



Avalara AvaTax Mapper

Guide for Extending Avalara AvaTax for Salesforce

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AvaTax Mapper

AvaTax Mapper is a framework that helps you to create **Address Validation** and **Tax Calculation** request based upon the XML configuration supplied. It includes a large library for **Analyzing the XML** and **Formulating the service request** models. It supports a variety of Salesforce-based products like CPQ and Billing.

Architecture

- [XML Analyzer](#)
- [Tax Calculator](#)
- [Address Validator](#)
- [Hook Manager](#)

Architecture

XML Analyzer

XML analyzer provides a platform for reading XML configuration file, which extracts a meaningful data and converts it into a map/dictionary of an understandable data type. This map/dictionary plays an important role while creating service request objects required by AvaTax services.

Tax Calculator

This class handles all the complexities of creating tax calculation request from an XML file. It also provides out of the box Hooks, which can be extended by the customers to override the default flow of the AvaTax Mapper. So that, it can fit into their business process if required.

The following extension methods are provided for tax calculation:

1. Before Tax Calculation
2. Tax Validation
3. Override Request Line
4. Before Update
5. After Update

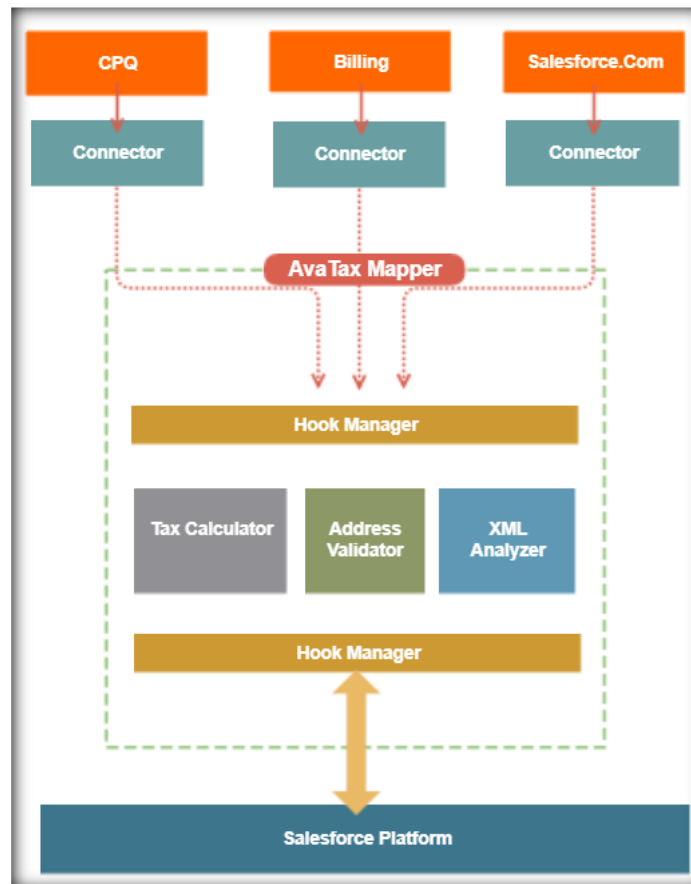
Address Validator

This class handles all the complexities of creating address validation request and displaying the validated address on the separate page. It also provides an option to update the original address if the user wants to update the address.

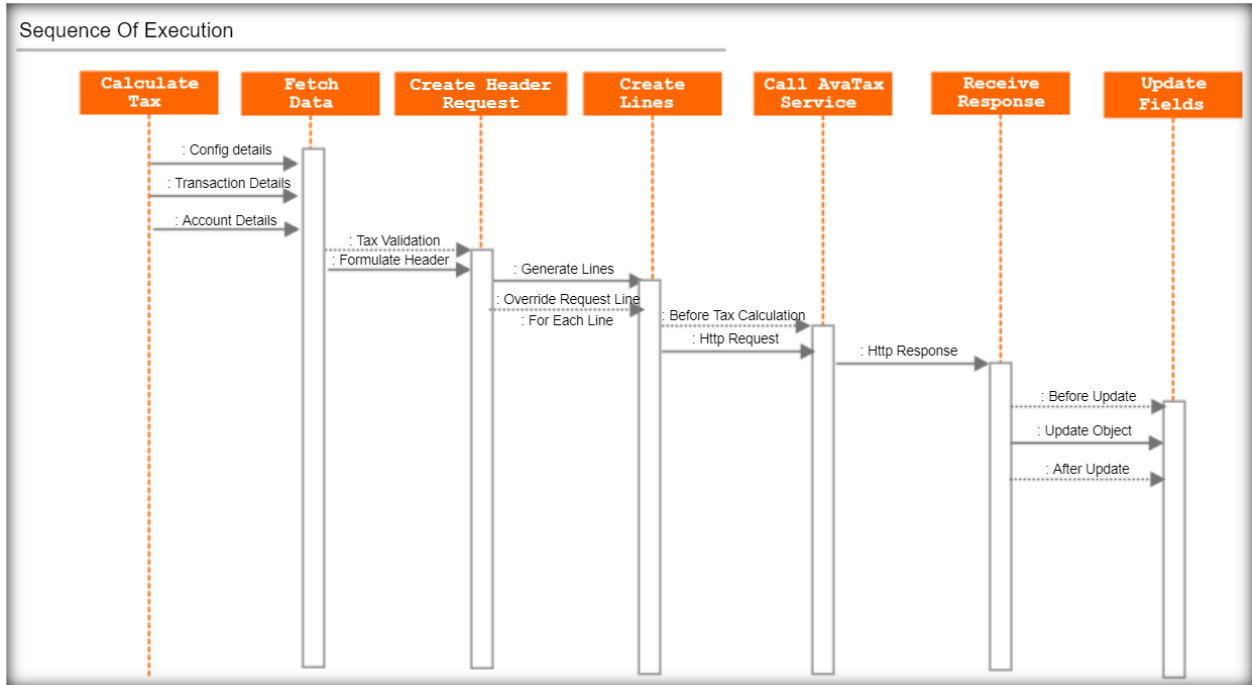
Hook Manager

This manager is the core of providing extension, so that the customer/SI partners can modify the web request that is going to the AvaTax engine. The administrator or developer needs to create a class, which implements a particular interface for accomplishing certain modification in the system to handle custom business requirement. Then the user can provide the class name in XML config file. The hook manager takes into consideration about the extensions that have been provided in XML config.

The following sequence diagram gives you more information on the hook manager and the extensions:



To elaborate more about the hook manager and the extensions which we provide let's consider following sequence diagram.



AVATAX Mapper XML Configuration Guideline

AVATAX Mapper XML configuration file help to specify “Request | Response” parameter essential for consuming AvaTax service. The Mapper XML is part of the Base AvaTax package. The XML formulate the request and upgrade the response for Tax Calculation, Address Validation, and Document Commits.

This topic describes the main configuration settings that you can make in the AVATAX XML.config file.

Configuration File Section

The XML configuration file is divided in various node that are specified as:

XML Scaffold

```

<avatax>
<FeatureNode1>
  <ObjectNode1>
    <ObjectComponent1>
      <Hook></Hook>
      <QueryNode></QueryNode>
      <ParameterNode> </ParameterNode>
      <MappingNode></MappingNode>
      <UpdateMappingNode> </UpdateMappingNode>
    </ObjectComponent1>
  </ObjectNode1>
  . . .
  <ObjectNode n> </ObjectNode n>
</FeatureNode1>
. . .
<FeatureNode n></FeatureNode n>
</avatax>

```

Beginning Node

This node specifies the beginning of the AVATAX XML Mapper file. For example, **<avatax> </avatax>**.

Feature Node

This node specifies the beginning of the function name that needs to be covered under the XML. Based on the value and purpose, the AVATAX Salesforce Core package decides, which AVATAX API need to call. For example, **<addressvalidation> </addressvalidation>**.

Object Node

This node specifies Salesforce Object for Feature Node. For example, **<Account></Account>**.

Object Component

- This node specifies the Object Component that needs to be considered for the Feature node. For example, Billing Address From Account to be considered for Address Validation.
- The account contains two Addresses "Billing and Shipping." In this example, you are considering Billing Address.

Feature Node	Object Node	Object Component
Address Validation	Account	Billing

The object component contains below nodes:

1. Query Node
2. Parameter Node
3. Mapping Node
4. Update Mapping Node

Query Node

- a. This node specifies the SOQL that need to query for fetching the attribute of the Object Component specified in the Object Component Node.
- b. This node specifies the attribute that needs to be queried and can be further specified for the Mapping Node.

```
<query>
  select BillingStreet, BillingCity,BillingState,BillingCountry,Billingpostalcode
  from Account where id = '{AccountId}'
</query>
```

Parameter Node

This node specifies the attribute that needs to be used for the WHERE clause in SOQL specified in Query Node.

```
<query>
  select BillingStreet, BillingCity,BillingState,BillingCountry,Billingpostalcode
  from Account where id = '{AccountId}'
</query>
<parameters>
  <AccountId>Id</AccountId>
</parameters>
```

Note: The id - `<AccountId>Id</AccountId>` here is the record id of the object.

Mapping Node

- a. This node specifies the Request parameters required for Request creation for Feature Node.
- b. Each parameter in the node is a Feature Request Parameter.

```
<Mapping>
  <line1>BillingStreet</line1>
  <city>BillingCity</city>
  <region> BillingState </region>
  <country>BillingCountry</country>
  <postalcode> Billingpostalcode </postalcode>
</Mapping>
```

Note: The field mark in **Red** are **AvaTax** Request Model field, and field mark **Teal** are **Salesforce** standard field.

Update Mapping Node

This node specifies the Response field, where Service Response needs to be shown. For example, Address Validation Feature.

```
<UpdateMapping>
    <line1>BillingStreet</line1>
    <city>BillingCity</city>
    <region> BillingState </region>
    <country>BillingCountry</country>
    <postalcode> Billingpostalcode </postalcode>
</UpdateMapping>
```

Note: The field mark in **Red** are **AvaTax** Request Model field, and field mark **Teal** are **Salesforce** standard field.

Sample Tax Calculation XML

The XML hierarchy remains the same till the Object Node, and the change from Object Component Node are:

Let's now consider Tax Calculation XML

Header Node

This node is used for specifying the Header of the Tax Calculation request.

The header node contains below node:

Query Node

This node specifies the SOQL that need to query for fetching the attribute of the Object Component specified in the Object Component Node. Also, specifies the attribute to be queried and can be further specified for the Mapping Node.

```
<query>
    select Id, AccountId,SalesTax__c,CloseDate,LeadSource from Opportunity where id
    = '{OpportunityId}'
</query>
```

Parameter Node

This node specifies the attribute to be used for the WHERE clause in SOQL specified in Query Node.

```
<query>
  select Id, AccountId,SalesTax__c,CloseDate,LeadSource from Opportunity where
  id = '{OpportunityId}'
</query>
<parameters>
  <OpportunityId>Id</OpportunityId>
</parameters>
```

Note: The id - < OpportunityId >Id</ OpportunityId > here is the record id of the object.

Mapping Node

This node specifies the Request parameters essential for Request creation for Feature Node. Also, each parameter in the node is a Feature Request Parameter.

```
<Mapping>
  <code>Id</code>
  <customerCode>AccountId</customerCode>
  <description>LeadSource</description>
</Mapping>
```

Note: The field mark in **Red** are **AvaTax** Request Model field, and field mark **Teal** are **Salesforce** standard field.

Update Mapping Node

This node specifies the Response field, and where Service Response needs to be shown. For example, Address Validation Feature.

```
<UpdateMapping>
  < SalesTax__c >totalTax</line1>
</UpdateMapping>
```

Note: The field mark in **Red** are **AvaTax** Request Model field, and field mark **Teal** are **Salesforce** standard field.

Line Node

This node is used for specifying the Line of the Tax Calculation request.

The line node contains the below nodes:

Query Node

- a. This node specifies the SOQL that need to be queried for fetching the attribute of the Object Component specified in the Object Component Node.
- b. This node specifies attribute to be queried and can be further specified for the Mapping Node.

```
<query>
select Id, Pricebookentry.product2.ProductCode, Description, SalesTax__c,
Quantity, TotalPrice, UnitPrice from OpportunityLineItem where OpportunityId =
'{OpportunityId}'
</query>
```

Parameter Node

This node specifies the attribute to be use for the WHERE clause in SOQL specified in Query Node.

```
<query>
    select Id, Pricebookentry.product2.ProductCode, Description, SalesTax__c,
    Quantity, TotalPrice, UnitPrice from OpportunityLineItem where OpportunityId
    = '{OpportunityId}'
</query>
<parameters>
    <OpportunityLineId>Id</ OpportunityLineId >
</parameters>
```

Note: The id - < OpportunityLineId >Id</ OpportunityLineId > here is the record id of the object.

Mapping Node

- a. This node specifies the Request parameters essential for Request creation for Feature Node.
- b. Each parameter in the node is a Feature Request Parameter.

```
<Mapping>
  <quantity> Quantity </code>
  <itemCode> Pricebookentry.product2.ProductCode </customerCode>
  <amount> TotalPrice </description>
</Mapping>
```

Note: The field mark in **Red** are **AvaTax** Request Model field, and field mark **Teal** are **Salesforce** standard field

Update Mapping Node

- a. This node specifies the Response field, and where Service Response needs to be shown. For example, Address Validation Feature.

```
<UpdateMapping>
  <SalesTax__c >totalTax</line1>
</UpdateMapping>
```

Note: The field mark in **Red** are **AvaTax** Request Model field, and field mark **Teal** are **Salesforce** standard field.

How to Use AvaTax Mapper?

Address Validation

Address Validation follows easy and convenient approach using AvaTax Mapper.

Consider you need to have Address Validation on Account Object, and then you need to follow these steps:

Steps

1. Create a Button on the Object where Tax Calculation needs to be done.
2. Select the Content Source as URL for the button.

Custom Button or Link Edit [Save] [Quick Save] [Preview] [Cancel]

Label:

Name: [i](#)

Description:

Display Type: Detail Page Link [View example](#)
 Detail Page Button [View example](#)
 List Button [View example](#)

Behavior: [View Behavior Options](#)

Content Source:

Select Field Type: Insert Field: Insert Operator:

3. In URL box enter the data
/apex/addressValidation?id={!Account.Id}&sType=CPQ
4. {!Account.id} specifies the Object id for Object where Address Validation need to be done.

AvaTax XML

```

<addressvalidation>
  <Account>
    <Billing>
      <query>select BillingStreet,
BillingCity,BillingState,BillingCountry,Billingpostalcode from Account where
id = '{AccountId}'</query>
      <parameters>
        <AccountId>Id</AccountId>
      </parameters>
      <Mapping>
        <line1>BillingStreet</line1>
        <city>BillingCity</city>
        <region>BillingState</region>
        <country>BillingCountry</country>
        <postalcode>Billingpostalcode</postalcode>
      </Mapping>
      <UpdateMapping>
        <line1>BillingStreet</line1>
        <city>BillingCity</city>
        <region>BillingState</region>
        <country>BillingCountry</country>
        <postalcode>Billingpostalcode</postalcode>
      </UpdateMapping>
    </Billing>
  </Account>
</addressvalidation>

```

Common Configuration

```

global class Configuration extends ConfigurationBase{

  public Configuration()
  {
    environment = AvaTaxEnvironment.Sandbox;
    companyCode = 'AvaTax Company Code';
    username = 'AvaTax Username';
    password = 'AvaTax Password';
    isTaxCalculationEnabled = true;
  }
}

```

Tax Calculation

Tax Calculation is easy and convenient using AvaTax Mapper.

Steps

1. Create a Visualforce page and add the Apex class as Controller Extension as shown
2. One must create a Configuration file for Config fetching, and the usage is depicted in Class TaxCalculator.

Visualforce Page

```
<apex:page standardController="Account" extensions=" TaxCalculator" action="
taxCalculator">
</apex:page>
```

Apex Class

```
Public class TaxCalculator
{
Public void taxCalculator() {
    Configuration cm = new Configuration();
    ConfigurationBase config = cm.getConfig();
    Map<String,String> oppParam = new Map<String,String>();

    TaxCalculationInput taxCalcInput = new TaxCalculationInput();
    taxCalcInput.recordId = opp.id;
    taxCalcInput.controller =
opp.id.getSObjectType().getDescribe().getName().toLowerCase();
    taxCalcInput.optionalParams = oppParam;
    taxCalc.calculateTax(taxCalcInput);
}
}
```

3. Create a button on an Object and the Content Source for the button > Visualforce Page
4. Add the Visualforce Page create in step 2 and create the button.
5. For the scope of this example, we have created a field "SalesTax__c" on Opportunity and Opportunity product to show the response from the tax service.

Sample XML

```
<Opportunity>
    <query>select Id,
AccountId,SalesTax__c,CloseDate,LeadSource from Opportunity where id =
'{OpportunityId}'</query>
    <parameters>
        <OpportunityId>Id</OpportunityId>
    </parameters>
    <Mapping>
        <code>Id</code>
        <customerCode>AccountId</customerCode>
        <description>LeadSource</description>
    </Mapping>
    <UpdateMapping>
        <SalesTax__c>totalTax</SalesTax__c>
    </UpdateMapping>
</Opportunity>
```

AvaTax XML

```

<taxcalculation>
  <Opportunity>
    <hooks>
      <overriderequestline></overriderequestline>
      <beforetaxcalculation></beforetaxcalculation>
      <beforeupdate></beforeupdate>
      <afterupdate></afterupdate>
    </hooks>
    <Header>
      <Queries>
        <Opportunity>
          <query>select Id,
AccountId,SalesTax__c,CloseDate,LeadSource from Opportunity where id =
'"{OpportunityId}"'</query>
          <parameters>
            <OpportunityId>Id</OpportunityId>
          </parameters>
          <Mapping>
            <code>Id</code>
            <customerCode>AccountId</customerCode>
            <description>LeadSource</description>
          </Mapping>
          <UpdateMapping>
            <SalesTax__c>totalTax</SalesTax__c>
          </UpdateMapping>
        </Opportunity>
        <Account>
          <query>select Id, AccountNumber, Name, ShippingStreet,
ShippingCity, ShippingState, Shippingpostalcode, ShippingCountry,
BillingStreet, BillingCity, BillingState,
Billingpostalcode, BillingCountry from Account where Id =
'"{AccountId}"'</query>
          <parameters>
            <AccountId>Opportunity.AccountId</AccountId>
          </parameters>
          <Mapping>
            <exemptNo>AccountNumber</exemptNo>
          </Mapping>
        </Account>
      </Queries>
      <addresses.shipTo.line1>ShippingStreet</addresses.shipTo.line1>
      <addresses.shipTo.line2 />
      <addresses.shipTo.line3 />
      <addresses.shipTo.city>ShippingCity</addresses.shipTo.city>
      <addresses.shipTo.region>ShippingState</addresses.shipTo.region>
      <addresses.shipTo.country>ShippingCountry</addresses.shipTo.country>
      <addresses.shipTo.postalcode>Shippingpostalcode</addresses.shipTo.postalcode
>
      <addresses.shipTo.latitude></addresses.shipTo.latitude>
    </Header>
  </Opportunity>
</taxcalculation>

```

```

<addresses.shipTo.longitude></addresses.shipTo.longitude>

<addresses.shipFrom.line1>BillingStreet</addresses.shipFrom.line1>
    <addresses.shipFrom.line2 />
    <addresses.shipFrom.line3 />

<addresses.shipFrom.city>BillingCity</addresses.shipFrom.city>

<addresses.shipFrom.region>BillingState</addresses.shipFrom.region>

<addresses.shipFrom.country>BillingCountry</addresses.shipFrom.country>

<addresses.shipFrom.postalcode>Billingpostalcode</addresses.shipFrom.postalcode>

<addresses.shipFrom.latitude></addresses.shipFrom.latitude>

<addresses.shipFrom.longitude></addresses.shipFrom.longitude>
    </Mapping>
    <UpdateMapping>
        <SalesTax__c>totalTax</SalesTax__c>
    </UpdateMapping>
</Account>
</Queries>
</Header>
<Line>
    <Queries>
        <OpportunityLineItem>
            <query>select Id, Pricebookentry.product2.ProductCode,
Description, SalesTax__c,
            Quantity, TotalPrice, UnitPrice from
OpportunityLineItem where OpportunityId = '{OpportunityId}'</query>
            <parameters>
                <OpportunityId>Opportunity.Id</OpportunityId>
            </parameters>
            <Mapping>
                <description>Description</description>
                <quantity>Quantity</quantity>
        </OpportunityLineItem>
    </Queries>
    <itemCode>Pricebookentry.product2.ProductCode</itemCode>
        <amount>TotalPrice</amount>
    </Mapping>
    <UpdateMapping>
        <SalesTax__c>tax</SalesTax__c>
    </UpdateMapping>
</OpportunityLineItem>
</Queries>
</Line>
</Opportunity>
</taxcalculation>

```

Post-Tax Calculation

Post-Tax Calculation is easy and convenient using AvaTax Mapper.

Steps

1. Create a Visualforce page and add the Apex class as Controller Extension as shown
2. One must create a Configuration file for Config fetching, and the usage is depicted in Class TaxCalculator.

Visualforce Page

```
<apex:page standardController="Account" extensions=" PostTaxCalculator" action="taxCalculator">
</apex:page>
```

Apex Class

```
Public class PostTaxCalculator
{
Public void taxCalculator() {
    Configuration cm = new Configuration();
    ConfigurationBase config = cm.getConfig();
    Map<String,String> oppParam = new Map<String,String>();

    PostTaxCalculator ptc = new PostTaxCalculator('CPQ',config);
    PostTaxCalculationInput postTaxCalcInput = new PostTaxCalculationInput();
    postTaxCalcInput.companyCode = 'DEFAULT';
    postTaxCalcInput.transactionCode = String.valueOf(opp.id);
    postTaxCalcInput.commitFlag = true;
    postTaxCalcInput.docType = DocumentType.SalesInvoice;
    ptc.postTax(postTaxCalcInput);
    }
}
```

3. Create a button on an Object and the Content Source for the button > Visualforce Page
4. Add the Visualforce Page create in step 2 and create the button.

AvaTax XML

```

<posttaxcalculation>
  <Opportunity>
    <hooks>
    </hooks>
    <Queries>
    <Opportunity>
      <query>select Id, AccountId,SalesTax__c,CloseDate,LeadSource
from Opportunity where id = '{OpportunityId}'</query>
      <parameters>
        <OpportunityId>Id</OpportunityId>
      </parameters>
      <Mapping>

        <transactionCode>Id </transactionCode>

    </Mapping>
  </Queries>
</Opportunity>
</posttaxcalculation>

```

Cancel Tax Calculation

Cancel Tax Calculation is easy and convenient using AvaTax Mapper.

Steps

1. Create a Visualforce page and add the Apex class as Controller Extension as shown
2. One must create a Configuration file for Config fetching, and the usage is depicted in Class TaxCalculator.

Visualforce Page

```

<apex:page standardController="Account" extensions=" CancelTaxCalculator" action="
taxCalculator">
</apex:page>

```

Apex Class

```
Public class CancelTaxCalculator
{
Public void taxCalculator() {
    Configuration cm = new Configuration();
    ConfigurationBase config = cm.getConfig();
    Map<String,String> oppParam = new Map<String,String>();

    CancelTaxCalculationInput cancelTaxCalcInput = new CancelTaxCalculationInput();
    cancelTaxCalcInput.recordId = opp.id;
    cancelTaxCalcInput.controller =
opp.id.getSObjectType().getDescribe().getName().toLowerCase();
    cancelTaxCalcInput.optionalParams = oppParam;
    cancelTaxCalcInput.companyCode = 'DEFAULT';
    cancelTaxCalcInput.transactionCode = String.valueOf(opp.id);
    cancelTaxCalcInput.code = VoidReasonCode.DocVoided;
    cancelTaxCalcInput.docType = DocumentType.SalesInvoice;
    ctc.cancelTax(cancelTaxCalcInput);
    }
}
```

3. Create a button on an Object and the Content Source for the button > Visualforce Page
4. Add the Visualforce Page create in step 2 and create the button.

Apex Class

```

    <canceltaxcalculation>
      <Opportunity>
        <hooks>
        </hooks>
        <Queries>
        <Opportunity>
          <query>select Id, AccountId,SalesTax__c,CloseDate,LeadSource
from Opportunity where id = '{OpportunityId}'</query>
          <parameters>
            <OpportunityId>Id</OpportunityId>
          </parameters>
          <Mapping>

            <transactionCode>Id </transactionCode>

        </Mapping>
        </Queries>
      </Opportunity>
    </canceltaxcalculation>

```

Hooks Manager

This manager is the core of providing extension so that customer/SI partners can modify the web request that is going to AvaTax engine.

Hook manager takes into consideration about the extensions that have been provided in XML config.

Hooks available for tax calculation are below:

AvaTax XML

```

<taxcalculation>
  <Order>
    <hooks>
      <overriderequestline></overriderequestline>
      <beforetaxcalculation></beforetaxcalculation>
      <beforeupdate></beforeupdate>
      <afterupdate></afterupdate>
    </hooks>
  </Order>
</taxCalculation>

```

Example for Hooks Definition

BeforeTaxCalculationExtender:

```
global class BeforeTaxCalculationExtender implements IBeforeTaxCalculation {
    global void hookExtention(CreateTransactionModel model,
        Map<String,List<SObject>> headerResults) {
        model.code = 'overrideDocCode';
    }
}
```

Now to provide the extension in XML file you need to update XML as follows:

```
<taxcalculation>
    <Order>
        <hooks>
            <overriderequestline></overriderequestline>
            <beforetaxcalculation>BeforeTaxCalculationExtender
        </beforetaxcalculation>
            <beforeupdate></beforeupdate>
            <afterupdate></afterupdate>
        </hooks>
    </Order>
</taxCalculation>
```


AvaTaxClient

Description	Initializes Rest client with supplied parameters.
Returns	A new object of AvaTaxClient class.
Parameters	
AppName	Name of calling application. Mostly it is ERP/Salesforce Package Name which is willing to call AvaTax Services.
AppVersion	A version of the calling application.
MachineName	Name of the machine from which this call is being made. In case of Salesforce, it can be the hostname.
Environment	Select whether calls to be made to AvaTax Sandbox or Production environment.

Methods

WithSecurity

Description	Initializes AvaTaxClient class with security information. Note if you want to send username and password for authentication then use this method.
Returns	An instance of the AvaTaxClient class.
Parameters	
Username	Username provided by Avalara.
Password	Password provided by Avalara.

WithSecurity

Description	Initializes AvaTaxClient class with security information. Note if you want to send Account Id and License Key for authentication then use this method.
Returns	An instance of the AvaTaxClient class.
Parameters	
AccountId	10-digit Account Id provided by Avalara.
LicenseKey	16-character License Key provided by Avalara.

resolveAddressPost

Description	Retrieve geolocation information for a specified address.
Returns	If the address can be resolved, then this API provides the latitude and longitude of the resolved location. The value 'resolutionQuality' can be used to identify how closely this address can be located. If the address cannot be located, then use the 'messages' structure to learn more about problems with this address.
Parameters	
Model	Instance of AddressValidationInfo.

CreateTransaction

Description	Records a new transaction in AvaTax. A transaction represents a unique potentially taxable action that your company has recorded, and transactions include actions like sales, purchases, inventory transfer, and returns (also called refunds).
Returns	TransactionModel as transaction object.
Parameters	
Model	Instance of CreateTransactionModel.
Include	Specifies objects to include in the response after transaction is created <ul style="list-style-type: none"> • Lines • Details (implies lines) • Summary (implies details) • Addresses • SummaryOnly (omit lines and details - reduces API response size) • LinesOnly (omit details - reduces API response size) • ForceTimeout - Simulates a timeout. This adds a 30 second delay and error to your API call. This can be used to test your code to ensure it can respond correctly in the case of a dropped connection.

CommitTransaction

Description	<p>Marks a transaction by changing its status to Committed.</p> <p>Transactions that are committed are available to be reported to a tax authority by Avalara Managed Returns.</p> <p>A transaction represents a unique potentially taxable action that your company has recorded, and transactions include actions like sales, purchases, inventory transfer, and returns (also called refunds).</p> <p>If you have more than one document with the same code, specify the documentType parameter to choose between them.</p> <p>Any changes made to a committed transaction will generate a transaction history.</p>
Returns	TransactionModel as transaction object.
Parameters	
CompanyCode	The company code of the company that recorded this transaction.
TransactionCode	The transaction code to commit.
Model	Instance of CommitTransactionModel.
Document Type	(Optional): The document type of the transaction to void. If not provided, the default is SalesInvoice.

VoidTransaction

Description	<p> voids the current transaction uniquely identified by this URL.</p> <p> A transaction represents a unique potentially taxable action that your company has recorded, and transactions include actions like sales, purchases, inventory transfer, and returns (also called refunds).</p> <p> When you void a transaction, that transaction's status is recorded as DocVoided.</p> <p> If you have more than one document with the same code, specify the documentType parameter to choose between them.</p> <p> Transactions that have been previously reported to a tax authority by Avalara Managed Returns are no longer available to be voided.</p>
Returns	TransactionModel as transaction object.
Parameters	
CompanyCode	The company code of the company that recorded this transaction.
TransactionCode	The transaction code to commit.
Model	Instance of VoidTransactionModel.
Document Type	(Optional): The document type of the transaction to void. If not provided, the default is SalesInvoice.

Models

AddressResolutionModel

Description	Validated Address Resolution.
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Properties

The following are the address resolution model properties and their information:

Properties	Description	Data Type
Address	The original address.	AddressInfo
Coordinates	The geospatial coordinates of this address.	CoordinateInfo
Messages	List of informational and warning messages regarding this address.	AvaTaxMessage
resolutionQuality	The resolution quality of the geospatial coordinates = ['NotCoded', 'External', 'CountryCentroid', 'RegionCentroid', 'PartialCentroid', 'PostalCentroidGood', 'PostalCentroidBetter', 'PostalCentroidBest', 'Intersection', 'Interpolated', 'Rooftop', 'Constant'].	resolutionQuality
taxAuthorities	List of tax authorities associated with this address.	TaxAuthorityInfo
validatedAddresses	The validated address or addresses.	ValidatedAddressInfo

ValidatedAddressInfo

Description	The validated address.
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Properties

The following are the validate address info model properties and their information:

Properties	Description	Data Type
addressType	<ul style="list-style-type: none"> • Firm or company address • General Delivery address • High-rise or business complex • PO Box address • Rural route address 	String
city	City component of the address.	String
country	Name or ISO 3166 code identifying the country.	String
latitude	Geospatial latitude measurement, in Decimal Degrees, floating point format.	Double
line1	The first line of the street address.	String
line2	The second line of the street address.	String
line3	The third line of the street address.	String
longitude	Geospatial longitude measurement, in Decimal Degrees, floating point format.	Double
postalCode	Postal Code / Zip Code component of the address.	String
region	Name or ISO 3166 code identifying the region within the country.	String

AddressInfo

Description	Represents Address for validation or tax calculation.
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Properties

The following are the address info properties and their information:

Properties	Description	Data Type
city	City component of the address.	String
country	Name or ISO 3166 code identifying the country.	String
latitude	Geospatial latitude measurement, in Decimal Degrees, floating point format.	Double
line1	The first line of the street address.	String
line2	The second line of the street address.	String
line3	The third line of the street address.	String
longitude	Geospatial longitude measurement, in Decimal Degrees, floating point format.	Double
postalCode	Postal Code / Zip Code component of the address.	String
region	Name or ISO 3166 code identifying the region within the country.	String

CoordinateInfo

Description	Validated Address Resolution.
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Properties

The following are the coordinate info properties and their information:

Properties	Description	Data Type
latitude	Latitude	Double
longitude	Longitude	Double

AvaTaxMessage

Description	Informational and warning messages regarding the object.
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Properties

The following are the AvaTax message properties and their information:

Properties	Description	Data Type
details	Detailed information that explains what the summary provided.	String
refersTo	Information about what object in your request this message refers to.	String
severity	A category that indicates how severely this message affects the results.	String
source	The name of the code or service that generated this message.	String
summary	A summary of what this message tells us.	String

TaxAuthorityInfo

Description	informational and warning messages regarding the address.
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Properties

The following are the tax authority info properties and their information:

Properties	Description	Data Type
avalaraId	A unique ID number assigned by Avalara to this tax authority.	String
jurisdictionName	The friendly jurisdiction name for this tax authority.	String
jurisdictionType	The type of jurisdiction referenced by this tax authority. ['Country', 'State', 'County', 'City', 'Special'].	JurisdictionType
signatureCode	An Avalara-assigned signature code for this tax authority.	String

TransactionModel

Description	Transaction Model.
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Properties

The following are the transaction model properties and their information:

Properties	Description	Data Type
addresses	A list of line items in this transaction.	TransactionAddressModel
adjustmentDescription	If this transaction has been reported to a tax authority, then this transaction is considered locked and may not be adjusted after reporting.	String
adjustmentReason	If this transaction was adjusted, then it indicates the unique ID number of the reason why the transaction was adjusted.	AdjustmentReason
batchCode	If this transaction was created as part of a batch, then this code indicates which batch.	String
businessIdentificationNo	VAT business identification number used for this transaction.	String
code	A unique customer-provided code is identifying this transaction.	String
companyId	The unique ID number of the company that recorded this transaction.	Long
country	If this transaction was adjusted, this indicates the version number of this transaction. Incremented each time the transaction is adjusted.	String

Properties	Description	Data Type
currencyCode	The three-character ISO 4217 currency code that was used for payment for this transaction.	String
customerUsageType	The customer usage type for this transaction. Customer usage types often affect exemption or taxability rules.	String
customerVendorCode	Customer Vendor Code.	String
description	Description of this transaction. Field permits unicode values.	String
destinationAddressId	The unique ID number of the destination address for this transaction.	Long
email	The email address associated with this transaction.	String
exchangeRate	If this transaction included foreign currency exchange, this is the exchange rate that was used.	Decimal
exchangeRateEffectiveDate	If this transaction included foreign currency exchange, this is the date as of which the exchange rate was calculated.	DateTime
exemptNo	If this transaction were exempt, this field would contain the word "Exempt."	String
history	If this transaction has been adjusted, this list contains all the previous versions of the document.	TransactionModel
id	The unique ID number of this transaction.	Long
isSellerImporterOfRecord	If true, this seller was considered the importer of record of a product shipped internationally.	Boolean
lines	A list of line items in this transaction.	TransactionLineModel

Properties	Description	Data Type
locationCode	(DEPRECATED) This field has been replaced by the reportingLocationCode field. To ensure consistency of field names; Please use reportingLocationCode instead.	String
locationTypes	A list of location types in this transaction.	TransactionLocationTypeModel
locked	The two or three-character ISO region code of the region for this transaction.	Boolean
messages	List of informational and warning messages regarding this API call. These messages are only relevant to the current API call.	AvaTaxMessage
modifiedDate	The date/time when this record was last modified.	DateTime
modifiedUserId	The user ID of the user who last modified this record.	Long
originAddressId	The unique ID number of the origin address for this transaction.	Long
parameters	Contains a list of extra parameters that were set when the transaction was created.	String
paymentDate	The date when payment was made on this transaction. By default, this should be the same as the date of the transaction.	DateTime
purchaseOrderNo	The customer-supplied purchase order number for this transaction.	String
reconciled	If this transaction has been reconciled against the company's ledger, this value is set to true.	Boolean

Properties	Description	Data Type
referenceCode	A user-defined reference code for this transaction.	String
region	The two-character ISO 3166 code of the country for this transaction.	String
reportingLocationCode	If this transaction was made from a specific reporting location, this is the code string of the location.	String
salespersonCode	The salesperson who provided this transaction. Not required.	String
softwareVersion	The software version used to calculate this transaction.	String
status	It shows the status of the transaction.	DocumentStatus
summary	It shows the tax summary of the transaction.	TransactionSummary
taxDate	Tax date for this transaction.	DateTime
taxOverrideAmount	If a tax override was applied to this transaction, then it indicates the amount of tax that was requested by the customer.	Decimal
taxOverrideReason	If a tax override was applied to this transaction, indicates the reason for the tax override.	String
taxOverrideType	The total amount of this transaction.	TaxOverrideTypeId
totalAmount	The total amount of this transaction.	Decimal
totalExempt	The amount of this transaction that was exempt.	Decimal
totalTax	The total tax calculated for all lines in this transaction.	Decimal

Properties	Description	Data Type
totalTaxable	The portion of the total amount of this transaction that was taxable.	Decimal
totalTaxCalculated	If a tax override was applied to this transaction, indicates the amount of tax Avalara calculated for the transaction.	Decimal
transactionDate	The date on which this transaction occurred.	DateTime
type	The type of the transaction. For Returns customers, a transaction type of "Invoice" will be reported to the tax authorities.	DocumentType
version	The software version used to calculate this transaction.	Long

TransactionLocationTypeModel

Description	Transaction Location Type Model.
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Properties

The following are the transaction location type model properties and their information:

Properties	Description	Data Type
documentAddressId	Address ID for the transaction.	Long
documentId	Transaction ID.	Long
documentLocationTypeId	Location type ID for this location type in transaction.	Long
locationTypeCode	Location type code.	String

TransactionSummary

Description	Transaction Summary.
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Properties

The following are the transaction summary properties and their information:

Properties	Description	Data Type
country	Two-character ISO-3166 country code.	String
exemption	The amount of the transaction that was exempt.	Decimal
jurisCode	Jurisdiction Code for the taxing jurisdiction.	String
jurisName	The name of the jurisdiction that collects this tax.	String
jurisType	The type of jurisdiction that collects this tax.	JurisdictionType
nonTaxable	The amount of the transaction that was non-taxable.	Decimal
rate	Tax Rate - The rate of taxation, as a fraction of the amount.	Decimal
rateType	(DEPRECATED) Indicates the tax rate type. Please use rateTypeCode instead.	RateType
rateTypeCode	Indicates the code of the rate type. Use <code>`/api/v2/definitions/ratetypes`</code> for a full list of rate type codes.	String
region	Two or three-character ISO region, state or province code, if applicable.	String
stateAssignedNo	The state assigned a number of the jurisdiction that collects this tax.	String
tax	Tax amount - The calculated tax (Base * Rate).	Decimal
taxable	Tax Base - The adjusted taxable amount.	Decimal
taxAuthorityType	The unique ID of the Tax Authority Type that collects this tax.	Integer

Properties	Description	Data Type
taxCalculated	Tax Calculated by Avalara AvaTax. This may be overridden by a TaxOverride.TaxAmount.	Decimal
taxGroup	Group code when special grouping is enabled.	String
taxName	The name of the tax.	String
taxType	The tax type of this tax.	TaxType

TransactionAddressModel

Description	Transaction Address Model.
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Properties

The following are the transaction address model properties and their information:

Properties	Description	Data Type
boundaryLevel	The boundary level at which this address was validated.	BoundaryLevel
city	The city for the address.	String
country	The country for the address.	String
id	The unique ID number of this address.	Long
latitude	Latitude for this address (CALC - 13394).	String
line1	The first line of the street address.	String
line2	The second line of the street address.	String
line3	The third line of the street address.	String
longitude	Longitude for this address (CALC - 13394).	String
postalcode	Postal Code / Zip Code component of the address.	String
region	The region, state, or province for the address.	String
taxRegionId	The unique ID number of the tax region for this address.	Long
transactionId	The unique ID number of the document to which this address belongs.	Long

TransactionLineModel

Description	Transaction Line Model.
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Properties

The following are the transaction line model properties and their information:

Properties	Description	Data Type
boundaryOverrideId	The unique ID number of the boundary override applied to this line item.	Long
businessIdentificationNo	VAT business identification number used for this transaction.	String
certificateId	The CertCapture Certificate ID.	String
customerUsageType	The customer usage type for this line item. Usage type often affects taxability rules.	String
description	A description of the item or service represented by this line.	String
destinationAddressId	The unique ID number of the destination address where this line was delivered or sold.	Long
details	TransactionLineDetailModel[] Optional: A list of location types for this line item. To fetch this list, add the query string "\$include=LineLocationTypes" to your URL.	TransactionLineDetailModel
discountAmount	The amount of discount that was applied to this line item.	Decimal
discountTypeId	The type of discount, if any, that was applied to this line item.	Long
exemptAmount	The amount of this line item that was exempt.	Decimal
exemptCertId	The unique ID number of the exemption certificate that applied to this line item.	Long

Properties	Description	Data Type
exemptNo	If this line item was exempt, this string contains the word `Exempt.`	String
id	The unique ID number of this transaction line item.	Long
isItemTaxable	True if this item is taxable.	Boolean
isSSTP	True if this item is a Streamlined Sales Tax line item.	Boolean
itemCode	The code string of the item represented by this line item.	String
lineAmount	The total amount of the transaction, including both taxable and exempt.	Decimal
lineLocationTypes	TransactionLineLocationTypeModel[] Optional: A list of location types for this line item.	TransactionLineDetailModel
lineNumber	The line number or code indicating the line on this invoice or receipt or document.	String
originAddressId	The unique ID number of the origin address where this line was delivered or sold.	Long
parameters	Contains a list of extra parameters that were set when the transaction was created.	String
quantity	The quantity of products sold on this line item.	Decimal
ref1	A user-defined reference identifier for this transaction line item.	String
ref2	A user-defined reference identifier for this transaction line item.	String
reportingDate	The date when this transaction should be reported.	DateTime
revAccount	The revenue account number for this line item.	String
sourcing	Indicates whether this line item was taxed according to the origin or destination.	Sourcing
tax	The amount of tax generated for this line item.	Decimal

Properties	Description	Data Type
taxableAmount	The taxable amount of this line item.	Decimal
taxCalculated	The tax calculated for this line by Avalara.	Decimal
taxCode	The tax calculated for this line by Avalara.	String
taxCodeId	The unique ID number for the tax code that was used to calculate this line item.	Long
taxDate	The date that was used for calculating tax amounts for this line item.	DateTime
taxEngine	The tax engine identifier that was used to calculate this line item.	String
taxIncluded	True if the tax was included in the purchase price of the item.	Boolean
taxOverrideAmount	If a tax override was specified, this indicates the amount of tax that was requested.	Decimal
taxOverrideReason	If a tax override was specified, represents the reason for the tax override.	String
taxOverrideType	If a tax override was specified, this indicates the type of tax override.	TaxOverrideTypeId
transactionId	The unique ID number of the transaction to which this line item belongs.	Long

TransactionLineDetailModel

Description	Transaction Line Detail Model.
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Properties

The following are the transaction line detail model properties and their information:

Properties	Description	Data Type
addressId	The unique ID number of the address used for this tax detail.	Long
country	The two-character ISO 3166 country code of the country where this tax detail is assigned.	String
countyFIPS	For U.S. transactions, the Federal Information Processing Standard (FIPS) code for the county where this tax detail is assigned.	String
exemptAmount	The amount of this line that was considered exempt in this tax detail.	Decimal
exemptReasonId	The unique ID number of the exemption reason for this tax detail.	Long
exemptUnits	A number of units in this line item that were calculated to be exempt according to this rating detail.	Decimal
id	The unique ID number of this tax detail.	Long
inState	True if this detail element represented an in-state transaction.	Boolean
jurisCode	The code of the jurisdiction to which this tax detail applies.	String
jurisdictionId	The unique ID number of the jurisdiction to which this tax detail applies.	Long
jurisName	The name of the jurisdiction to which this tax detail applies.	String
jurisType	The type of the jurisdiction to which this tax detail applies.	JurisTypeId
nonTaxableAmount	The amount of this line item that was considered nontaxable in this tax detail.	Decimal

Properties	Description	Data Type
nonTaxableRuleId	The rule according to which portion of this detail was considered nontaxable.	Long
nonTaxableType	The type of nontaxability that was applied to this tax detail.	TaxRuleTypeId
nonTaxableUnits	A number of units in this line item that were calculated to be nontaxable according to this rating detail.	Decimal
rate	The rate at which this tax detail was calculated.	Decimal
rateRuleId	The unique ID number of the rule according to which this tax detail was calculated.	Long
rateSourceId	The unique ID number of the source of the rate according to which this tax detail was calculated.	Long
rateType	(DEPRECATED) The rate type for this tax detail. Please use rateTypeCode instead.	RateType
rateTypeCode	Indicates the code of the rate type that was used to calculate this tax detail.	String
region	The two or three-character ISO region code for the region where this tax detail is assigned.	String
serCode	For Streamlined Sales Tax customers, the SST Electronic Return code under which this tax detail should be applied.	String
signatureCode	The Avalara-specified signature code of the jurisdiction to which this tax detail applies.	String
sourcing	Indicates whether this tax detail applies to the origin or destination of the transaction.	Sourcing
stateAssignedNo	The state assigned a number of the jurisdiction to which this tax detail applies.	String

Properties	Description	Data Type
stateFIPS	For U.S. transactions, the Federal Information Processing Standard (FIPS) code for the state where this tax detail is assigned.	String
tax	The amount of tax for this tax detail.	Decimal
taxableAmount	The taxable amount of this tax detail.	Decimal
taxableUnits	A number of units in this line item that were calculated to be taxable according to this rating detail.	Decimal
taxAuthorityTypeId	The type of the tax authority to which this tax will be remitted.	Long
taxCalculated	The amount of tax that was calculated.	Decimal
taxName	The name of the tax against which this tax amount was calculated.	String
taxOverride	The amount of tax override that was specified for this tax line.	Decimal
taxRegionId	The unique ID number of the tax region.	Long
taxType	The type of tax that was calculated. Depends on the company's nexus settings as well as the jurisdiction's tax laws.	TaxType
transactionId	The unique ID number of this transaction.	Long
transactionLineId	The unique ID number of the line within this transaction.	Long

AddressValidationInfo

Description

REST client for Avalara address validation and tax calculation services.
@author Avalara Salesforce Connector Team.

Properties

The following are the address validation info properties and their information:

Properties	Description	Data Type
city	City component of the address.	String
country	Name or ISO 3166 code identifying the country.	String
latitude	Geospatial latitude measurement, in Decimal Degrees, floating point format.	Double
line1	The first line of the street address.	String
line2	The second line of the street address.	String
line3	The third line of the street address.	String
longitude	Geospatial longitude measurement, in Decimal Degrees, floating point format.	Double
postalcode	Postal Code / Zip Code component of the address.	String
region	Name or ISO 3166 code identifying the region within the country.	String
textcase	Specify the text case for the validated address result. If not specified, it returns uppercase. = ['Upper', 'Mixed'].	TextCase

CreateTransactionModel

Description	Create Transaction Model.
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Properties

The following are the create transaction model properties and their information:

Properties	Description	Data Type
addresses	Default addresses for all lines in this document.	AddressesModel
batchCode	BatchCode for batch operations.	String
businessIdentificationNo	VAT business identification number for the customer for this transaction.	String
code	Transaction Code - the internal reference code used by the client application.	String
commitDocument	Causes the document to be committed if true.	Boolean
companyCode	Company Code - Specify the code of the company creating this transaction here.	String
currencyCode	The three-character ISO 4217 currency code for this transaction.	String
customerCode	The client application customer reference code.	String
customerUsageType	Customer Usage Type - The client application customer or usage type.	String
debugLevel	If the user wishes to request additional debug information from this transaction, specify a level higher than 'normal.'	TaxDebugLevel
description	User-supplied description for this transaction.	String

Properties	Description	Data Type
discount	The discount amount to apply to the document.	Decimal
documentDate	The date on the invoice, purchase order.	DateTime
email	User-supplied email address relevant for this transaction.	String
exchangeRate	Currency exchange rate from this transaction to the company base currency.	Decimal
exchangeRateEffectiveDate	The effective date of the exchange rate.	DateTime
exemptionNo	Exemption Number for this document.	String
isSellerImporterOfRecord	Specifies if the Transaction has the seller as IsSellerImporterOfRecord.	Boolean
lines	Document line items list.	LineItemModel
parameters	Special parameters for this transaction.	String
posLaneCode	Sets the Point of Sale Lane Code sent by the User for this document.	String
purchaseOrderNo	Purchase Order Number for this document.	String
referenceCode	Customer-provided Reference Code with information about this transaction.	String
reportingLocationCode	Sets the sale location code (Outlet ID) for reporting this document to the tax authority.	String
salespersonCode	Salesperson Code - The client application salesperson reference code.	String
serviceMode	Specifies whether the tax calculation is handled Local, Remote, or Automatic (default).	ServiceMode
taxOverride	Specifies a tax override for the entire document.	TaxOverrideModel
type	Specifies the type of document to create.	DocumentType

AddressesModel

Description	Wrapper for Address data.
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Properties

The following are the addresses model properties and their information:

Properties	Description	Data Type
pointOfOrderAcceptance	The place of business where you accept/approve the customer's order, thereby becoming contractually obligated to make the sale.	AddressLocationInfo
pointOfOrderOrigin	The place of business where you receive the customer's order.	AddressLocationInfo
shipFrom	The origination address where the products were shipped from, or from where the services originated.	AddressLocationInfo
shipTo	The destination address where the products were shipped to, or where the services were delivered.	AddressLocationInfo
singleLocation	If this transaction occurred at a retail point-of-sale location, provide that single address here and leave all other address types null.	AddressLocationInfo

AddressLocationInfo

Description	Informational about Address data.
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Properties

The following are the addresses location info properties and their information:

Properties	Description	Data Type
city	City component of the address.	String
country	Two-character ISO 3166 Country Code. Call `ListCountries` for a list of ISO 3166 country codes.	String
latitude	Geospatial latitude measurement, in Decimal Degrees, floating point format.	Decimal
line1	The first line of the street address.	String
line2	The second line of the street address.	String
line3	The third line of the street address.	String
locationCode	If you wish to use the address of an existing location for this company, specify the address here.	String
longitude	Geospatial longitude measurement, in Decimal Degrees, floating point format.	Decimal
postalCode	Postal Code / Zip Code component of the address.	String
region	State / Province / Region component of the address.	String

LineItemModel

Description	Line Item Model
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Properties

The following are the line item model properties and their information:

Properties	Description	Data Type
addresses	The addresses to use for this transaction line.	AddressesModel
amount	The total amount for this line.	Decimal
businessIdentificationNo	VAT business identification number for the customer for this line item.	String
customerUsageType	Customer Usage Type - The client application customer or usage type.	String
description	Item description. This is required for SST transactions if an unmapped ItemCode is used.	String
discounted	True if the document discount should be applied to this line.	Boolean
exemptionCode	Exemption number for this line.	String
itemCode	Item Code (SKU).	String
lineNumber	Line number within this document.	String
quantity	Quantity of items in this line.	Decimal
ref1	Reference 1 - Client specific reference field.	String
ref2	Reference 2 - Client specific reference field.	String
revenueAccount	Revenue Account.	String
taxCode	Tax Code - System or Custom Tax Code.	String
taxIncluded	Indicates if the line has Tax Included; defaults to false.	Boolean

TaxOverrideModel

Description	Tax Override Model.
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Properties

The following are the tax override model properties and their information:

Properties	Description	Data Type
reason	This provides the reason for a tax override for audit purposes.	String
taxAmount	Indicates a total override of the calculated tax on the document.	Decimal
taxDate	The override tax date to use.	Decimal
type	Identifies the type of tax override.	TaxOverrideType

CommitTransactionModel

Description	Commit Transaction Model.
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Properties

The following are the commit transaction model properties and their information:

Properties	Description	Data Type
commitTransaction	Set this value to be true to commit this transaction.	Boolean

VoidTransactionModel

Description	Void Transaction Model.
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Properties

The following are the void transaction model properties and their information:

Properties	Description	Data Type
code	Please specify the reason for voiding or canceling this transaction.	VoidReasonCode

Enums

BoundaryLevel

Description	The boundary level at which this address was validated.
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Properties

The following are the transaction address model properties and their information:

Properties	Description
Address	Street address precision.
Zip9	9-digit zip precision.
Zip5	5-digit zip precision.

DocumentType

Description	Document Type for Tax Calculation.
Return	NA

Properties

The following are the document type properties and their information:

Properties	Description
SalesOrder	Sales Order estimate or quote (default). This is a temporary document type and is not saved in tax history.
SalesInvoice	Sales Invoice.
PurchaseOrder	Purchase order, estimate, or quote. This is a temporary document type and is not saved in tax history.
PurchaseInvoice	Purchase Invoice.
ReturnOrder	Sales Return Order. This is a temporary document type and is not saved in tax history.
ReturnInvoice	Sales Return Invoice.
InventoryTransferOrder	Inventory Transfer Order.
InventoryTransferInvoice	Inventory Transfer Invoice.
ReverseChargeOrder	Reverse Charge Order.

Properties	Description
ReverseChargeInvoice	Reverse Charge Invoice.
AnyDocumentType	No particular type.

TaxOverrideTypeId

Description	Tax Override Type Id for Tax Calculation.
Return	NA

Properties

The following are the document type properties and their information:

Properties	Description
None	No override.
TaxAmount	The tax was overridden by the client.
Exemption	Entity exemption was ignored (For example, consumed item).
TaxDate	Only the tax date was overridden.
AccruedTaxAmount	To support Consumer Use Tax.
DeriveTaxable	Derive the taxable amount from the tax amount.

VoidReasonCode

Description	Void Reason Code.
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Properties

The following are the void reason code properties and their information:

Properties	Description
Unspecified	Unspecified reason.
PostFailed	Post operation failed - Document status will be changed to unposted.
DocDeleted	Document deleted - If committed, document status will be changed to Cancelled.
DocVoided	The document has been voided, and DocStatus will be set to Cancelled.
AdjustmentCancelled	The adjusttax operation has been canceled. The adjustment will be reversed.

TaxOverrideType

Description	Tax Override Type for Tax Calculation.
Return	NA

Properties

The following are the tax override type properties and their information:

Properties	Description
None	No override.
TaxAmount	The tax was overridden by the client.
Exemption	Entity exemption was ignored (For example, consumed item).
TaxDate	Only the tax date was overridden.
AccruedTaxAmount	To support Consumer Use Tax.
DeriveTaxable	Derive the taxable amount from the tax amount.

TaxDebugLevel

Description	Tax Debug Level for Tax Calculation.
Return	NA

Properties

The following are the tax debug level properties and their information:

Properties	Description
Normal	User requests the normal level of debugging information when creating a tax transaction.
Diagnostic	User requests additional diagnostic information when creating a tax transaction.

AdjustmentReason

Description	Adjustment Reason for Tax Calculation.
Return	NA

Properties

The following are the adjustment reason properties and their information:

Properties	Description
NotAdjusted	The transaction has not been adjusted.
SourcingIssue	A sourcing issue existed which caused the transaction to be adjusted.
ReconciledWithGeneralLedger	The transaction was adjusted to reconcile it with a general ledger.
ExemptCertApplied	The transaction was adjusted after an exemption certificate was applied.
PriceAdjusted	The transaction was adjusted when the price of an item changed.
ProductReturned	The transaction was adjusted due to a product return.
ProductExchanged	The transaction was adjusted due to a product exchange.
BadDebt	The transaction was adjusted due to bad or uncollectable debt.
Other	The transaction was adjusted for another reason not specified.

DocumentStatus

Description	Document Status for Tax Calculation.
Return	NA

Properties

The following are the document status properties and their information:

Properties	Description
SalesOrder	Sales Order estimate or quote (default). This is a temporary document type and is not saved in tax history.
SalesInvoice	Sales Invoice.

Properties	Description
PurchaseOrder	Purchase order, estimate, or quote. This is a temporary document type and is not saved in tax history.
PurchaseInvoice	Purchase Invoice.
ReturnOrder	Sales Return Order. This is a temporary document type and is not saved in tax history.
ReturnInvoice	Sales Return Invoice.
InventoryTransferOrder	Inventory Transfer Order.
InventoryTransferInvoice	Inventory Transfer Invoice.
ReverseChargeOrder	Reverse Charge Order.
ReverseChargeInvoice	Reverse Charge Invoice.
AnyDocumentType	No type.

JurisdictionType

Description	The type of jurisdiction referenced by the tax authority.
-------------	---

Properties

The following are the jurisdiction type properties:

Properties
Country
Composite
State
County
City
Special

JurisTypeId

Description	Juris Type Id for Tax Calculation.
Return	NA

Properties

The following are the juris type id properties and their information:

Properties	Description
STA	State
CTY	County
CIT	City
STJ	Special
CNT	Country

RateType

Description	Rate Type for Tax Calculation.
Return	NA

Properties

The following are the rate type properties:

Properties
ReducedA
ReducedB
Food
General
IncreasedStandard
LinenRental
Medical
Parking
SuperReduced
ReducedR
Standard
Zero

ResolutionQuality

Description	The resolution quality of the geospatial coordinates.
Return	NA

Properties

The following are the resolution quality properties:

Properties
NotCoded
External
CountryCentroid
RegionCentroid
PartialCentroid
PostalCentroidGood
PostalCentroidBetter
PostalCentroidBest
Intersection
Interpolated
Rooftop
Constant

TaxRuleTypeId

Description	Tax Rule Type Id.
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Properties

The following are the tax rule type id properties:

Properties
RateRule
RateOverrideRule
BaseRule
ExemptEntityRule
ProductTaxabilityRule
NexusRule

TaxType

Description	Tax Type.
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Properties

The following are the tax type properties and their information:

Properties	Description
Lodging	Match Lodging tax type.
Bottle	Match bottle tax type.
EWaste	EWaste tax type.
ConsumerUse	Consumer Use Tax.
Excise	Medical Excise Tax.
Fee	Fee - PIFs (global Improvement Fees) and RSFs (Retail Sales Fees).
Input	VAT/GST Input tax.
Nonrecoverable	VAT/GST Nonrecoverable Input tax.
Output	VAT/GST Output tax.
Rental	Rental Tax.
Sales	Sales tax.
Use	Use Tax.

Sourcing

Description	Sourcing for Tax Calculation.
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Properties

The following are the sourcing properties and their information:

Properties	Description
Mixed	Mixed sourcing, for states that do both origin and destination calculation.
Destination	Destination
Origin	Origin

ServiceMode

Description	Service Mode
--------------------	--------------

Properties

The following are the service mode properties and their information:

Properties	Description
Automatic	Automatically use local or remote (default).
Local	The local server only.
Remote	Remote server only.

PostTaxCalculator

Description	<p>Contains methods for Posting tax and updating back to Salesforce object.</p> <p>It reads XML configuration provide and generate post-tax calculation request from the mapping provided in XML configuration file.</p> <p>It supports several hooks that can be subscribed to modify the tax calculation request as per business requirement.</p>
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Properties

The following are the post-tax calculator properties and their information:

Properties	Description	Data Type
headerQueryResult	Stores query wise result of SOQL defined under TaxCalculator->SalesforceObject->Header->Queries node.	String
lineQueryResult	Stores query wise result of SOQL defined under TaxCalculator->SalesforceObject->Line->Queries node.	String

Methods

executeQuery

Description	Retrieves Data from Salesforce. It also reads all the Queries in XML config provided for the calling package. Moreover, keep it ready for further usage in tax calculation.
Returns	NA
Parameters	
Model	An instance of QueryInput .

postTax

Description	This method is responsible for document posting. It formulates the posting document for the calling package. Moreover, provide the Post-Tax Calculation result to the Connector.
Returns	An instance of TransactionModel .
Parameters	
Model	Instance of PostTaxCalculationInput .

PostTaxCalculator

Description	It initializes an instance of PostTaxCalculator class for the Salesforce object provided. It also reads all the XML config provided for the calling package. Moreover, keep it ready for further usage in document posting.
Returns	An instance of TaxCalculator class.
Parameters	
CallingPackage	Name of the package which wants to calculate the tax.
Model	AvaTax Configuration details.

setConfigProviderListener

Description	Hook Method for getting the config before Post Tax Calculation.
Returns	None
Parameters	
Model	Instance of IConfigManagerPost.

Models

QueryInput

Properties

The following are the query input properties and their information:

Properties	Description	Data Type
controller	Name of the object controller.	String
optionalParams	Data required for creating parameters in the query.	Map<String, String>
recordId	Id of the Salesforce record.	Id

PostTaxCalculationInput

Description	Post Tax details essential for Committing the document.
--------------------	---

Properties

The following are the post-tax calculator input properties and their information:

Properties	Description	Data Type
commitFlag	Flag to commit document, Value can true or false	VoidReasonCode
companyCode	CompanyCode for Cancel Tax Calculation.	String
docType	DocType for Cancel Tax Calculation.	DocumentType
transactionCode	TransactionCode for Cancel Tax Calculation.	String

TaxCalculator

Description	<p>Contains methods for calculating tax and updating back to Salesforce object.</p> <p>It reads XML configuration provide and generate tax calculation request from the mapping provided in XML configuration file.</p> <p>It supports several hooks that can be subscribed to modify the tax calculation request as per business requirement.</p>
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Properties

The following are the tax calculator properties and their information:

Properties	Description	Data Type
headerQueryResult	Stores query wise result of SOQL defined under TaxCalculator->SalesforceObject->Header->Queries node.	String
lineQueryResult	Stores query wise result of SOQL defined under TaxCalculator->SalesforceObject->Line->Queries node.	String

Methods

TaxCalculator

Description	<p>It initializes an instance of TaxCalculator class for the Salesforce object provided.</p> <p>It also reads all the XML config provided for the calling package. Moreover, keep it ready for further usage in tax calculation.</p>
Returns	An instance of TaxCalculator class.
Parameters	
CallingPackage	name of the package which wants to calculate the tax.
Config	AvaTax Configuration details

calculateTax

Description	This method is responsible for Tax Calculation. It formulates the Tax for the calling package. Moreover, provide the Tax Calculation result to the Connector.
Returns	An instance of TransactionModel .
Parameters	
Model	Instance of TaxCalculationInput .

setBeforeTaxCalculationListener

Description	Hook Method for editing the header data of Tax Request before Tax Calculation.
Returns	None
Parameters	
Model	Instance of IBeforeTaxCalculation .

setBeforeTaxValidationListener

Description	Hook Method for validations if any to be done before actual before Tax Calculation.
Returns	None
Parameters	
Model	Instance of IBeforeTaxValidation .

setConfigProviderListener

Description	Hook Method for getting the config before Tax Calculation.
Returns	None
Parameters	
Model	Instance of IBeforeTaxValidation .

setOverrideRequestLineListener

Description	Hook Method for editing the line data of Tax Request before Tax Calculation.
Returns	None
Parameters	
Model	Instance of IOverrideRequestLine.

Models

TaxCalculationInput

Properties

The following are the tax calculation input properties and their information:

Properties	Description	Data Type
commitFlag	Flag for committing document on AvaTax.	Boolean
controller	Name of the Salesforce object.	String
docType	AvaTax Document Type.	DocumentType
optionalParams	Data required for creating parameters in the query.	String
recordId	The id of the Salesforce record.	Id

CancelTaxCalculator

Description	Contains methods for canceling tax and updating back to Salesforce object.
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Properties

The following are the cancel tax calculator properties and their information:

Properties	Description	Data Type
headerQueryResult	Stores query wise result of SOQL defined under TaxCalculator->SalesforceObject->Header->Queries node.	Map<String,List<SObject>>

Methods

cancelTax

Description	This method is responsible for Tax Calculation.
Returns	An instance of TransactionModel .
Param	An instance of CancelTaxCalculationInput.

CancelTaxCalculator

Description	Initializes an instance of CancelTaxCalculator class for the Salesforce object provided.
Returns	An instance of TaxCalculator class.
Parameters	
CallingPackage	name of the package which wants to calculate the tax.
Config	AvaTax Configuration details

Models

CancelTaxCalculationInput

Description	Cancel Tax details essential for Voiding the document. Tax calculation is affected by these details.
--------------------	--

Properties

The following are the cancel tax calculator input properties and their information:

Properties	Description	Data Type
code	VoidReasonCode for Cancel Tax Calculation.	VoidReasonCode
companyCode	CompanyCode for Cancel Tax Calculation.	String
controller	Controller for Cancel Tax Calculation.	String
docType	DocType for Cancel Tax Calculation.	DocumentType
optionalParams	OptionalParams for Cancel Tax Calculation, One can specify if any extra parameters need to be sent to AvaTax Service.	Map<String, String>
recordId	RecordId for Cancel Tax Calculation.	Id
transactionCode	TransactionCode for Cancel Tax Calculation.	String

ConfigurationBase

Description	Abstract class for Configuration
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Properties

The following are the configuration base properties and their information:

Properties	Description	Data Type
accountId	Specify the accountId for validating in AvaTax.	Integer
appName	Specify the Application Name.	String
appVersion	Specify the Application Version.	String
companyCode	Specify the code of the company creating this transaction here.	String
defaultOriginAddress	Specify the instance of AddressValidationInfo for Origin Address.	AddressValidationInfo
environment	AvaTaxEnvironment for Tax Calculation.	AvaTaxEnvironment
isAddressValidationEnabled	Specify if the Address Validation is Enabled.	Boolean
isDateOverrideAllowed	Specify whether Transaction Date can be overridden.	Boolean
isTaxCalculationEnabled	Specify if the Tax Calculation is Enabled.	Boolean
isUPCEnabled	Specify whether the UPC Tax Code is allowed.	Boolean
licenseKey	Specify the licenseKey for validating in AvaTax.	String
password	Specify the Password for validating in AvaTax.	String
restClientName	Specify the Client Name.	String
returnAddressInUpperCase	Returns Address Validation result in Upper Case.	Boolean
saveTransactionToAvaTax	Specify whether to record the document to Avatax.	Boolean
username	Specify the Username for validating in AvaTax.	String

Enums

AvaTaxEnvironment

Description	AvaTaxEnvironment for Tax Calculation.
Return	NA

Properties

The following are the configuration base properties and their information:

Properties	Description
Sandbox	Development Environment.
Production	Production Environment.

