



Avalara AvaTax for Salesforce B2C Commerce

SiteGenesis JavaScript Controllers and Storefront Reference Architecture

System Integration Document for Avalara AvaTax

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Acronyms and Abbreviations

B2C	Business to Consumer
SFRA	Storefront Reference Architecture
SGJC	SiteGenesis JavaScript Controllers
UUID	Universally Unique Identifiers

Connector Overview

The AvaTax Salesforce B2C Commerce – SGJC/ SFRA cartridge provides rapid integration for Salesforce B2C Commerce – SGJC/ SFRA implementations. The AvaTax cartridge is a self-contained package that can easily integrate into a project. This cartridge can be configured in the Business Manager and contains all the elements necessary to perform a successful implementation of AvaTax **Tax calculation** and **Address Validation** services.

Configuration

Sr. No.	Setting Name (Custom Preferences)	Comments
1	Enable AvaTax	Select check box to calculate the tax with AvaTax on the transactions.
2	Enable Address Validation	Select to validate addresses using AvaTax.
3	Enable Test Pipelines/Controllers	Enables access to Test Pipelines/Controllers on the Storefront.
4	Save transactions to AvaTax	Select to save the transaction on AvaTax Update/ Avalara Admin Console.
5	AvaTax Company Code	Company code value to save transactions in companies configured in AvaTax.
6	AvaTax default shipping method tax code (Tax)	The default tax code to send when a shipping method has no tax class ID.
7	AvaTax ShipFrom location code	Use this field only if a location code is configured in the AvaTax company with a valid distributor address. If you fill details in this field, then it is used for tax calculation for all your transactions, and it holds priority above all the other ShipFrom Address fields.
8	ShipFrom Address fields	AvaTax ShipFrom address line 1, AvaTax ShipFrom address line 2, AvaTax ShipFrom address line 3, AvaTax ShipFrom City, AvaTax ShipFrom StateCode, AvaTax ShipFrom ZipCode, and AvaTax ShipFrom Country Code should be filled out to match the address of the distributor.

Object Mapping

Below fields/attributes from the address are mapped to their AvaTax counterpart.

Address Validation

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Field	AvaTax Field
1	String	address1	line1
2	String	address2	line2
3	String	address3	line3
4	String	city	city
5	String	stateCode	region
6	String	countryCode / country	country
7	String	postalCode	postalCode
8	String	latitude	latitude
9	String	longitude	longitude

Tax Calculation

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Field	AvaTax Field	Comments
1	String	Basket > UUID	code	Once you place an order, the variable code gets assign with the Order Number, and the docType gets assign with SalesInvoice.
2	String	Settings > Company Code	companyCode	<ul style="list-style-type: none"> A custom field for the company code is provided. If the user enters the company code in this field, then the transaction passes to the mapped company code. If a company code in the custom field is blank, then the transaction passes to the Company Code mapped in the AvaTax configuration page.
3	String	Current date	date	Retrieved using JavaScript.
4	String	Basket > Shipment > Email	customerCode	It sends the Account Id and Name as a Customer Code.
5	dw.order.orderAddress	Basket > Shipment > shippingAddress	addresses.shipTo	The shipTo address picked from shippingAddress and passes as destination address at header level address.
6	dw.order.orderAddress	Settings > shipFrom values	addresses.shipFrom	The shipFrom address picked from the custom preferences and passes as an origin address at header level address

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Field	AvaTax Field	Comments
7	String	Shipment > Line Item > UUID	line.number	Represents one-line item in a transaction.
8	Number	Line Item > Quantity	line.quantity	Quantity of items in the line.
9	dw.value.Money	Line Item > Price	line.amount	The AvaTax receives the final amount once the discount or coupon applied to the current line item.
10	dw.order.orderAddress	Settings > shipFrom values	line.addresses.shipFrom	The shipFrom address picked from the custom preferences and passes as a line level address.
11	dw.order.orderAddress	Basket > Shipment > shippingAddress	line.addresses.shipTo	The shipTo address is filled by the end user on the Storefront and passes as a line level address.
12	String	Line Item > Tax class ID OR Setting > defaultShippingMethodTaxCode	line.taxCode	If it is a product then the tax class ID configured for the product is used. If it is a shipping line item the tax code configured in custom preferences is used.
13	dworder.TaxMgr.taxationPolicy	Site settings > Taxation policy	line.taxIncluded	It is a taxation policy of the current site that is net/ gross.
14	String	Line Item > ID	line.itemCode	The Line Item ID is used as ItemCode.
15	String	Line Item > Product > Description	line.description	AvaTax for Salesforce B2C Commerce passes Product Description as a line description.
16	Boolean	customer.profile.custom.isSellerImporterOfRecord	isSellerImporterOfRecord	Specifies if the transaction should have value-added and cross-border taxes calculated with the seller as the importer of record.
17	String	customer.profile.custom.taxID	businessIdentificationNo	VAT business identification number for the customer for this transaction.
18	String	basket.currencyCode	currencyCode	It is a currency code. For example: Currency Code: USD
19	String	basket.custom.ATInvoiceMessage	response.messages.details[]	This field is used to display the invoice message received from AvaTax service.

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Field	AvaTax Field	Comments
20	String	order.custom.ATInvoiceMessage	response.messages.details[]	This field is used to display the invoice message received from AvaTax service.
21	String	basket.custom.ATTaxDetail	response.line.details[]	It stores the tax detail/ type in the basket object.
22	String	order.custom.ATTaxDetail	response.line.details[]	It stores the tax detail/ type in the order object.

Integration Points

SR. No.	Integration Page	Address Validation	Tax Calculation
1	My Account	Yes	N/A
2	Shipping Page	Yes	Yes
4	Billing Page	N/A	Yes

Extension Examples

AvaTax features can be customized to suit the requirements of the business. Below section outlines an example of how it can be done:

Example: Address Validation on Homepage

Use the validateShippingAddress method from avaTax.js inside the plugin_avatax cartridge, to validate the customer address.

Address Validation

```
// script includes
var avatax = require('*/cartridge/scripts/avaTax');
// get the address field values entered from the user and store it in 'address' variable as below
var address = {
  address1 = /* user entered value */,
  address2 = /* user entered value */,
  address3 = /* user entered value */,
  city = /* user entered value */,
  stateCode = /* user entered value */,
  countryCode = /* user entered value */,
  postalCode = /* user entered value */,
};
// call the avatax address validation method, and pass this address object along
var validationResponse = avatax.validateShippingAddress(address);
```

Address Validation Response

The validationResponse will contain either of the below 3 results.

1. If the service is not available, or if there are any programmatical errors, then the validationResponse will contain:

```
{
  statusCode: 'validateShippingAddressMethodFailed',
  message: /* error message */,
  error: true
};
```

2. If the address validation service is working, and address is invalid or if any of address components could not be found, then the validationResponse contains an array attribute messages, and also informs about the incorrect fields along with the other attributes.


```

"messages":[
  {
    "summary":"An exact street name match could not be found",
    "details":"An exact street name match could not be found and phonetically matching the street name resulted ..."
    "refersTo":"Address.Line1",
    "severity":"Error",
    "source":"Avalara.AvaTax.Services.Address"
  },
  {
    "summary":"Address not geocoded.",
    "details":"Address cannot be geocoded.",
    "refersTo":"Address",
    "severity":"Error",
    "source":"Avalara.AvaTax.Services.Address"
  }
]

```

3. If the address validation service is working, and the address is valid.

```

{
  "address":{
    "textCase":"Upper",
    "line1":"2000 Main Street",
    "city":"Irvine",
    "region":"CA",
    "country":"US",
    "postalCode":"92614"
  },
  "ValidatedAddresses":[
    {
      "addressType":"StreetOrResidentialAddress",
      "line1":"2000 MAIN ST",
      "line2":"",
      "line3":"",
      "city":"IRVINE",
      "region":"CA",
      "country":"US",
      "postalCode":"92614-7202",
      "latitude":33.684689,
      "longitude":-117.851495
    }
  ],
  "coordinates":{
    "latitude":33.684689,
    "longitude":-117.851495
  },
  "resolutionQuality":"Intersection",
  "taxAuthorities":[
    {
      "avalaraId":"267",

```

```
"jurisdictionName": "ORANGE",
"jurisdictionType": "County",
"signatureCode": "AHXU"
},
{
"avalaraId": "5000531",
"jurisdictionName": "CALIFORNIA",
"jurisdictionType": "State",
"signatureCode": "AGAM"
},
{
"avalaraId": "2001061425",
"jurisdictionName": "ORANGE COUNTY DISTRICT TAX SP",
"jurisdictionType": "Special",
"signatureCode": "EMAZ"
},
{
"avalaraId": "2001061784",
"jurisdictionName": "ORANGE CO LOCAL TAX SL",
"jurisdictionType": "Special",
"signatureCode": "EMTN"
}
]
}
```

Workflow Diagrams

Address Validation

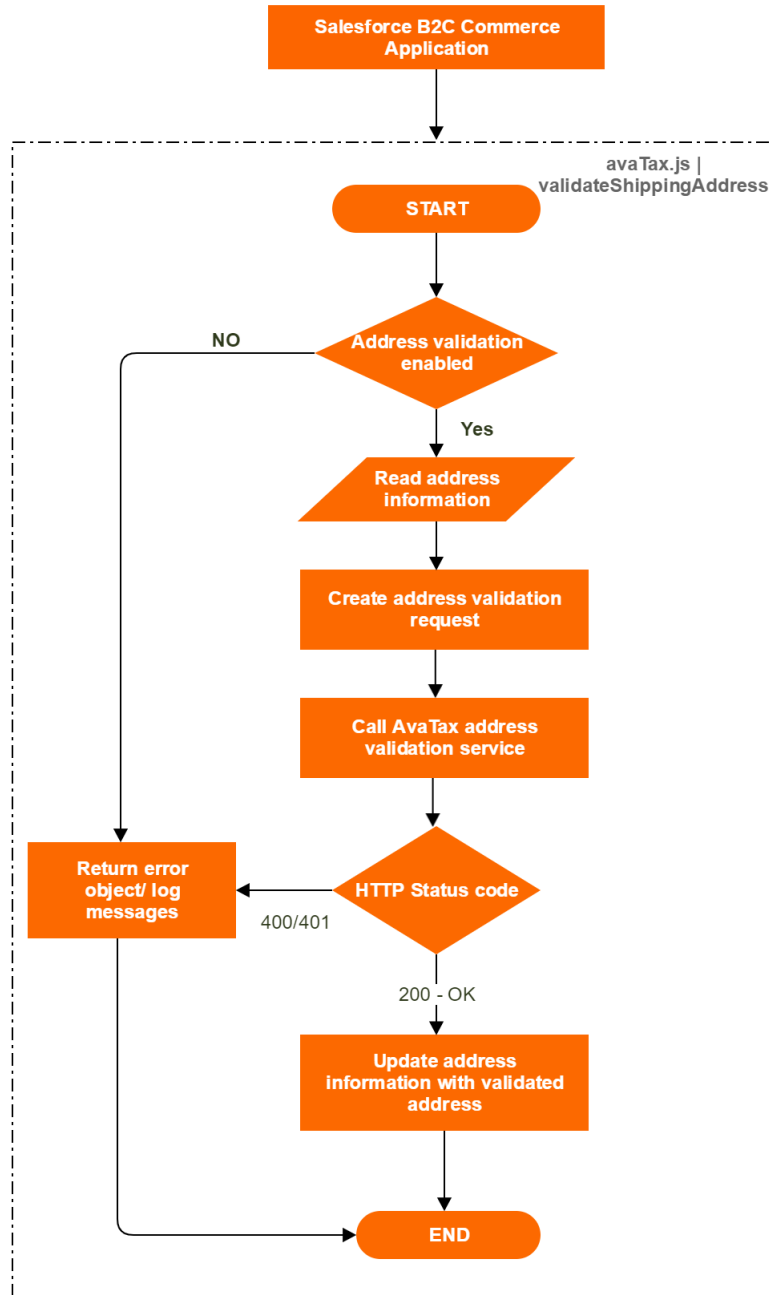


Figure 1: Address Validation

Tax Calculation

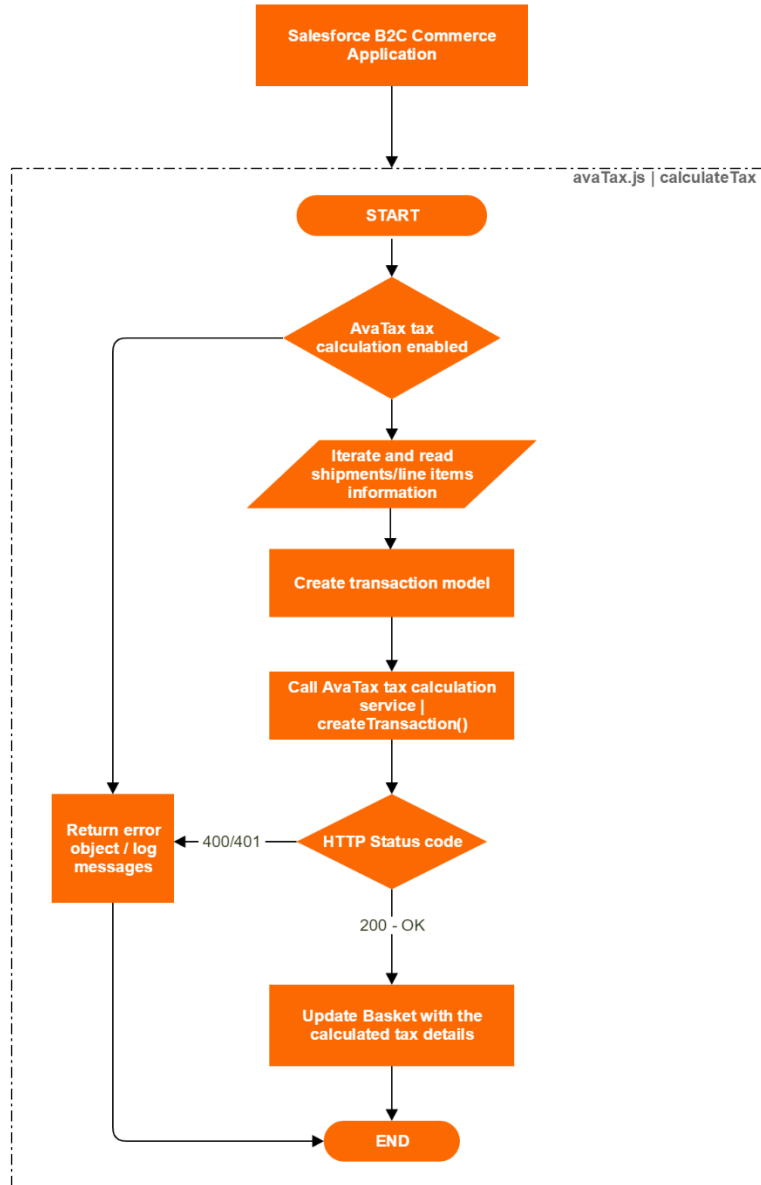


Figure 2: Tax Calculation