



Salesforce CPQ API

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CONTENTS

Chapter 1: Get Started with Salesforce CPQ API	1
CPQ API Models	2
CPQ API QuoteLineModel	2
CPQ API QuoteLineGroupModel	4
CPQ API OptionModel	4
CPQ API FeatureModel	6
CPQ API ConfigAttributeModel	6
CPQ API ConfigurationModel	7
CPQ API ConstraintModel	9
CPQ API ProductModel	9
CPQ API QuoteModel	10
CPQ API QuoteProposalModel	11
CPQ Quote API	12
Save Quote API	13
Calculate Quote API	14
Read Quote API	18
Validate Quote API	26
Add Products API	26
Read Product API	24
Create and Save Quote Proposal API	26
CPQ Contract API	28
Contract Amender API	28
Contract Renewer API	31
Service Router	33
CPQ API Quickstart Guide	33
Disable CPQ Triggers in Apex	35
Index	37

CHAPTER 1 Get Started with Salesforce CPQ API

In this chapter ...

- [CPQ API Models](#)
- [CPQ Quote API](#)
- [CPQ Contract API](#)
- [Service Router](#)
- [CPQ API Quickstart Guide](#)
- [Disable CPQ Triggers in Apex](#)

Want to start working with Salesforce CPQ API? Check out the CPQ data models, types of API, and quickstart guides.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

CPQ API Models

CPQ API references several CPQ data models. To use the Salesforce CPQ API, create classes for each data model in your org.

[CPQ API QuoteLineModel](#)

The Quote Line model represents a quote line data model in Salesforce CPQ.

[CPQ API QuoteLineGroupModel](#)

The Quote Line Group model represents a quote line group data model in Salesforce CPQ.

[CPQ API OptionModel](#)

The Option model represents a product option data model in Salesforce CPQ.

[CPQ API FeatureModel](#)

The Feature model represents a product feature data model in Salesforce CPQ.

[CPQ API ConfigAttributeModel](#)

The ConfigAttribute model represents the configuration attribute object in Salesforce CPQ.

[CPQ API ConfigurationModel](#)

The Configuration model represents a bundle product in Salesforce CPQ.

[CPQ API ConstraintModel](#)

The Constraint model represents the option constraint object in Salesforce CPQ.

[CPQ API ProductModel](#)

The Product model represents a product data model in Salesforce CPQ.

[CPQ API QuoteModel](#)

The Quote model represents a CPQ quote data model in Salesforce CPQ.

[CPQ API QuoteProposalModel](#)

The QuoteProposal model represents a quote document in Salesforce CPQ.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

CPQ API QuoteLineModel

The Quote Line model represents a quote line data model in Salesforce CPQ.

Name	Type	Description
record	SBQQ__QuoteLine__c	The record that this model represents.
amountDiscountProrated	Boolean	Corresponds to SBQQ__QuoteLine__c.AmountDiscountProrated
parentGroupKey	Integer	The unique key of this line's group, if this line is part of a grouped quote.
parentItemKey	Integer	The unique key of this line's parent, if this line is part of a bundle.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Name	Type	Description
key	Integer	Each quote line and group has a key that is unique amongst all other keys in the same quote.
upliftable	Boolean	True if this line is an MDQ segment that can be uplifted from a previous segment.
configurationType	String	Indicates the configuration type of the product that this line represents.
configurationEvent	String	Indicates the configuration event of the product that this line represents.
reconfigurationDisabled	Boolean	If true, this line cannot be reconfigured.
descriptionLocked	Boolean	If true, this line's description cannot be changed.
productQuantityEditable	Boolean	If true, this line's quantity cannot be changed.
productQuantityScale	Decimal	The number of decimal places used for rounding this line's quantity.
dimensionType	String	The type of MDQ dimension that this line represents.
productHasDimensions	Boolean	If true, the underlying product can be represented as a multidimensional line.
targetCustomerAmount	Decimal	The unit price for which this quote line is discounted.
targetCustomerTotal	Decimal	The customer amount for which this quote line is discounted.

```

public class QuoteLineModel {
    public SBQQ__QuoteLine__c record;
    public Boolean amountDiscountProrated;
    public Integer parentGroupKey;
    public Integer parentItemKey;
    public Integer key;
    public Boolean upliftable;
    public String configurationType;
    public String configurationEvent;
    public Boolean reconfigurationDisabled;
    public Boolean descriptionLocked;
    public Boolean productQuantityEditable;
    public Decimal productQuantityScale;
    public String dimensionType;
    public Boolean productHasDimensions;
    public Decimal targetCustomerAmount;
}

```

```
    public Decimal targetCustomerTotal;
}
```

CPQ API QuoteLineGroupModel

The Quote Line Group model represents a quote line group data model in Salesforce CPQ.

Name	Type	Description
record	SBQQ__QuoteLineGroup__c	The record that this model represents.
netNonSegmentTotal	Decimal	The net total for all non-multidimensional quote lines.
key	Integer	Each quote line and group has a key that is unique amongst all other keys in the same quote.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

```
public class QuoteLineGroupModel {
    public SBQQ__QuoteLineGroup__c record;
    public Decimal netNonSegmentTotal;
    public Integer key;
}
```

CPQ API OptionModel

The Option model represents a product option data model in Salesforce CPQ.

Name	Type	Description
record	SBQQ__ProductOption__c	The record that this model represents.
externalConfigurationData	Map<String,String>	Internal property for the external configurator feature.
configurable	Boolean	Indicates whether the option is configurable.
configurationRequired	Boolean	Indicates whether the configuration of the option is required.
quantityEditable	Boolean	Indicates whether the quantity is editable. Editability is determined by the quantity

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Name	Type	Description
		and bundled fields on the option record.
priceEditable	Boolean	Indicates whether the price is editable. Editability is determined by the price editable field on the product record and the bundled field on the option record.
productQuantityScale	Decimal	Returns the value of the quantity scale field for the product being configured.
priorOptionExists	Boolean	Checks if this option is an asset on the account that the quote is associated with.
dependentIds	Set<Id>	The option IDs that depend on this option.
controllingGroups	Map<String,Set<Id>>	The option IDs that this option depends on.
exclusionGroups	Map<String,Set<Id>>	The option IDs that this option is exclusive with.
reconfigureDimensionWarning	String	Reconfigures the warning label for an option with segments.
hasDimension	Boolean	Indicates whether this option has dimensions or segments.
isUpgrade	Boolean	Indicates whether the product option is related to an upgrade product.
dynamicOptionKey	String	Internal property for dynamic options.

```

public class OptionModel {
    public SBQQ__ProductOption__c record;
    public Map<String,String> externalConfigurationData;
    public Boolean configurable;
    public Boolean configurationRequired;
    public Boolean quantityEditable;
    public Boolean priceEditable;
    public Decimal productQuantityScale;
    public Boolean priorOptionExists;
    public Set<Id> dependentIds;
    public Map<String,Set<Id>> controllingGroups;
    public Map<String,Set<Id>> exclusionGroups;
    public String reconfigureDimensionWarning;
    public Boolean hasDimension;
    public Boolean isUpgrade;
    public String dynamicOptionKey;
}

```

CPQ API FeatureModel

The Feature model represents a product feature data model in Salesforce CPQ.

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Name	Type	Description
record	SBQQ__ProductFeature__c	The record that this model represents.
instructionsText	String	Instruction label for the feature.
containsUpgrades	Boolean	This feature is related to an upgrade product.

```
public class FeatureModel {
    public SBQQ__ProductFeature__c record;
    public String instructionsText;
    public Boolean containsUpgrades;
}
```

CPQ API ConfigAttributeModel

The ConfigAttribute model represents the configuration attribute object in Salesforce CPQ.

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Name	Type	Description
name	String	Corresponds directly to SBQQ__ConfigurationAttribute__cName
targetFieldName	String	Corresponds directly to SBQQ__ConfigurationAttribute__cTargetField__c
displayOrder	Decimal	Corresponds directly to SBQQ__ConfigurationAttribute__cDisplayOrder__c
columnOrder	String	Corresponds directly to SBQQ__ConfigurationAttribute__cColumnOrder__c
required	Boolean	Corresponds directly to SBQQ__ConfigurationAttribute__cRequired__c
featureId	Id	Corresponds directly to SBQQ__ConfigurationAttribute__cFeatureId__c
position	String	Corresponds directly to SBQQ__ConfigurationAttribute__cPosition__c
appliedImmediately	Boolean	Corresponds directly to SBQQ__ConfigurationAttribute__cAppliedImmediately__c
applyToProductOptions	Boolean	Corresponds directly to SBQQ__ConfigurationAttribute__cApplyToProductOptions__c

Name	Type	Description
autoSelect	Boolean	Corresponds directly to SBQQ_ConfigurationAttribute_cSBQQ_AutoSelect_c
shownValues	String[]	Corresponds directly to SBQQ_ConfigurationAttribute_cSBQQ_ShownValues_c
hiddenValues	String[]	Corresponds directly to SBQQ_ConfigurationAttribute_cSBQQ_HiddenValues_c
hidden	Boolean	Corresponds directly to SBQQ_ConfigurationAttribute_cSBQQ_Hidden_c
noSuchFieldName	String	If no field with the target name exists, the target name is stored here.
myId	String	Corresponds directly to SBQQ_ConfigurationAttribute__c.Id.

```
public class ConfigAttributeModel {
    public String name;
    public String targetFieldName;
    public Decimal displayOrder;
    public String colmnOrder;
    public Boolean required;
    public Id featureId;
    public String position;
    public Boolean appliedImmediately;
    public Boolean applyToProductOptions;
    public Boolean autoSelect;
    public String[] shownValues;
    public String[] hiddenValues;
    public Boolean hidden;
    public String noSuchFieldName;
    public Id myId;
}
```

CPQ API ConfigurationModel

The Configuration model represents a bundle product in Salesforce CPQ.

Name	Type	Description
configuredProductId	Id	The Product2.Id.
optionId	Id	The SBQQ__ProductOption__c.Id.
optionData	SBQQ__ProductOption__c	Editable data about the option, such as quantity or discount.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Name	Type	Description
configurationData	SBQQ__ProductOption__c	Stores the values of the configuration attributes.
inheritedConfigurationData	SBQQ__ProductOption__c	Stores the values of the inherited configuration attributes.
optionConfigurations	ConfigurationModel	Stores the options selected on this product.
configured	Boolean	Indicates whether the product has been configured.
changedByProductActions	Boolean	Indicates whether a product action changed the configuration of this bundle.
isDynamicOption	Boolean	Indicates whether the product was configured using a dynamic lookup.
isUpgrade	Boolean	Queries whether this product is an upgrade.
disabledOptionIds	Set<Id>	The option IDs that are disabled.
hiddenOptionIds	Set<Id>	The option IDs that are hidden.
listPrice	Decimal	The list price.
priceEditable	Boolean	Indicates whether the price is editable.
validationMessages	String[]	Validation messages.
dynamicOptionKey	String	Internal property for dynamic options.

```

public class ConfigurationModel {
    public Id configuredProductId;
    public Id optionId;
    public SBQQ__ProductOption__c optionData; // Editable data about the option in question,
    such as quantity or discount
    public SBQQ__ProductOption__c configurationData;
    public SBQQ__ProductOption__c inheritedConfigurationData;
    public ConfigurationModel[] optionConfigurations;
    public Boolean configured;
    public Boolean changedByProductActions;
    public Boolean isDynamicOption;
    public Boolean isUpgrade;
    public Set<Id> disabledOptionIds;
    public Set<Id> hiddenOptionIds;
    public Decimal listPrice;
    public Boolean priceEditable;
    public String[] validationMessages;
    public String dynamicOptionKey;
}

```

CPQ API ConstraintModel

The Constraint model represents the option constraint object in Salesforce CPQ.

Name	Type	Description
record	SBQQ__OptionConstraint__c	The record that this model represents.
priorOptionExists	Boolean	Checks if this option is an asset on the account that the quote is associated with.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

```
public class ConstraintModel {
    public SBQQ__OptionConstraint__c record;
    public Boolean priorOptionExists;
}
```

CPQ API ProductModel

The Product model represents a product data model in Salesforce CPQ.

Name	Type	Description
record	Product2	The record that this model represents.
upgradedAssetId	Id	Provides a source for SBQQ__Quote__SBQQ__UpgradeAsset__c
currencySymbol	String	The symbol for the currency in use.
currencyCode	String	The ISO code for the currency in use.
featureCategories	String[]	Allows users to sort product features by category.
options	OptionModel[]	A list of all available options for this product.
features	FeatureModel	All features available for this product
configuration	ConfigurationModel	An object representing this product's current configuration.
configurationAttributes	ConfigAttributeModel[]	All configuration attributes available for this product.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Name	Type	Description
inheritedConfigurationAttributes	ConfigAttributeModel[]	All configuration attributes that this product inherits from ancestor products.
constraints	ConstraintModel[]	Option constraints on this product.

```

public class ProductModel {
    public Product2 record;
    public Id upgradedAssetId;
    public String currencySymbol;
    public String currencyCode;
    public String[] featureCategories;
    public OptionModel[] options;
    public FeatureModel[] features;
    public ConfigurationModel configuration;
    public ConfigAttributeModel[] configurationAttributes;
    public ConfigAttributeModel[] inheritedConfigurationAttributes;
    public ConstraintModel[] constraints;
}

```

CPQ API QuoteModel

The Quote model represents a CPQ quote data model in Salesforce CPQ.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Name	Type	Description
record	SBQQ__Quote__c	The record that this model represents.
lineItems	QuoteLineModel[]	The lines that this quote contains.
lineItemGroups	QuoteLineGroupModel[]	The groups that this quote contains.
nextKey	Integer	The next key to use for new groups or lines. To keep keys unique, do not lower this value.
applyAdditionalDiscountLast	Boolean	Corresponds to the field <code>SBQQ__Quote__ApplyAdditionalDiscountLast_c</code>
applyPartnerDiscountFirst	Boolean	Corresponds to the field <code>SBQQ__Quote__ApplyPartnerDiscountFirst_c</code>
channelDiscountsOffList	Boolean	Corresponds to the field <code>SBQQ__Quote__ChannelDiscountsOffList_c</code>
customerTotal	Decimal	<code>SBQQ__Quote__SBQQ__CustomerAmount_c</code> is a roll-up summary field, so its accuracy is guaranteed only

Name	Type	Description
		after a quote has been saved. In the meantime, its current value is stored in customerTotal.
netTotal	Decimal	SBQQ__Quote__c.SBQQ__NetAmount__c is a roll-up summary field, so its accuracy is guaranteed only after a quote has been saved. In the meantime, its current value is stored in netTotal.
netNonSegmentTotal	Decimal	The net total for all non-multidimensional quote lines.

```
public class QuoteModel {
    public SBQQ__Quote__c record;
    public QuoteLineModel[] lineItems;
    public QuoteLineGroupModel[] lineItemGroups;
    public Integer nextKey;
    public Boolean applyAdditionalDiscountLast;
    public Boolean applyPartnerDiscountFirst;
    public Boolean channelDiscountsOffList;
    public Decimal customerTotal;
    public Decimal netTotal;
    public Decimal netNonSegmentTotal;
}
```

CPQ API QuoteProposalModel

The QuoteProposal model represents a quote document in Salesforce CPQ.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Name	Type	Description
<i>name</i>	String	The document name.
<i>paperSize</i>	String	The paper size. Possible values are: <ul style="list-style-type: none"> • Default • Letter • Legal • A4 Defaults to Default.
<i>outputFormat</i>	String	The output format. Possible values are: <ul style="list-style-type: none"> • pdf • word

Name	Type	Description
		Defaults to pdf.
<i>quoteId</i>	Id	The ID of your quote.
<i>templateId</i>	Id	The ID of your quote template.
<i>language</i>	String	The language code. Defaults to en_US.

```
public class QuoteProposalModel {
    public String name;
    public Id quoteId;
    public Id templateId;
    public String language;
    public String outputFormat;
    public String paperSize;
}
```

CPQ Quote API

Manage quotes and quoting actions with CPQ quote API.

[Save Quote API](#)

The Save Quote API saves a CPQ quote.

[Calculate Quote API](#)

The Calculate Quote API calculates the prices of a CPQ quote.

[Read Quote API](#)

The Read Quote API reads a quote from a CPQ quote ID.

[Validate Quote API](#)

Validate a CPQ quote and return any validation errors.

[Add Products API](#)

Validate a CPQ quote and return any validation errors.

[Read Product API](#)

The Read Product API takes the request's product ID, pricebook ID, and currency code and returns a Product model. The Product model loads the product from your catalog when the user requests it.

[Create and Save Quote Proposal API](#)

Validate a CPQ quote and return any validation errors.

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Save Quote API

The Save Quote API saves a CPQ quote.

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

REQUEST

Name

quote

Type

QuoteModel

Required

Yes

Description

Representation of SBQQ__Quote__c data

RESPONSE

Type

QuoteModel

Description

Representation of SBQQ__Quote__c data

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

REST Examples

```
curl
  "https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter" -H
  "Content-Type: application/json" -H "Authorization: Bearer token" -X POST -d
  @quoteModel.json
```

This request body `quoteModel.json` file saves a quote. The context value is a JSON formatted string.

```
{"saver": "SBQQ.QuoteAPI.QuoteSaver", "model": "{\"record\":
{ \"attributes\": { \"type\": \"SBQQ__Quote__c\", \"url\": \"/services/data/v41.0/subjects/
SBQQ__Quote__c/a0161000003kU1VAAU\" },
 \"Name\": \"Q-00681\", \"Id\": \"a0161000003kU1VAAU\" }, \"nextKey\": 2, \"netTotal\": 0.00,
 \"lineItems\": [], \"lineItemGroups\": [], \"customerTotal\": 0.00 }"}
```

An example response body after saving a quote. The actual response is a JSON formatted string.

```
{
  "record": {
    "attributes": {
      "type": "SBQQ__Quote__c",
      "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0161000003kU1VAAU"
    },
    "Name": "Q-00681",
```

```

    "Id":"a0161000003kU1VAAU"
  },
  "nextKey":2,
  "netTotal":0.00,
  "lineItems":[],
  "lineItemGroups":[],
  "customerTotal":0.00
}

```

APEX Examples

Before saving the QuoteSaver example class, make sure that the CPQ Model classes are added as individual Apex classes in your org.

```

public with sharing class QuoteSaver {
    public QuoteModel save(QuoteModel quote) {
        String quoteJSON = SBQQ.ServiceRouter.save('SBQQ.QuoteAPI.QuoteSaver',
JSON.serialize(quote));
        return (QuoteModel) JSON.deserialize(quoteJSON, QuoteModel.class);
    }
}

```

For an example of the QuoteSaver class, run the following code in anonymous Apex.

```

QuoteModel quoteModel; //Use Read, Add Products, or Calculate APIs to obtain a QuoteModel

QuoteSaver saver = new QuoteSaver();
QuoteModel savedQuote = saver.save(quoteModel);
System.debug(savedQuote);

```

Calculate Quote API

The Calculate Quote API calculates the prices of a CPQ quote.

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: quote

Type: QuoteModel

Required: Yes

Description: Representation of SBQQ__Quote__c data. See [CPQ API QuoteModel](#)

Parameter 2

Name: callbackClass

Type: String

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Required: Required for Apex Trigger

Description: This Apex class implements the CPQ CalculateCallback interface.

REST Examples

```
curl
"https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter?loader=SBQQ.QuoteAPI.QuoteCalculator"
-H
"Content-Type: application/json" -H "Authorization: Bearer token" -X PATCH -d
"@quoteToCalculate.json"
```

This request body `quoteToCalculate.json` file calculates a quote. The context value is a JSON formatted string.

```
{
  "context": "{
    \"quote\": {
      \"record\": {
        \"attributes\": {
          \"type\": \"SBQQ_Quote_c\",
          \"url\": \"/services/data/v41.0/subjects/SBQQ_Quote_c/a0p61000002NUmoAAG\"
        },
        \"SBQQ_PartnerDiscount_c\": null,
        \"SBQQ_GenerateContractedPrice_c\": null,
        \"SBQQ_QuoteProcessId_c\": \"a0m61000005NYxO\",
        \"SBQQ_NetAmount_c\": 100.0,
        \"SBQQ_CustomerDiscount_c\": null,
        \"SBQQ_CustomerAmount_c\": 100.0,
        \"SBQQ_PaymentTerms_c\": \"Net30\",
        \"SBQQ_RenewalUpliftRate_c\": null,
        \"Name\": \"Q-00822\",
        \"SBQQ_Type_c\": \"Quote\",
        \"SBQQ_SubscriptionTerm_c\": null,
        \"SBQQ_MarkupRate_c\": null,
        \"SBQQ_OrderGroupID_c\": null,
        \"SBQQ_DistributorDiscount_c\": null,
        \"SBQQ_OrderByQuoteLineGroup_c\": false,
        \"SBQQ_OrderBy_c\": null,
        \"SBQQ_PricebookId_c\": \"01s61000000LI67AAG\",
        \"SBQQ_EndDate_c\": null,
        \"SBQQ_Account_c\": null,
        \"SBQQ_StartDate_c\": null,
        \"SBQQ_FirstSegmentTermEndDate_c\": null,
        \"SBQQ_BillingFrequency_c\": null,
        \"SBQQ_LineItemsGrouped_c\": false,
        \"SBQQ_ExpirationDate_c\": null,
        \"SBQQ_Primary_c\": false,
        \"SBQQ_LineItemCount_c\": 1.0,
        \"SBQQ_MasterContract_c\": null,
        \"SBQQ_EditLinesFieldSetName_c\": null,
        \"Id\": \"a0p61000002NUmoAAG\",
        \"SBQQ_Unopened_c\": false,
        \"SBQQ_RenewalTerm_c\": null
      },
      \"nextKey\": 2,
      \"netTotal\": 100.00,
      \"netNonSegmentTotal\": 100.0000,
      \"lineItems\": [
        {
          \"upliftable\": false,
          \"targetCustomerTotal\": null,
          \"targetCustomerAmount\": null,
          \"record\": {
            \"attributes\": {
              \"type\": \"SBQQ_QuoteLine_c\",
              \"url\": \"/services/data/v41.0/subjects/SBQQ_QuoteLine_c/a01610000061yHpAAI\"
            },
            \"SBQQ_CarryoverLine_c\": false,
            \"SBQQ_TermDiscountTier_c\": null,
            \"SBQQ_VolumeDiscount_c\": null,
            \"SBQQ_BillingType_c\": null,
            \"SBQQ_Discount_c\": null,
            \"SBQQ_ListPrice_c\": 100.0,
            \"SBQQ_Existing_c\": false,
            \"SBQQ_ProductName_c\": \"Product1\",
            \"SBQQ_SegmentIndex_c\": null,
            \"SBQQ_DiscountTier_c\": null,
            \"SBQQ_SBCustomLevel_c\": null,
            \"SBQQ_ComponentTotal_c\": null,
            \"SBQQ_RenewedSubscription_c\": null,
            \"SBQQ_SubscriptionTargetPrice_c\": null,
            \"SBQQ_AllowAssetRefund_c\": false,
            \"SBQQ_Optional_c\": false,
            \"SBQQ_PriorQuantity_c\": null,
            \"SBQQ_Source_c\": null,
            \"SBQQ_Quote_c\": \"a0p61000002NUmoAAG\",
            \"SBQQ_SBCustomEndDate_c\": null,
            \"SBQQ_ProratedListPrice_c\": 100.0,
            \"SBQQ_ChargeType_c\": null,
            \"SBQQ_UpliftAmount_c\": 0.0,
            \"SBQQ_ComponentSubscriptionScope_c\": null,
            \"SBQQ_OptionLevel_c\": null,
            \"SBQQ_NetPrice_c\": 100.0,
            \"SBQQ_SBCustomCity_c\": null,
            \"Id\": \"a01610000061yHpAAI\",
            \"SBQQ_OriginalQuoteLineId_c\": null,
            \"SBQQ_RegularPrice_c\": 100.0,
            \"SBQQ_EffectiveQuantity_c\": 1.0,
            \"SBQQ_Quantity_c\": 1.0,
            \"SBQQ_TaxCode_c\": null,
            \"SBQQ_sbCustom_Number1_c\": null,
            \"SBQQ_ContractedPrice_c\": null,
            \"SBQQ_CostEditable_c\": false,
            \"SBQQ_Dimension_c\": null,
            \"SBQQ_DynamicOptionId_c\": null,
            \"SBQQ_SBCustomSupport_c\": null,
            \"SBQQ_PreviousSegmentUplift_c\": null,
            \"SBQQ_EndDate_c\": null,
            \"SBQQ_PreviousSegmentPrice_c\": null,
            \"SBQQ_UpgradedSubscription_c\": null,
            \"SBQQ_SpecialPriceType_c\": null
          }
        }
      ]
    }
  }"
```

```

\"SBQQ__SegmentKey_c\":null,\"SBQQ__OptionDiscount_c\":null,\"SBQQ__RequiredBy_c\":null,
\"SBQQ__UpgradedAsset_c\":null,\"SBQQ__Bundled_c\":false,\"SBQQ__SBCustomColor_c\":null,
\"SBQQ__OptionType_c\":null,\"SBQQ__Number_c\":1.0,\"SBQQ__SubscriptionPercent_c\":null,
\"SBQQ__ComponentListTotal_c\":null,\"SBQQ__TermDiscountSchedule_c\":null,
\"SBQQ__Taxable_c\":false,\"SBQQ__Description_c\":null,\"SBQQ__ProductCode_c\":\"P1\",
\"SBQQ__OriginalPrice_c\":100.0,\"SBQQ__GenerateContractedPrice_c\":null,
\"SBQQ__NetTotal_c\":100.0,\"SBQQ__UnitCost_c\":null,\"SBQQ__SubscriptionCategory_c\":null,
\"SBQQ__Hidden_c\":false,\"SBQQ__NonDiscountable_c\":false,\"SBQQ__Markup_c\":0.0,\"SBQQ__RenewedAsset_c\":null,
\"SBQQ__GrossProfit_c\":null,\"SBQQ__MinimumPrice_c\":null,
\"SBQQ__BundledQuantity_c\":null,\"SBQQ__BatchQuantity_c\":null,
\"SBQQ__ProrateMultiplier_c\":1.0,\"SBQQ__CustomerPrice_c\":100.0,\"SBQQ__SubscriptionTerm_c\":null,
\"SBQQ__MarkupRate_c\":null,\"SBQQ__DistributorDiscount_c\":null,
\"SBQQ__DefaultSubscriptionTerm_c\":null,\"SBQQ__PriceEditable_c\":false,
\"SBQQ__ProratedPrice_c\":100.0,
\"SBQQ__ComponentUpliftedByPackage_c\":false,\"SBQQ__StartDate_c\":null,
\"SBQQ__NonPartnerDiscountable_c\":false,\"SBQQ__BlockPrice_c\":null,\"SBQQ__MaximumPrice_c\":null,
\"SBQQ__SubscriptionPricing_c\":null,\"SBQQ__AdditionalDiscount_c\":0.0,\"SBQQ__Favorite_c\":null,
\"SBQQ__ProductOption_c\":null,\"SBQQ__OptionDiscountAmount_c\":null,
\"SBQQ__TermDiscount_c\":null,\"SBQQ__MarkupAmount_c\":null,\"SBQQ__PartnerDiscount_c\":null,
\"SBQQ__ComponentDiscountedByPackage_c\":false,\"SBQQ__Renewal_c\":false,
\"SBQQ__CompoundDiscountRate_c\":null,\"SBQQ__UpgradedQuantity_c\":null,
\"SBQQ__AdditionalDiscountAmount_c\":null,\"SBQQ__Cost_c\":null,
\"SBQQ__PackageProductDescription_c\":null,\"SBQQ__PartnerPrice_c\":100.0,\"SBQQ__DiscountSchedule_c\":null,
\"SBQQ__ComponentCost_c\":null,\"SBQQ__SubscribedAssetIds_c\":null,
\"SBQQ__SubscriptionScope_c\":\"Quote\", \"SBQQ__Product_r\":{ \"attributes\":
{ \"type\":\"Product2\", \"url\":\"/services/data/v41.0/subjects/Product2/01t610000033JNPAA2\"},
\"SBQQ__ExternallyConfigurable_c\":false,\"SBQQ__CostEditable_c\":false,
\"SBQQ__QuantityEditable_c\":true,\"SBQQ__Hidden_c\":false,\"SBQQ__ExcludeFromOpportunity_c\":false,
\"SBQQ__NonDiscountable_c\":false,\"Name\":\"Product1\", \"PricebookEntries\":
{ \"totalSize\":1, \"done\":true, \"records\":[ { \"attributes\":{ \"type\":\"PricebookEntry\",
\"url\":\"/services/data/v41.0/subjects/PricebookEntry/01u610000055KTeAAM\"},
\"UnitPrice\":100.0, \"Product2Id\":\"01t610000033JNPAA2\", \"IsActive\":true,
\"Pricebook2Id\":\"01s61000000LI67AAG\", \"Id\":\"01u610000055KTeAAM\"} ]},
\"SBQQ__AssetConversion_c\":\"Oneperquoteline\", \"SBQQ__IncludeInMaintenance_c\":false,
\"SBQQ__PriceEditable_c\":false,\"SBQQ__ReconfigurationDisabled_c\":false,
\"SBQQ__DescriptionLocked_c\":false,\"SBQQ__NewQuoteGroup_c\":false,\"SBQQ__Optional_c\":false,
\"SBQQ__ExcludeFromMaintenance_c\":false,
\"SBQQ__AssetAmendmentBehavior_c\":\"Default\", \"ProductCode\":\"P1\", \"SBQQ__OptionSelectionMethod_c\":\"Click\",
\"SBQQ__SubscriptionType_c\":\"Renewable\", \"SBQQ__SubscriptionBase_c\":
\"List\", \"SBQQ__CustomConfigurationRequired_c\":false,\"SBQQ__NonPartnerDiscountable_c\":false,
\"SBQQ__DefaultQuantity_c\":1.0,\"SBQQ__PricingMethodEditable_c\":false,\"SBQQ__BlockPricingField_c\":
\"Quantity\", \"SBQQ__HasConfigurationAttributes_c\":false,\"SBQQ__Taxable_c\":false,
\"SBQQ__PricingMethod_c\":\"List\", \"Id\":\"01t610000033JNPAA2\", \"SBQQ__SubscriptionBase_c\":
\"List\", \"SBQQ__BillingFrequency_c\":null,\"SBQQ__OriginalUnitCost_c\":null,
\"SBQQ__sbcustom_TwinField_c\":null,\"SBQQ__Bundle_c\":false,\"SBQQ__Product_c\":
\"01t610000033JNPAA2\", \"SBQQ__SpecialPrice_c\":100.0,\"SBQQ__PricingMethodEditable_c\":false,
\"SBQQ__Uplift_c\":0.0,\"SBQQ__PackageProductCode_c\":null,\"SBQQ__PricingMethod_c\":\"List\",
\"SBQQ__SegmentLabel_c\":null,\"SBQQ__AdditionalQuantity_c\":null,
\"SBQQ__DiscountScheduleType_c\":null}, \"reconfigurationDisabled\":false, \"productQuantityScale\":
null, \"productQuantityEditable\":true, \"productHasDimensions\":false,
\"parentItemKey\":null, \"parentGroupKey\":null, \"key\":2, \"dimensionType\":null, \"descriptionLocked\":false,
\"configurationType\":null, \"configurationEvent\":null,
\"amountDiscountProrated\":null}, \"lineItemGroups\":[], \"customerTotal\":100.00, \"channelDiscountsOffList\":false,
\"applyPartnerDiscountFirst\":false, \"applyAdditionalDiscountLast\":false} } }

```

An example response body after successfully calculating a product. The actual response is a JSON formatted string.

```
{
  "record": {
    "attributes": {
      "type": "SBQQ__Quote__c",
      "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p610000040iumAAA"
    },
    "Id": "a0p61000002NUmoAAG",
    "Name": "Q-00822"
  },
  "nextKey": 2,
  "netTotal": 200,
  "netNonSegmentTotal": 200,
  "lineItems": [
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c",
          "url": "/services/data/v41.0/subjects/SBQQ__QuoteLine__c/a0161000003u09UAAQ"
        },
        "Id": "a01610000061yHpAAI",
        "SBQQ__NetTotal__c": 200
      }
    }
  ]
  "lineItemGroups": []
}
```

Apex Examples

When you execute the Calculate API with an Apex trigger, you also need to create a quote calculator callback class. This class must implement the CPQ CalculateCallback interface to save the quote after calculating it in the background.

```
global with sharing class MyCallback implements SBQQ.CalculateCallback {
  global void callback(String quoteJSON){
    SBQQ.ServiceRouter.save('SBQQ.QuoteAPI.QuoteSaver', quoteJSON);
  }
}
```

Before saving the QuoteCalculator example class, make sure that the CPQ model classes are added as individual Apex classes in your org.

```
public with sharing class QuoteCalculator {

  public void calculate(QuoteModel quote, String callbackClass) {
    QuoteCalculatorContext ctx = new QuoteCalculatorContext(quote, callbackClass);
    SBQQ.ServiceRouter.load('SBQQ.QuoteAPI.QuoteCalculator', null, JSON.serialize(ctx));
  }

  private class QuoteCalculatorContext {
    private QuoteModel quote;
    private String callbackClass;
  }
}
```

```

private QuoteCalculatorContext(QuoteModel quote, String callbackClass) {
    this.quote = quote;
    this.callbackClass = callbackClass;
}
}
}

```

For an example of the QuoteCalculator class, run the following code in anonymous Apex.

```

QuoteModel quoteModel; // Use Read or Add Products APIs to obtain a QuoteModel

quoteModel.lineItems[0].record.SBQQ__Quantity__c = 2;
QuoteCalculator calculator = new QuoteCalculator();
calculator.calculate(quoteModel, 'MyCallback');

```

Read Quote API

The Read Quote API reads a quote from a CPQ quote ID.

Formats

JSON, Apex

HTTP Method

GET

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: uid

Type: String

Required: Yes

Description: The ID of the quote to read

RESPONSE

Type

QuoteModel

Description

The representation of SBQQ__Quote__c data.

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

REST Examples

```

curl "https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter?reader=SBQQ.QuoteAPI.QuoteReader&uid=a0p610000040iumAAA"
-H "Content-Type: application/json" -H "Authorization: Bearer token" -X GET

```

An example response body after reading a quote. The actual response is a JSON formatted string.

```

{
  "record": {
    "attributes": {

```

```

        "type": "SBQQ__Quote__c",
        "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p610000040iumAAA"
    },
    "Id": "a0p610000040iumAAA",
    "Name": "Q-00880"
},
"nextKey": 5,
"netTotal": 300,
"netNonSegmentTotal": 300,
"lineItems": [
    {
        "record": {
            "attributes": {
                "type": "SBQQ__QuoteLine__c",
                "url":
"/services/data/v41.0/subjects/SBQQ__QuoteLine__c/a0161000003u09UAAQ"
            },
            "Id": "a0161000003u09UAAQ"
        }
    }
]
"lineItemGroups": [ ]
}

```

Apex Examples

Before saving the QuoteReader example class, make sure that the CPQ model classes are as individual Apex classes in your org.

```

public with sharing class QuoteReader {

    public QuoteModel read(String quoteId) {
        String quoteJSON = SBQQ.ServiceRouter.read('SBQQ.QuoteAPI.QuoteReader', quoteId);

        return (QuoteModel) JSON.deserialize(quoteJSON, QuoteModel.class);
    }
}

```

For an example of the QuoteReader class, run the following code in anonymous Apex.

```

QuoteReader reader = new QuoteReader();
QuoteModel quote = reader.read('a0Wf100000J1vk1');
System.debug(quote);

```

Validate Quote API

Validate a CPQ quote and return any validation errors.

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

REQUEST

Parameter 1

Name: quote

Type: QuoteModel

Required: Yes

Description: Representation of SBQQ__Quote__c data.

RESPONSE

Type

String[]

Description

If the quote is valid, the array is empty. Otherwise, the array contains an item for each validation error.

REST Examples

```
curl
"https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter?loader=QuoteAPI.QuoteValidator"
-H
"Content-Type: application/json" -H "Authorization: Bearer token" -X PATCH -d
@quoteModel.json
```

The request body `quoteModel.json` file validates a quote. The context value is a JSON formatted string/serialization of a quote, the same as the CPQ Save Quote API.

```
{"context": "{\\"record\\":
{\\"attributes\\":{\\"type\\":\\"SBQQ_Quote_c\\",\\"url\\":\\"/services/data/v41.0/subjects/SBQQ_Quote_c/a0161000003kU1VAAU\\"},
\\"Name\\":\\"Q-00681\\",\\"Id\\":\\"a0161000003kU1VAAU\\"},\\"href\\":2,\\"netTotal\\":0.00,\\"lineItems\\":[],\\"lineItemGroups\\":[],\\"customerTotal\\":0.00}"}
```

An example response body after creating the Apex job for generating the quote proposal.

```
// valid quote
[]

// invalid quote
[
  "message 1",
  "message 2",
  "message 3"
]
```

Apex Examples

Before saving the Validator example class, make sure that the CPQ model classes are added as individual Apex classes in your org.

```
public with sharing class Validator {

    public List<String> validate(QuoteModel quote) {
        String res=SBQQ.ServiceRouter.load('SBQQ.QuoteAPI.QuoteValidator', null,
JSON.serialize(quote));
        return (List<String>) JSON.deserialize(res, List<String>.class);
    }
}
```



```
    }
}
```

Run the following code in anonymous Apex to get Apex job ID for generating and saving the quote proposal.

```
QuoteModel quoteModel; //Use Read Quote API to obtain a QuoteModel

Validator validator = new Validator();
List<String> msgs = validator.validate(quoteModel);
System.debug(msgs);
```

Add Products API

Receive a CPQ quote, product collection, and quote group key in a request, and return a Quote model with all provided products added as quote lines.

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: quote

Type: QuoteModel

Required: Yes

Description: A representation of SBQQ__Quote__c data

Parameter 2

Name: products

Type: ProductModel[]

Required: Yes

Description: An array of representations of product data

Parameter 3

Name: groupKey

Type: Integer

Required: Required only for grouped quotes

Description: An index of the existing quote line group where you're adding products (0 indexed by default)

Parameter 4

Name: ignoreCalculate

Type: Boolean

Required: Yes

Description: Always use true for this value

RESPONSE

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Type

QuoteModel

Description

The representation of SBQQ__Quote__c data

REST Examples

```
curl
"https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter?loader=SBQQ.QuoteAPI.QuoteProductAdder"

-H "Content-Type: application/json" -H "Authorization: Bearer token" -X PATCH -d
"@adderContext.json"
```

This request body `adderContext.json` file reads a product. The context value is a JSON formatted string.

```
{
  "context": {
    "quote": {
      "record": {
        "attributes": {
          "type": "SBQQ__Quote__c",
          "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p61000004IpR8AAK",
          "Name": "Q-00905",
          "Id": "a0p61000004IpR8AAK",
          "nextKey": 2,
          "netTotal": 0.00,
          "lineItems": [],
          "lineItemGroups": [],
          "customerTotal": 0.00,
          "products": [],
          "groupKey": 0,
          "ignoreCalculate": true
        }
      }
    }
  }
}
```

An example response body after adding a product. The actual response is a JSON formatted string.

```
{
  "record": {
    "attributes": {
      "type": "SBQQ__Quote__c",
      "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p61000004IpR8AAK"
    }
  },
  "nextKey": 4,
  "netTotal": 0.00,
  "lineItems": [
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c"
        },
        "SBQQ__Product__c": "01t610000033JNtAAM"
      },
      "productQuantityEditable": true,
      "productHasDimensions": false,
      "key": 3,
      "descriptionLocked": false
    },
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c"
        },
        "SBQQ__Product__c": "01t610000033JNUAA2",
        "SBQQ__Product__r": {
          "attributes": {
            "type": "Product2",
            "url": "/services/data/v41.0/subjects/Product2/01t610000033JNUAA2"
          }
        }
      }
    }
  ]
}
```

```

        "Id": "01t610000033JNUAA2",
        "Name": "Product 2",
        "ProductCode": "P2"
    }
}
],
"lineItemGroups": [
    {
        "record": {
            "attributes": {
                "type": "SBQQ__QuoteLineGroup__c",
                "url": "/services/data/v41.0/subjects/SBQQ__QuoteLineGroup__c/a0k61000008WIF1AAO"
            },
            "SBQQ__Quote__c": "a0p61000004IpR8AAK",
            "Id": "a0k61000008WIF1AAO",
            "SBQQ__Number__c": 1.0,
            "SBQQ__SeparateContract__c": false,
            "Name": "Group1"
        },
        "key": 2,
        "hasMultiSegmentLines": false
    }
],
"customerTotal": 0.00
}

```

Apex Examples

Before saving the ProductAdder example class, make sure that the CPQ model classes are added as individual Apex classes in your org.

```

public with sharing class ProductAdder {

    public QuoteModel add(QuoteModel quote, ProductModel[] products, Integer groupKey) {
        AddProductsContext ctx = new AddProductsContext(quote, products, groupKey);
        String quoteJSON = SBQQ.ServiceRouter.load('SBQQ.QuoteAPI.QuoteProductAdder', null,
JSON.serialize(ctx));
        return (QuoteModel) JSON.deserialize(quoteJSON, QuoteModel.class);
    }

    private class AddProductsContext {
        private QuoteModel quote;
        private ProductModel[] products;
        private Integer groupKey;
        private final Boolean ignoreCalculate = true; //Must be hardcoded to true

        private AddProductsContext(QuoteModel quote, ProductModel[] products, Integer
groupKey) {
            this.quote = quote;
            this.products = products;
            this.groupKey = groupKey;
        }
    }
}

```

```

    }
}

```

For an example of the ProductAdder, run the following code in anonymous Apex.

```

QuoteModel quoteModel; //Use Read Quote API to obtain a QuoteModelProductModel
productModel; //Use Read Product API to obtain a ProductModel

List<ProductModel> productModels = new List<ProductModel>();
productModels.add(productModel);
ProductAdder adder = new ProductAdder();
QuoteModel quoteWithProducts = adder.add(quoteModel, productModels, 0);
System.debug(quoteWithProducts);

```

Read Product API

The Read Product API takes the request's product ID, pricebook ID, and currency code and returns a Product model. The Product model loads the product from your catalog when the user requests it.

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: productId

Type: ID

Required: Yes

Description: The ID of the product record to load

Parameter 2

Name: pricebookId

Type: ID

Required: Yes

Description: The ID of the pricebook that contains the product record to load

Parameter 3

Name: currencyCode

Type: String

Required: Required only for multi-currency orgs

Description: The ISO code of a Salesforce currency where the product's price is loaded

RESPONSE

Type

ProductModel

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Description

The representation of product data

REST Examples

```
curl
"https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter?loader=SBQQ.ProductAPI.ProductLoader&uid=01t610000033JNE"
-H "Content-Type: application/json" -H "Authorization: Bearer token" -X PATCH -d
"@loaderContext.json"
```

This request body loaderContext.json file reads a product. The context value is a JSON formatted string.

```
{"context" : "{\"pricebookId\": \"01sA0000000wuhg\", \"currencyCode\": \"USD\"}"}
```

An example response body after reading a product. The actual response is a JSON formatted string.

```
{
  "record": {
    "attributes": {
      "type": "Product2",
      "url": "/services/data/v42.0/subjects/Product2/01tA0000005uzfZ"
    },
    "Id": "01tA0000005uzfZ",
    "Name": "Apple"
  }
  "options": [],
  "features": [],
  "configuration": {}
}
```

Apex Examples

Before saving the ProductReader example class, make sure that the CPQ model classes are added as individual Apex classes in your org.

```
public with sharing class ProductReader {

    public ProductModel read(Id productId, Id pricebookId, String currencyCode) {
        ProductReaderContext ctx = new ProductReaderContext(pricebookId, currencyCode);
        String productJSON = SBQQ.ServiceRouter.load('SBQQ.ProductAPI.ProductLoader',
productId, JSON.serialize(ctx));
        return (ProductModel) JSON.deserialize(productJSON, ProductModel.class);
    }

    private class ProductReaderContext {
        private Id pricebookId;
        private String currencyCode;

        private ProductReaderContext(Id pricebookId, String currencyCode) {
            this.pricebookId = pricebookId;
            this.currencyCode = currencyCode;
        }
    }
}
```

For an example of the ProductReader class, run the following code in anonymous Apex.

```
ProductReader reader = new ProductReader();
ProductModel product = reader.read('01tj0000003P1SN', '01sj0000003THhKAAW', 'USD');
System.debug(product);
```

Create and Save Quote Proposal API

Create and save a CPQ quote proposal.

Formats

JSON, Apex

HTTP Method

POST

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: name

Type: String

Required: No

Description: The document name

Parameter 2

Name: paperSize

Type: String

Required: No

Description: Options: Default, Letter, Legal, A4

Parameter 3

Name: outputFormat

Type: String

Required: No

Description: Options: pdf, word. Defaults to pdf.

Parameter 4

Name: quoteID

Type: Id

Required: Yes

Description: The quote ID

Parameter 5

Name: templateId

Type: Id

Required: Yes

Description: The quote template ID

EDITIONS

Available in: Salesforce CPQ
Winter '19 and later

Parameter 6

Name: language

Type: String

Required: No

Description: Defaults to en_US

RESPONSE**Type**

jobId

Description

Apex queueable job Id

REST Examples

```
curl
"https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter?saver=QuoteDocumentAPI.SaveProposal"
-H "Content-Type: application/json" -H
  "Authorization: Bearer token" -X PATCH -d @data.json
```

The request body data.json file generates and saves a quote proposal.

```
"{\saver\":"SBQQ.QuoteDocumentAPI.Save\","model\":"{\name\":"test\","quoteId\":"a0n0R000000jhVC\","templateId\":"a010R000000vahe\","outputFormat\":"PDF\","language\":"en_US\","paperSize\":"Default\"}\}"
```

An example response body after creating the Apex job for generating the quote proposal.

```
"7070R00000Nj8mjQAB"
```

Apex Examples

Before saving the GenerateQuoteProposal example class, make sure that the CPQ model classes are added as individual Apex classes in your org.

```
public with sharing class GenerateQuoteProposal {
    public String save(QuoteProposalModel context) {
        return SBQQ.ServiceRouter.save('SBQQ.QuoteDocumentAPI.Save',
JSON.serialize(context));
    }
}
```

Run the following code in anonymous Apex to get Apex job ID for generating and saving the quote proposal.

```
QuoteProposalModel model = new QuoteProposalModel();
model.quoteId = 'a0n0R000000jhVC';
model.templateId = 'a010R000000vahe';
GenerateQuoteProposal proposalGenerator = new GenerateQuoteProposal();
String jobId = proposalGenerator.save(model);
System.debug(jobId);
```

CPQ Contract API

Use CPQ Contract API to amend and renew CPQ quotes.

[Contract Amender API](#)

Receive a CPQ contract ID in a request, and return quote data for an amendment quote.

[Contract Renewer API](#)

Receive a CPQ contract in a request, and return quote data for one or more renewal quotes.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

Contract Amender API

Receive a CPQ contract ID in a request, and return quote data for an amendment quote.

Service Provider Name

SBQQ.ContractManipulationAPI.ContractAmender

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: uid

Type: String

Required: Yes

Description: 15-character case sensitive or 18-character case insensitive Salesforce Contract ID to amend

RESPONSE

Type

QuoteModel

Description

Representation of SBQQ__Quote__c data for an amendment quote

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

REST Examples

```
curl
"https://yourInstance.salesforce.com/services/apexrest/SBQ/ServiceRouter?loader=SBQQ.ContractManipulationAPI.ContractAmender&uid=800R000000004g"
-H "Content-Type: application/json" -H "Authorization: Bearer token" -X PATCH
```

An example response body after amending a quote. The actual response is a JSON formatted string.

```
{
  "record": {
```



```

    "attributes": {
      "type": "SBQQ__Quote__c",
      "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p610000040iumAAA"
    },
    "Id": "a0p610000040iumAAA",
    "Name": "Q-00880"
  },
  "nextKey": 5,
  "netTotal": 300,
  "netNonSegmentTotal": 300,
  "lineItems": [
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c",
          "url": "/services/data/v41.0/subjects/SBQQ__QuoteLine__c/a0161000003u09UAAQ"
        },
        "Id": "a0161000003u09UAAQ"
      }
    }
  ]
  "lineItemGroups": [ ]
}

```

An example response body after amending a quote. The actual response is a JSON formatted string.

```

{
  "record": {
    "attributes": {
      "type": "SBQQ__Quote__c",
      "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p61000004IpR8AAK"
    }
  },
  "nextKey": 4,
  "netTotal": 0.00,
  "lineItems": [
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c"
        },
        "SBQQ__Product__c": "01t610000033JNtAAM"
      },
      "productQuantityEditable": true,
      "productHasDimensions": false,
      "key": 3,
      "descriptionLocked": false
    },
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c"
        },
        "SBQQ__Product__c": "01t610000033JNUAA2",
        "SBQQ__Product__r": {

```

```

    "attributes": {
      "type": "Product2",
      "url": "/services/data/v41.0/subjects/Product2/01t610000033JNUAA2"
    },
    "Id": "01t610000033JNUAA2",
    "Name": "Product 2",
    "ProductCode": "P2"
  }
}
],
"lineItemGroups": [
  {
    "record": {
      "attributes": {
        "type": "SBQQ__QuoteLineGroup__c",
        "url": "/services/data/v41.0/subjects/SBQQ__QuoteLineGroup__c/a0k61000008WIF1AAO"
      },
      "SBQQ__Quote__c": "a0p61000004IpR8AAK",
      "Id": "a0k61000008WIF1AAO",
      "SBQQ__Number__c": 1.0,
      "SBQQ__SeparateContract__c": false,
      "Name": "Group1"
    },
    "key": 2,
    "hasMultiSegmentLines": false
  }
],
"customerTotal": 0.00
}

```

Apex Examples

Before saving the ContractAmender example class, make sure that the CPQ model classes are added as individual Apex classes in your org.

```

public with sharing class ContractAmender {

    public QuoteModel load(String contractId) {
        String quoteJSON =
SBQQ.ServiceRouter.load('SBQQ.ContractManipulationAPI.ContractAmender', contractId);
        return (QuoteModel) JSON.deserialize(quoteJSON, QuoteModel.class);
    }
}

```

For an example of the ContractAmender, run the following code in anonymous Apex.

```

ContractAmender amender = new ContractAmender();
QuoteModel quote = amender.load('800R00000000X4g');
System.debug(quote);

```

Contract Renewer API

Receive a CPQ contract in a request, and return quote data for one or more renewal quotes.

Service Provider Name

SBQQ.ContractManipulationAPI.ContractRenewer

Formats

JSON, Apex

HTTP Method

PATCH

Authentication

Authorization: Bearer token

REQUEST

Parameter 1

Name: context

Type: RenewalContext

Required: Yes

Description: JSON object

Attribute 1

Name: masterContractId

Type: Id

Required: No

Description: If you're renewing multiple contracts, use the ID of the contract that you want to consider the master contract

Attribute 2

Type: ContractModel[]

Required: Yes

Description: One or more ContractModels to renew

RESPONSE

Type

QuoteModel[]

Description

Representation of one or more SBQQ__Quote__c data for renewal quotes

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

REST Examples

```
curl
  "https://yourInstance.salesforce.com/services/apexrest/SBQQ/ServiceRouter" -H
  "Content-Type: application/json" -H "Authorization: Bearer token" -X POST -d
  @context.json
```

This request body context.json file renews one or more Contracts. The context value is a JSON formatted string.

```
{"loader": "SBQQ.ContractManipulationAPI.ContractRenewer", "masterContractId": null,
"renewedContracts": "[{"record":
{"attributes":{"type":"Contract","url":"/services/data/v41.0/subjects/
```

```
Contract/800R00000000X4g\"},
\"Id\": \"800R00000000X4g\"}]"]}
```

An example response body after renewing a quote. The actual response is a JSON formatted string.

```
[{
  "record": {
    "attributes": {
      "type": "SBQQ__Quote__c",
      "url": "/services/data/v41.0/subjects/SBQQ__Quote__c/a0p610000040iumAAA"
    },
    "Id": "a0p610000040iumAAA",
    "Name": "Q-00880"
  },
  "nextKey": 5,
  "netTotal": 300,
  "netNonSegmentTotal": 300,
  "lineItems": [
    {
      "record": {
        "attributes": {
          "type": "SBQQ__QuoteLine__c",
          "url":
"/services/data/v41.0/subjects/SBQQ__QuoteLine__c/a0161000003u09UAAQ"
        },
        "Id": "a0161000003u09UAAQ"
      }
    }
  ]
  "lineItemGroups": [ ]
}]
```

Apex Examples

Before saving the ContractRenewer example class, make sure that the CPQ model classes are as individual Apex classes in your org.

```
public with sharing class ContractRenewer {

    public QuoteModel[] load(String masterContractId, String context) {
        String quoteJSON =
SBQQ.ServiceRouter.load('SBQQ.ContractManipulationAPI.ContractRenewer', masterContractId,
context);
        return (QuoteModel[]) JSON.deserialize(quoteJSON, QuoteModel.class);
    }
}
```

For an example of the ContractAmender, run the following code in anonymous Apex.

```
ContractRenewer renewer = new ContractRenewer();
QuoteModel[] quotes = renewer.load(null, new String[]{'800R00000000X4g'});
System.debug(quotes);
```

Service Router

SBQQ.ServiceRouter is a global Apex class serving as a single entry point for all API calls. You can use it for calls made by Apex code, Visualforce Remoting, or REST callouts.

SBQQ.ServiceRouter contains three global methods.

- global static String read(String reader, String uid)
- global static String load(String loader, String uid, String context)
- global static String save(String saver, String model)

Each method accepts the name of a service provider, such as SBQQ.ProductAPI.ProductLoader as its first parameter. This lets Salesforce CPQ route the API request to the appropriate internal handler. The internal handler isn't global and can't be called directly by code outside the Salesforce CPQ package.

Use the `read()` method only when it needs a simple unique ID as input. For example, you could use `read()` when querying for a quote from the database. Provide the quote's ID as the request and, and `read()` returns the QuoteModel object.

Use the `load()` method when you need more input information than a simple unique ID, but don't need to change anything in the database. For example, you could use `load()` if you wanted to load products for a given currency code and pricebook ID. The `load()` method passes the unique ID as the second parameter. It then passes the extra information as a serialized JSON string in the third parameter.

Use the `save()` method when you save a model to the database, such as when you save a quote. The `save()` method passes the model as a serialized JSON string in the second parameter.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

CPQ API Quickstart Guide

Review examples of integrating Salesforce CPQ API with your platform.

Anonymous Apex

This example reads a quote, adds a product, and saves the quote.

EDITIONS

Available in: Salesforce CPQ Summer '16 and later

```
/**
 * Note: this doesn't perform a calculation. Reference the calculate API to see how to
 * calculate a quote.
 */

//the Id of the quote
String quoteId = 'a0Wf100000J1vk1';

//the Id of the product to add to the quote
String productId = '01tj0000003P1SN';

//the Id of the pricebook for the quote and product being added
String pricebookId = '01sj0000003THhKAAW';

//the currency code
String currencyCode = 'USD';

//the JSON formatted String representing the quote model to add a product to
String quoteModel = SBQQ.ServiceRouter.read('SBQQ.QuoteAPI.QuoteReader', quoteId);
```

```
//the JSON formatted String representing the product to be added to the quote
String productModel = SBQQ.ServiceRouter.load('SBQQ.ProductAPI.ProductLoader', productId,
  '{"pricebookId" : "' + pricebookId + '", "currencyCode" : "' + currencyCode + '"}');

//the JSON formatted String representing the quote with the product added to it
String updatedQuoteModel = SBQQ.ServiceRouter.load('SBQQ.QuoteAPI.QuoteProductAdder', null,
  '{"quote" : ' + quoteModel + ', "products" : [' + productModel + '], "ignoreCalculate" :
  true}');

//the JSON formatted String representing the saved quote
String savedQuoteModel = SBQQ.ServiceRouter.save('SBQQ.QuoteAPI.QuoteSaver',
  updatedQuoteModel);
```

NODEJS

This example reads a quote, adds a product, calculates the quote, and saves it.

```
// 3rd party library to call into a Salesforce org
var jsforce = require('jsforce');

// login credentials to the org
var loginUrl = 'https://login.salesforce.com'; // if sandbox use https://test.salesforce.com
var username = 'admin@user.salesforce.com';
var password = 'password';

// quote and product details
var quoteId = 'a0bA000000FW2o4';
var productId = '01tA00000005NsiA';
var pricebookId = '01tA00000005NsiA';
var currencyCode = 'USD';

// log in to the org with with a valid username and password using jsforce
var conn = new jsforce.Connection({loginUrl: loginUrl});
conn.login(username, password).then(function () {
  return Promise.resolve(conn);
})

.then(function (conn) {
  // read both the quote and the product to add
  var quotePromise =
  conn.apex.get('/SBQQ/ServiceRouter?reader=SBQQ.QuoteAPI.QuoteReader&uid=' + quoteId);

  var productPromise =
  conn.apex.patch('/SBQQ/ServiceRouter?loader=SBQQ.ProductAPI.ProductLoader&uid=' + productId,
  {
    context: JSON.stringify({
      pricebookId: pricebookId,
      currencyCode: currencyCode
    })
  });
  return Promise.all([quotePromise, productPromise]);
})
```

```

.then(function (models) {
    // add the retrieved product to the retrieved quote in the first group
    var quoteModel = JSON.parse(models[0]);
    var productModel = JSON.parse(models[1]);
    return conn.apex.patch('/SBQQ/ServiceRouter?loader=SBQQ.QuoteAPI.QuoteProductAdder',
    {
        context: JSON.stringify({
            quote: quoteModel,
            products: [productModel],
            groupKey: 0,
            ignoreCalculate: true
        })
    });
})
.then(function (quoteWithProduct) {
    var quote = JSON.parse(quoteWithProduct);
    // calculate the quote with the added product
    return conn.apex.patch('/SBQQ/ServiceRouter?loader=SBQQ.QuoteAPI.QuoteCalculator', {
        context: JSON.stringify({
            quote: quote
        })
    });
})
.then(function (calculatedQuote) {
    var quote = JSON.parse(calculatedQuote);
    // save the calculated quote
    return conn.apex.post('/SBQQ/ServiceRouter', {
        saver: 'SBQQ.QuoteAPI.QuoteSaver',
        model: JSON.stringify(quote)
    });
})
.then(function (savedQuoted) {
    // log the quote has been saved
    console.log('Quote finished processing', savedQuoted);
});

```

Disable CPQ Triggers in Apex

You can manually disable Salesforce CPQ application logic when you update records. This process is helpful when you're updating your own custom field. It's also helpful when you update a record several times in one transaction and want triggers to run only on the last iteration.

To ensure that your org doesn't run into operational issues when disabling triggers, test thoroughly. Use the global Apex API `TriggerControl`—the same mechanism that Salesforce CPQ uses internally—to manually disable CPQ triggers.



Note: `TriggerControl` disables only CPQ triggers. Other triggers or Salesforce logic, or your own triggers, validations, workflow rules, or processes, are unaffected.

EDITIONS

Available in: Salesforce CPQ
Summer '16 and later

Methods

global static void disable();

Disables built-in CPQ triggers within the current transaction.

global static void enable();

Enables built-in CPQ triggers if they had previously been disabled.

global static Boolean isEnabled()

Returns true if CPQ triggers are currently enabled. Otherwise, returns false.

Example:

```
SBQQ.TriggerControl.disable();
try {
    // Do something simple and interesting without
    // running triggers.
    quote.MyStatus__c = 'Red';
    update quote;
} finally {
    SBQQ.TriggerControl.enable();
}
```

Example:

```
if (SBQQ.TriggerControl.isEnabled()) {
    // Only run our logic if CPQ trigger logic is also enabled.
    myRelatedObject.Quote__c = quote.Id;
    insert myRelatedObject;
}
```


INDEX

A

Add products [19, 21, 26](#)
Amend contracts [28, 31, 33](#)

C

Calculate API [14](#)
Configuration attribute model [6](#)
Configuration model [7, 9–10](#)
contracts [28](#)
CPQ [1–2, 4, 6–7, 9–14, 19, 21, 24, 26, 28, 31, 33, 35](#)
CPQ API [1–2, 4, 6–7, 9–14, 24, 28, 31, 33, 35](#)
CPQ API quickstart guide [1–2, 4, 6–7, 9–11, 33, 35](#)
CPQ contracts [28](#)

D

Document API [11](#)

F

Feature model [6](#)

O

Option model [4](#)

P

Pricing API [12](#)
Product API [24](#)
Product model [9](#)

Q

Quote API [13–14](#)
QuoteProposal model [11](#)

S

Save API [13](#)

U

User Interface API quickstart [12, 18–19, 21, 26, 28, 31, 33](#)