote fields empty now display to users in the correct order of the tabs containing those fields.
8. Copying an item on the quote in both quote engines no longer causes quote tabs listed in the dropdown to be duplicated.
9. The list of existing section template files in the **Add Section** popup (**Manage Global Document Templates > Sections**) is now displayed properly in both quote engines.
10. Administrators can now successfully select categories for guided selling attribute values if the **Use Attribute Only to Select in which Categories Values will be Searched** toggle is enabled.
11. The filter in the **See Users Who Belong to Permission Group** popup now works properly if the logic between permission groups is set to **OR**.
12. The issue which caused copying attribute order from one tab to another in product configuration layout has been resolved. The issue appeared when the same attribute was displayed on multiple tabs.
13. The issue with the **Check Syntax** button in the **Formula Builder** in the products' **Rules and Messages** tab has been resolved.
14. The page elements are no longer bouncing when users select radio buttons during product configuration.
15. Dictionary keys for **Choose File** and **No file chosen** labels, which appear during the document generation process, have been added to the system dictionaries and administrators are now able to add translations for these keys to the custom dictionaries.
16. The issue that prevented rules with CTX tags from being displayed in the **Check if attribute is in use** pop-up, in the product **Attributes** tab, is now resolved.
17. The height of attributes with display type **Free Input, no Matching** is now adequately applied in the **Configurator**.
18. Radio buttons are now displayed properly with related files in the **Customize** tab during the document generation process.

19. After parent or child products are configured and added to the quote, the correct product structure is now displayed for these products in the **Configuration Tree** when users reopen the **Configurator** from the quote.
20. Deployment packages with quote tables containing the default brand can now be successfully deployed to the target environment.
21. Product aliases now inherit translations from the original product.
22. When administrators attempt to add multiple attribute values with the same **System ID**, a notification pops up, informing them that an attribute value with the same **System ID** already exists and prompting them to specify a different one.
23. The table columns **CpqTableEntryDateModified** and **CpqTableEntryModifiedBy** are no longer visible in attribute definition when adding or editing an autocomplete attribute sourced from a custom table.
24. If a product favorite is shared within a company using the option **Share with users in my company**, and the administrator tries to delete that company, a proper error message now appears informing the administrator that the company can't be deleted if a product favorite was shared between its users.
25. If the option **Refresh Configurator on Change** is disabled in product attribute administration for container attributes, the configurator is no longer refreshed when attribute values are changed.
26. Once an attribute is saved as an autocomplete attribute, it is no longer possible to change its type.
27. If the application parameter **Enable product search by product name and description in 'Add Products' section of the quote** is set to **FALSE**, it is no longer possible to search by product description.
28. Outdated log entries are now removed from the **Log** on all tenants.
29. After a product alias is deployed from one environment to another, the way its attributes are displayed in the **Configurator (Read only, Show and Hidden)** remains the same in the target environment as in the source environment.

30. Product aliases containing formulas can now successfully be deployed to target environments.
31. The issue that caused custom translations of **Setup** sections in the menu to revert to default dictionary values has been resolved. The missing dictionary keys are now properly defined, and menu items are translated as expected.
32. Users are now allowed to copy companies on the **Management of companies** page only if the administrator enables them to do so by selecting the **Can Create New Companies** checkbox in **Delegation of authority > User management > Management of companies**.
33. The issue that occurred with the date picker in the sections of the **Setup** has been successfully resolved. Previously, after administrators selected the start and end year of a fixed time range in the past and attempted to browse back through years by clicking the navigation arrow, a string *Undefined* would appear next to the start year. Now, users can select and browse a fixed time range in the past with both the start and end year displaying properly.
34. The time and date of changes made on custom tables are now properly recorded in the audit trail in the date and time format of the respective logged-in administrator.
35. Errors are no longer displayed or logged if a user clicks on the **Request Approval** action while there is a required custom field in a custom tab for which the user doesn't have the access rights.
36. When the values of the **Date Modified** column in **Setup > Product Catalog > Custom Tables** are sorted, they now appear in the correct order.
37. All date formats now work correctly in custom table columns with the type **Date**. In addition, all new custom table date entries in a two-digit year format are now created with the correct century as determined by the application parameter **Set boundary for two-digit year resolving**.
38. The **Quote creation** event is now triggered every time a new quote is created.
39. The issue that prevented deploying custom fields used in multiple quote tabs has been resolved in both quote engines.

40. The issue that prevented the system to successfully send email notifications has been resolved in both quote engines.
41. Validation is added for setting the value of quote custom fields via scripting. If administrators try to set a date custom field to a value other than date, a message now displays on the page informing them of the incorrect data type.
42. The issue with copying translations from the original product to the product alias has been resolved. Accordingly, product aliases can now be successfully saved.
43. Attribute hints and custom labels are now successfully deployed in the target environment.
44. The issue with the **Display to Users** option on product alias attributes has been resolved and attributes can now be successfully saved.
45. Formulas in attribute change triggers can now be successfully saved.
46. The order of tabs in product administration layout is now properly retained in the configuration preview, as well as in the **Configurator**.

Breaking Changes

HTML Data Binding Changed to Text in Responsive Templates

Data binding for the product description field has been changed from HTML to text in the following templates:

- **Catalog > CatalogPage**
- **CompareProducts > CompareProductsTemplate**
- **Favorites > FavoritesPage**
- **ProductDetails > ProductDetailsTemplate**

This change improves the overall security of SAP CPQ and prevents potential cross-site scripting.

Depending on whether administrators have customized these templates before this release or not, they need to take the following actions:

- If these templates were customized before this release, there will be no breaking changes in the model as the HTML binding will continue to work as before this release. However, we strongly advise that administrators manually change the binding to text, as explained in [Actions to Take](#).
- If HTML was used in the product description field, there will be a breaking change in the model after the 2205 release. To prevent breaking the model, administrators need to manually change the binding from text to HTML, as explained in [Actions to Take](#).
- If these templates weren't customized before, nor was HTML used in the product description field, administrators don't need to take any action.

Actions to Take

To change the data binding of the description field, open each template (**Catalog > CatalogPage, CompareProducts > CompareProductsTemplate, Favorites > FavoritesPage and ProductDetails > ProductDetailsTemplate**) and find where data binding is defined for the description. Then replace `html` with `text`.

Old Binding	New Binding
<div data-bind="html: description"></div>	<div data-bind="text: description"></div>

Pricing Attribute Determination Fix for Quote 2.0

The logic behind the determination of pricing attributes is modified in the Quote 2.0 engine for the 2205 release. When using a Quote 2.0 environment in which the Variant Configuration integration is enabled, it is necessary to implement a fix before the deployment of 2205 code, to ensure that the information in quotes remains correct. The behavior remains unchanged on environments using Quote 1.0.

Actions to Take

If the Variant Configuration integration is enabled on a Quote 2.0 environment, prior to 2205, it is necessary to review the pricing attributes that are used on a created quote in **Setup > Providers > Providers > SAP General Attribute Mappings**. The administrator needs to make note of all the quote custom fields and quote item custom fields referenced in the **Value** column of pricing attribute definition.

Following that step, it is necessary to click **Set Determination Events** and move all the fields that are referenced in the **Value** column of pricing attribute definition to the column **Selected Fields/Partner Functions**. As of 2205, the **Set Determination Events** option will become available on all Quote 2.0 environments using the Variant Configuration integration.

By performing this fix, the administrator ensures that pricing attribute determination is triggered every time any of those fields is edited. Consequently, the quote context remains up to date and the pricing information remains correct.

Automatic Cancellation of Scripts Exceeding 20 Minute Time Limit

With the 2205 release of SAP CPQ, IronPython scripts which take more than 20 minutes to execute will be automatically canceled. Consequently, the execution time for scripts will no longer exceed the timeout limit for the HTTP request, which is 20 minutes.

In the period prior to the 2205 release (May 21) starting with January, a warning was recorded in the log every time a script exceeds the 20-minute time limit.

Actions to Take

Please search your log for warnings caused by scripts exceeding the 20-minute time limit now to determine if such scripts exist on your environment.

Go to **Setup > Developer Tools > Log** (alternatively, on the user side of the application, click **Setup > Log**) and filter the log entries the following way:

- **Level: Warn**
- **Labels: Scripts**
- **Title: *Script execution timeout***

Once the filter is applied and the results display, you can find the names of scripts exceeding the time limit in the **Description** column.

If scripts exceeding the time limit exist on your environment, please optimize the script and shorten the execution time before the 2205 release. After the deployment of 2205 code on May 21, scripts which take longer than 20 minutes to execute will be automatically cancelled and will not execute successfully. In that scenario, a warning and an error will be recorded in the **Log**.

Character Limit Introduced for Scripts in 2205

As of the 2205 release of SAP CPQ, the size of IronPython scripts will be limited to 40,000 characters. New scripts created after the 2205 release will need to adhere to the introduced limit. Existing scripts will continue to work after the deployment of the 2205 release even if they exceed the character limit. However, if you edit those scripts, you won't be able to save the changes.

Actions to Take

Please review your existing scripts before the 2205 release and make sure that they aren't longer than 40,000 characters. You can use the character count feature of a text editor to review the number of characters in a script. Following that step, modify the scripts so that they don't exceed the character limit by breaking them down into smaller scripts or importing them as modules. In addition, if you plan to further expand any large scripts in the future, please adjust the plan in accordance with the character limit.

The character limit will be the default setting starting with 2205. However, if there is a significant interference with your existing scripts caused by the character limit, please contact the SAP CPQ Support team with your feedback. You can use the following SQL script to locate scripts originating from any possible script source that are exceeding the character limit:

```
SELECT 'script name: ' + [Name] FROM [SystemEventScript] where LEN([Script]) > 40000
UNION ALL
SELECT 'action name: ' [ACTION_NAME] FROM [ACTIONS] where LEN(CAST([Script] AS NVARCHAR(MAX))) >
40000
UNION ALL
SELECT 'custom calculation name: ' + [Name] FROM [CartEditableMathDefn] where LEN(CAST([Script]
AS NVARCHAR(MAX))) > 40000
UNION ALL
SELECT 'product name: ' + [product_name] FROM [PRODUCTS] where LEN([Script]) > 40000
UNION ALL
select 'product name for attribute trigger: ' + [product_name] from
    [attrTrigger] inner join products
    on [attrTrigger].product_id = [products].PRODUCT_ID
    where LEN(CAST([ActionListC] AS NVARCHAR(MAX))) > 40000
```

List as Line Item When Price is Zero Option on Container Attributes in 2205 Release

As of the 2205 release, when referenced by container attributes, products whose extended price is zero will be listed as line items on the quote only if the checkbox **List as line item when price is zero** is selected in the attribute values section of product attribute settings.

As the new behavior will become active by default in the 2205 release, administrators can make the necessary adaptations and test the effect of this change on product models in their environments prior to the release. This change is introduced only for the Quote 1.0 engine.

Actions to Take

In the 2205 release, the new behavior will become active by default on all tenants using Quote 1.0. However, it is possible to test the new behavior of the checkbox **List as line item when price is zero** on container attributes prior to the release, in order to make the necessary adjustments on your environments.

Please contact the SAP CPQ Support team to enable the new behavior on your environment, and make sure to communicate your feedback to the SAP CPQ team.

New Business Partner Permissions Feature

As of the 2205 release, permissions for business partners will no longer be specified for each business partner individually, and the **Permissions** tab will be removed from business partner administration. Instead, administrators will be able to manage the permissions for multiple business partners at once, by creating rules using the new feature **Business Partner Permissions**.

Any currently used permissions which are defined on individual business partner level will no longer be valid as of the 2205 release, and administrators will only be able to use the new feature for managing business partner permissions after this time.

In addition, once the new permissions feature becomes available, initially no business partners will be visible to any users. As an initial solution, once 2205 is deployed, administrators can use the new feature to create a simple rule as described below to make all business partners available to all users.

Actions to Take

We advise you not to define any additional business partner permissions for individual business partners until the deployment of SAP CPQ 2205, when you can use the new feature **Business Partner Permissions**, because you would need to set those permissions again after the release. Note that existing permissions defined on individual business partner level will no longer be available starting with 2205.

Once the 2205 release is deployed, initially no business partners will be visible to any users. Using the new feature, you will be able create a rule that makes all business partners visible to all users. To do that, create a new rule, enable the option **All business partners are visible to selected groups**, and then select all available permission groups.

Try-Except-Continue Construct Forbidden in Scripting

As of the 2205 release, the following construct will be forbidden in IronPython scripting in order to prevent issues in the system:

```
for j in range(1000):
    try:
        func
    except:
        continue
```

Scripts containing the provided construct will no longer work after the 2205 release.

Actions to Take

Administrators need to replace this construct with a workaround solution whenever it occurs. The appropriate workaround is to replace `continue` with `pass`. If this workaround isn't viable for implementation, the construct from the following example can be used instead:

```
continueFlag = False
try:
    something
except:
    continueFlag = True
if continueFlag:
    continue
```

Involved Parties Page Breaking Change

Users will be provided with an optimized way to search for existing business partners in the **Involved Parties** quote tab in the 2205 release. Consequently, the options to add new or existing business partners to an involved party will be available in separate dialog windows. By selecting the option **Add Existing Business Partner** users will be able to search for business partners using all standard business partner fields as parameters. In addition, it will be possible to manually go through the field values and select them.

As a result of this improvement, the option to add an existing business partner will no longer be available in the **Add Business Partner** dialog. It will be only possible to create a new business partner via this specific dialog. If customizations have been created for the **Involved Parties** page, or the page was frozen to a previous version, the new option **Add Existing Business Partner** won't be accessible after the deployment of 2205 code. Since the previously existing option to add existing business partners via the **Add Business Partner** dialog will be removed, the option to add business partners won't be available in this scenario. Because of that, you need to implement a fix to retain the option to search for existing business partners when using frozen or customized templates.

However, if no customizations have been created for this page, there will be no issues regarding the changes to the dialog.

Actions to Take

If customizations have been created for the **Involved Parties** page before the 2205 release or the page was frozen to a previous version, you need to make sure to set default partner functions for your quotes before the release. By setting default partner functions, you will be able to search for existing business partners via the search field available next to the partner functions. You can set default partner functions in partner function definition in the **Setup** by enabling the option **Show by default on new quotes**.

Scripting Message Breaking Change Fix

As of the 2205 release, scripting messages will be visible on all quote tabs in both quote engines, except Inline Frame custom tabs, where they are not supported. Prior to 2205, scripting messages were visible only on the **Quotation** tab.

If no customizations were created for any quote tabs or the **Sections/Notifications** template, and the **Cart** page wasn't frozen to the previous version, scripting messages will work correctly on all quote tabs after the 2205 version is live. However, if any tabs or the **Sections/Notifications** template have been customized, or the **Cart** page has been frozen, you need to implement a fix before the deployment of 2205 code to ensure there are no issues with the responsive templates after the deployment.

Actions to Take

If you have previously customized any of these pages: **CartDocumentPage**, **DealViewPage**, **InvolvedPartiesPage**, **TeamsPage**, **ShippingInfoPage**, **CustomFieldsPage**, you need to add the provided line of code to the customized template:

- `<scripting-messages></scripting-messages>`

The provided line of code should be copied to a specific location at the beginning of the template code. The beginning of these templates is provided here with the addition of the provided line, which is highlighted. When applying the fix, please add the line in the same location as here.

CartDocumentsPage

```
@using WebSite.Controllers
<div id="main" class="w960 row">
    <main class="col-xs-12 col-md-12 col-sm-12 user-page-container cart-documents-container fiori3-cart-tab-container">
        <div class="fiori3-documents-page clearfix approvals cart-content"
id="cartDocumentsContainer" data-bind="visible: isLoading" style="display: none">
            <scripting-messages></scripting-messages>
            @Html.PartialWithNameAsComment("/Views/Cart/Sections/Tabs.cshtml")
            <div id="documentsTablesContainer" class="col-md-12 cart-documents-container-table">
```

DealViewPage

```
@using WebSite.Models
@model DealViewTableModel

<div class="w960 cart-width deal-view-container user-page-container fiori3-cart-tab-container"
style="height: calc(100% - 80px)">
    <div class="row cart" id="cartContainer" data-bind="css: { 'no-action-images':
!displayImagesForCartActions() } ">
        <div class="row cart" id="dealViewContainer">
            <div class="row-offcanvas row-offcanvas-left quote-page-main-container collapsed-actions-
visible" data-bind="visible: isInitialized" style="display: none;">
                <div class="col-xs-12 col-md-12 col-sm-12 clearfix" data-bind="css: { 'cart-view-
mode': isInViewMode }">
                    <div class="clearfix"></div>
                    <div class="cart-content clearfix">
                        <scripting-messages></scripting-messages>
                        @Html.PartialWithNameAsComment("Sections/Tabs")
```

InvolvedPartiesPage

```
<div class="w960 cart-width involved-parties-container user-page-involved-party-container fiori3-
cart-tab-container">
  <div class="row cart" id="involvedPartiesContainer">
    <div class="row-offcanvas row-offcanvas-left quote-page-main-container collapsed-actions-
visible" data-bind="visible: isInitialized" style="display: none;">
      <div class="clearfix" data-bind="css: { 'cart-view-mode': isInViewMode }">
        <div class="clearfix"></div>
        <div class="row cart-content-involved-party clearfix">
          <scripting-messages></scripting-messages>
          @Html.PartialWithNameAsComment("Sections/Tabs")
        </div>
      </div>
    </div>
  </div>
```

TeamsPage

```
<main id="main" class="w960 row">
  <div class="col-xs-12 col-md-12 col-sm-12 user-page-container cart-documents-container
fiori3-cart-tab-container">
    <div class="clearfix approvals cart-content" id="cartTeamsContainer">
      <div id="cartTabsContainer">
        <scripting-messages></scripting-messages>
        @Html.PartialWithNameAsComment("/Views/Cart/Sections/Tabs.cshtml")
      </div>
    </div>
  </div>
```

ShippingInfoPage

```
@using WebSite.Controllers
<div class="w960">
  <div class="col-xs-12 col-md-12 col-sm-12 clearfix user-page-container shipping-info-page-
container fiori3-shipping-info-page-container fiori3-cart-tab-container">
    <div id="shippingCustomerContainer" class="shipping-info-container fiori3-shipping-info-
container">
      <scripting-messages></scripting-messages>
      @Html.PartialWithNameAsComment("/Views/Cart/Sections/Tabs.cshtml")
    </div>
  </div>
</div>
```

CustomFieldsPage

```
@using WebSite.Controllers
<main class="w960">
  <div class="row user-page-container custom-fields-page-container fiori3-cart-tab-container
cart-content fiori3-cart-tab-container-with-footer" id="cartContainer">
    <div class="row" data-bind="visible: isInitalized" style="display: none;">
      <scripting-messages></scripting-messages>
      @Html.PartialWithNameAsComment("/Views/Cart/Sections/Tabs.cshtml")
    </div>
  </div>
</main>
```

```

<div data-bind="css: { 'cart-view-mode': isInViewMode }">
  <div class="clearfix"></div>

  @*Custom fields*@
  <div class="clearfix">
    <scripting-messages></scripting-messages>
    @Html.PartialWithNameAsComment("Sections/Tabs")
  </div>
</div>

```

CartPage

If you have previously customized the template **CartPage**, you need to add the provided line of code to the customized template:

- `<scripting-messages params="quoteMessages: $root.quoteMessages"></scripting-messages>`

Add the provided line of code in the location highlighted below in the beginning of the template.

```

@using WebSite.Controllers
<main class="w960 cart-width quote-page-container fiori3-cart-page-container fiori3-cart-tab-
container">
  <div class="row cart" id="cartContainer" data-bind="css: { 'no-action-images':
!cartActionsModel().displayImagesForCartActions() } ">
    <div class="row row-offcanvas row-offcanvas-left quote-page-main-container collapsed-
actions-visible" data-bind="visible: isIntialized, css: { 'active': areActionsActive }"
style="display: none;">
      <div class="clearfix cart-wrapper" data-bind="css: { 'cart-view-mode': isInViewMode
}">
        <div class="clearfix"></div>
        @Html.PartialWithNameAsComment("Sections/Promotions")
        <scripting-messages params="quoteMessages: $root.quoteMessages"></scripting-
messages>
        @Html.PartialWithNameAsComment("Sections/Notifications")
        @Html.PartialWithNameAsComment("Sections/InvalidAutocompleteNotification")
      </div>
    </div>
  </div>
</main>

```

Sections/Notifications

If any customizations were created for the **Sections/Notifications** page, you need to delete the highlighted lines of code before the deployment of 2205:

```

<!-- ko if: $root.useNewQuoteEngine -->
<div class="row" data-bind="foreach: scriptingMessages">
  <div class="fiori3-alert fiori3-alert-info fiori3-alert-info-border" data-bind="visible:
scriptingMessage.Type == 1">
    <span class="sap-icon">&#xe202;</span>
    <span data-bind="html: scriptingMessage.Content"></span>
    <span class="sap-icon sap-icon-scripting-messages-remove" data-bind="visible:
!scriptingMessage.IsTemporary, click: function() {
$root.removeScriptingMessage(scriptingMessage) }">&#xe03e;</span>
  </div>
  <div class="fiori3-alert fiori3-alert-warning fiori3-alert-warning-border" data-
bind="visible: scriptingMessage.Type == 2">
    <span class="sap-icon">&#xe201;</span>
    <span data-bind="html: scriptingMessage.Content"></span>
    <span class="sap-icon sap-icon-scripting-messages-remove" data-bind="visible:
!scriptingMessage.IsTemporary, click: function() {
$root.removeScriptingMessage(scriptingMessage) }">&#xe03e;</span>
  </div>
  <div class="fiori3-alert fiori3-alert-danger fiori3-alert-danger-border" data-bind="visible:
scriptingMessage.Type == 3">
    <span class="sap-icon">&#xe0b1;</span>
    <span data-bind="html: scriptingMessage.Content"></span>
    <span class="sap-icon sap-icon-scripting-messages-remove" data-bind="visible:
!scriptingMessage.IsTemporary, click: function() {
$root.removeScriptingMessage(scriptingMessage) }">&#xe03e;</span>
  </div>
  <div class="fiori3-alert fiori3-alert-success fiori3-alert-success-border" data-
bind="visible: scriptingMessage.Type == 4">
    <span class="sap-icon">&#xe203;</span>
    <span data-bind="html: scriptingMessage.Content"></span>
    <span class="sap-icon sap-icon-scripting-messages-remove" data-bind="visible:
!scriptingMessage.IsTemporary, click: function() {
$root.removeScriptingMessage(scriptingMessage) }">&#xe03e;</span>
  </div>
</div>
<!--/ko -->
<div class="row">
  <div class="fiori3-alert fiori3-alert-danger" data-bind="visible: approval.errorMessage,
html: approval.errorMessage"></div>
  <div class="fiori3-alert fiori3-alert-warning" data-bind="visible: messageTitle() ||
approval.conditions().length > 0 || cartUsage().length > 0 || (scriptingMessages().length > 0 &&

```

```

!$root.useNewQuoteEngine) || landingMessages().length > 0 || errorMessage()">
    <sap class="sap-icon">&#xe053;</sap>
    <div>
        <!-- ko ifnot: $root.useNewQuoteEngine -->
            <p class="cart-warning-group" data-bind="foreach: scriptingMessages, style: {
display: scriptingMessages().length > 0 ? 'block' : 'none' }">
                <span data-bind="html: scriptingMessage.Content"></span><br />
            </p>
            <!--/ko -->
            <div class="cart-warning-group" data-bind="style : { display: landingMessageTitle() ?
'block' : 'none' }">
                <p data-bind="html: landingMessageTitle"></p>
                <ul data-bind="foreach: landingMessages">
                    <li><span data-bind="text: title"></span><span data-bind="if: description">:
</span><span data-bind="text: description"></span></li>
                </ul>
            </div>
            <div class="cart-warning-group" data-bind="style : { display: messageTitle() ?
'block' : 'none' }">
                <p data-bind="html: messageTitle"></p>
                <ul data-bind="foreach: messageItems">
                    <li><span data-bind="text: title"></span>: <span data-bind="
text:
description"></span></li>
                </ul>
            </div>
            <div class="cart-warning-group" data-bind="style : { display: errorMessage() ?
'block' : 'none' }">
                <span data-bind="html: errorMessage"></span><br />
            </div>
            <div class="cart-warning-group" data-bind="style : { display:
approval.conditions().length > 0 ? 'block' : 'none' }">
                <!-- ko template: { name: 'ApprovalTemplate', data: approval } -->
                <!--/ko -->
            </div>
            <div class="cart-warning-group" data-bind="style : { display: cartUsage().length > 0
? 'block' : 'none' }">
                <p>@Translation.Get("Cart.RecentlyOpened")</p>
                <ul data-bind="foreach: cartUsage">
                    <li><span data-bind="text: user"></span>(<span data-bind="
text:
openedMinutesAgo"></span>)</li>
                </ul>

```

```

        </div>
    </div>
</div>
</div>

@Html.PartialWithNameAsComment("Templates/ApprovalTemplate")

```

Cart Page Frozen to Previous Version

If the **Cart** page has been frozen to the previous version, issues will occur with the **Quotation** tab on the quote. To prevent this from happening, you need to create a customization for the **Sections/Notifications** and **CartPage** templates. However, if you have already customized these templates, you need to add and delete the lines of code as described in the previous sections.

If you are adding a new customization, provided here are the complete new templates which you can use.

Cart Page – Complete Template

```

@using WebSite.Controllers
<main class="w960 cart-width quote-page-container fiori3-cart-page-container fiori3-cart-tab-
container">
    <div class="row cart" id="cartContainer" data-bind="css: { 'no-action-images':
!cartActionsModel().displayImagesForCartActions() } ">
        <div class="row row-offcanvas row-offcanvas-left quote-page-main-container collapsed-
actions-visible" data-bind="visible: isIntialized, css: { 'active': areActionsActive }"
style="display: none;">
            <div class="clearfix cart-wrapper" data-bind="css: { 'cart-view-mode': isInViewMode
}">
                <div class="clearfix"></div>
                @Html.PartialWithNameAsComment("Sections/Promotions")
                <scripting-messages params="quoteMessages: $root.quoteMessages"></scripting-
messages>
                @Html.PartialWithNameAsComment("Sections/Notifications")
                @Html.PartialWithNameAsComment("Sections/InvalidAutocompleteNotification")
                <div class="cart-content fiori3-cart-content clearfix">
                    @Html.PartialWithNameAsComment("Sections/Tabs")

                    <div id="cartSectionsWrapper" class="cart-sections-wrapper">
                        @Html.PartialWithNameAsComment("Sections/Proposal")
                        @{
                            var i = 0;
                            IList<string> sections = CartController.GetSections();
                            while (i < sections.Count)
                            {
                                Html.RenderPartialWithNameAsComment("Sections/" + sections[i]);

```

```

        }
        }
    }
}
</div>
@if (CartController.CanAccessCartDebugger())
{
    @Html.PartialWithNameAsComment("Debugger")
}
</div>
@Html.Partial("~/Views/Favourites/AddToFavoritesDialogTemplate.cshtml")

<!-- ko if: promosInfo.shouldShowPromotionsInfo -->

@Html.PartialWithNameAsComment("/Views/Cart/Dialogs/PromotionDialogTemplate.cshtml")
<!-- /ko -->
<!-- ko with: filterEditor -->
<div style="position: fixed; left: 0; right: 0; top: 0;bottom: 0"></div>

    <div id="filter-editor-content" class="quote-items-filter-editor fiori3-cart-
filter slide-in-from-left" data-bind="affixTop: { disableScroll: true }">
        <div class="quote-filter-header" style="border-bottom: 1px solid #deded">
            <h4 data-bind="text: $root.filtersLabel"></h4>
            <span class="close-filter-editor">
                <i tabindex="0" class="fa fa-times" data-bind="click:
$parent.toggleFilterEditor, event: { keyup: function() { $parent.toggleFilterEditorOnEnter(event)
} }, tooltip: { title: '@Translation.GetJS("Msg.Close")' }, attr: { 'aria-label':
'@Translation.GetJS("Msg.Close")' }"></i>
            </span>
        </div>
        <div id="quoteFilterContainer" class="quote-list-editors cpq-scroll" data-
bind="foreach: filters">
            <div data-bind="template: 'Filter_' + template" class="fiori3-input-
group"></div>
        </div>
        <div class="quote-list-tab-footer">
            <button class="btn btn-primary fiori3-btn-primary" data-bind="click:
applyFilters, enable: actionEnabled(), executeOnEnter: function() { applyFilters();
}">@Translation.Get("QuoteList.ApplyFilter")</button>
            <button class="btn btn-tertiary fiori3-btn-tertiary" data-bind="click:
$parent.toggleFilterEditor, event: { keyup: function() { $parent.toggleFilterEditorOnEnter(event)
} }">@Translation.Get("QuoteList.Cancel")</button>
        </div>
    </div>
<!-- /ko -->
</div>
</div>
</div>
</main>

@Html.PartialWithNameAsComment("Templates/CellTemplates")
@Html.PartialWithNameAsComment("Templates/QuoteFilterTemplates")
@Html.PartialWithNameAsComment("Templates/TotalsTemplate")
@Html.PartialWithNameAsComment("/Views/CartList/Dialogs/ReassignCartDialogTemplate.cshtml")
@Html.PartialWithNameAsComment("/Views/Cart/Dialogs/PricebookMissingForMarketDialogTemplate.cshtml")
@Html.PartialWithNameAsComment("/Views/Cart/Dialogs/CreatePartialOrderDialogTemplate.cshtml")
@Html.PartialWithNameAsComment("Dialogs/UpgradeProductsProgressBarTemplate")
@Html.PartialWithNameAsComment("SliderTemplate")

```


Sections/Notifications – Complete Template

```

<div class="row">
  <div class="fiiori3-alert fiiori3-alert-danger" data-bind="visible: approval.errorMessage,
html: approval.errorMessage"></div>
  <div class="fiiori3-alert fiiori3-alert-warning" data-bind="visible: messageTitle() ||
approval.conditions().length > 0 || cartUsage().length > 0 || landingMessages().length > 0 ||
errorMessage()">
    <sap class="sap-icon">&#xe053;</sap>
    <div>
      <div class="cart-warning-group" data-bind="style : { display: landingMessageTitle() ?
'block' : 'none' }">
        <p data-bind="html: landingMessageTitle"></p>
        <ul data-bind="foreach: landingMessages">
          <li><span data-bind="text: title"></span><span data-bind="if: description">:
</span><span data-bind="text: description"></span></li>
        </ul>
      </div>
      <div class="cart-warning-group" data-bind="style : { display: messageTitle() ?
'block' : 'none' }">
        <p data-bind="html: messageTitle"></p>
        <ul data-bind="foreach: messageItems">
          <li><span data-bind="text: title"></span>: <span data-bind=" text:
description"></span></li>
        </ul>
      </div>
      <div class="cart-warning-group" data-bind="style : { display: errorMessage() ?
'block' : 'none' }">
        <span data-bind="html: errorMessage"></span><br />
      </div>
      <div class="cart-warning-group" data-bind="style : { display:
approval.conditions().length > 0 ? 'block' : 'none' }">
        <!-- ko template: { name: 'ApprovalTemplate', data: approval } -->
        <!--/ko -->
      </div>
      <div class="cart-warning-group" data-bind="style : { display: cartUsage().length > 0
? 'block' : 'none' }">
        <p>@Translation.Get("Cart.RecentlyOpened")</p>
        <ul data-bind="foreach: cartUsage">
          <li><span data-bind="text: user"></span>(<span data-bind=" text:
openedMinutesAgo"></span>)</li>
        </ul>
      </div>
    </div>
  </div>
</div>

@Html.PartialWithNameAsComment("Templates/ApprovalTemplate")

```

Quote Error Messages Breaking Change Fix

More than one error message can now display on the quote at the same time when using the Quote 2.0 engine. Due to this improvement, administrators who have previously created any kind of quote messages using IronPython scripting need to implement the fix described below for the messages to continue working correctly.

Actions to Take

If any messages appearing on the quote were created using scripting, it is necessary to replace the enumeration `MessageType` with `MessageLevel` in all these scripts. Scripts used for quote messages that are using the enumeration `MessageType` will no longer work starting with the 2205 release.

The following example shows how to create a script for adding a quote message with the correct enumeration `MessageLevel`:



The screenshot shows the 'Script Workbench' interface. At the top, there is a 'Run' button and a 'Mode' dropdown menu set to 'Standard'. Below this, a code editor contains the following Python code:

```

1 from Scripting.Quote import MessageLevel
2 context.Quote.AddMessage("Info Msg", MessageLevel.Info, True)

```

Limitations

Limitations for the SAP CPQ 2205 release can be accessed on the [SAP CPQ Online Help portal](#).