



Avalara AvaTax for Salesforce B2C Commerce

Storefront Reference Architecture (SFRA)

System Integration Document for Avalara AvaTax

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1.0. Acronyms and Abbreviations

B2C	Business to Consumer
SFRA	Storefront Reference Architecture
UUID	Universally Unique Identifiers

2.0. Connector Overview

The AvaTax Salesforce B2C Commerce cartridge provides rapid integration for Salesforce B2C Commerce implementations, helping to accelerate and simplify integration projects. This cartridge can be configured in the Business Manager and contains all the elements necessary to perform a successful integration of AvaTax **Tax calculation, Address Validation, and Exemption Certificates Management** services.

3.0. Configuration

The following table displays the list of AvaTax Configuration Settings:

Sr. No.	AvaTax Settings	Descriptions
Account Settings		
1.	Tax Calculation	Enable AvaTax Tax Calculation on the transactions.
2.	Address Validation	Enable Address Validation using AvaTax.
3.	Save Transaction to AvaTax	Enable this to save the transactions to AvaTax.
4.	Commit Transaction to AvaTax	Enable this to commit the transactions to AvaTax.
5.	Company Code	The entered Company Code will be used to save the transactions in the company configured in the AvaTax.
6.	Customer Code	- Customer Code sent to Avalara services can be customized in the AvaTax Settings section. - For Guest users, Email ID provided during the checkout process is sent over. If the administrator(s) is authenticated, and the custom attribute preference value is available, then the attribute value from 'Profile' object is used. - The order of preference used for Customer Code is: - If the Admin has set the 'Enable Certificates Management' attribute provided in the AvaTax Settings section as 'Enabled', the customer number from the Customer's profile is passed as Customer Code (registered users only) while placing transactions. - Custom field attribute provided in AvaTax Settings section for the Authenticated users and subject to the availability. - Email ID provided during checkout for both Authenticated and Guest Users. - Email ID from the User Account (authenticated users only).
7.	Shipping Tax Code	The default Tax Code is used when no tax code is assigned to the shipping method.
Cross Border Calculation		
8.	Taxation Policy	It shows the taxation policy set by the merchant.
Address Details		
9.	Location Code	If a value is available, then the entered origin address details are not used for the tax calculation.
10.	ShipFrom Address fields (Address Line 1, Address Line 2, Address Line 3, City, State, Zip/Postal Code, Country Code)	Enter the ShipFrom address details.

4.0. Reconcile Orders

The Reconcile Orders utility allows you to reconcile/ update orders in the AvaTax where the Amount or Tax is mismatched, or the orders which are missing in the AvaTax.

Note: The orders which are missing in Salesforce B2C Commerce cannot be reconciled.

5.0. Exemption Certificates

The exemption certificates utility allows you to manage customer certificates on Business Manager as well as the storefront, using the Salesforce Customer Profile's Customer Number value as a unique identifier of the customer.

Sr. No.	B2C Commerce Exemption Feature	Business Manager/Storefront	Requirements	Description
1.	Certificate Landing Page	Business Manager (Merchant Tools > AvaTax > Exemption Certificates)	AvaCert subscription	Admin can navigate to Show Customers list, Invite Customers to Add Certificates, View Certificate Invites list from this page.
2.	Manage Certificates of Existing Customers	Business Manager (Merchant Tools > AvaTax > Exemption Certificates > Manage Certificates of Existing Customers)	AvaCert subscription	List of existing storefront customers. To view customer details, select the given customer number in the table.
3.	Invite to Add Certificate(s)	Business Manager (Merchant Tools > AvaTax > Exemption Certificates - Invite to Add Certificate(s) button)	AvaCert subscription	Enter Email ID and Customer Code to invite the customer to add exemption certificate(s) through E-mail using a unique URL.
4.	Customer Details Page	Business Manager (Merchant Tools > AvaTax > Exemption Certificates > Customers)	AvaCert subscription.	View Customer details. If customer is not available in AvaTax, select the 'Create Customer Record' button. If the customer is available in AvaTax, certificate details will be shown in the table.
		Storefront Account Dashboard - View Existing Certificates (Configuration steps provided in User Guide)	AvaCert subscription. Enable Certificates Management value is 'Enabled' on AvaTax Settings by Admin for Storefront feature.	View Customer details. If the customer is available in AvaTax, certificate details will be shown in the table.
5.	View/Edit Certificate	Business Manager (Merchant Tools > AvaTax > Exemption Certificates > Customers)	AvaCert subscription.	- The administrator(s) can View/Edit Certificate details for existing customer certificates if any, by selecting a certificate record populated in the table. - If no certificate data is available in the table, select the Create Certificate(s) button to create a new certificate.
		Storefront Account Dashboard - View Existing Certificates (Configuration steps provided in User Guide)	AvaCert subscription. Enable Certificates Management value is 'Enabled' on AvaTax Settings by Admin for Storefront feature.	- View/Edit Certificate details for existing customer certificates if any, by selecting a certificate record populated in the table. - If no certificate data is available in the table, select the Create Certificate(s) button to create a new certificate.
6.	Add Certificate	Business Manager (Merchant Tools > AvaTax > Exemption Certificates > Customers)	AvaCert subscription.	- The administrator(s) can Add a new Certificate by selecting the Create Certificate(s) button. - Select an exposure zone from the dropdown, GenCert will

Sr. No.	B2C Commerce Exemption Feature	Business Manager/Storefront	Requirements	Description
				initialize and create a certificate based on the details provided.
		Storefront Account Dashboard - View Existing Certificates (Configuration steps provided in User Guide)	AvaCert subscription. Enable Certificates Management value is 'Enabled' on AvaTax Settings by Admin for Storefront feature.	- Registered customers can Add a new Certificate for the customer number by selecting the Create Certificate(s) button. - Select an exposure zone from the dropdown, GenCert will initialize and create a certificate based on the details provided.
		Storefront Checkout Page (Configuration steps provided in User Guide)	AvaCert subscription. Enable Certificates Management value is 'Enabled' on AvaTax Settings by Admin for Storefront feature.	- Registered customers can Add a new Certificate for the customer number by selecting the Create Certificate(s) button. - Select an exposure zone from the dropdown, GenCert will initialize and create a certificate based on the details provided.
7.	Invalidate Certificate	Business Manager (Merchant Tools > AvaTax > Exemption Certificates > Customers)	AvaCert subscription.	- The administrator(s) can Invalidate an existing Certificate of a customer by selecting the certificate record populated in the table. - Select the Invalidate button and confirm to Proceed.
		Storefront Account Dashboard (Configuration steps provided in User Guide)	AvaCert subscription. Enable Certificates Management value is 'Enabled' on AvaTax Settings by Admin for Storefront feature.	- Registered customers can Invalidate an existing Certificate by selecting the certificate record populated in the table. - Select the Invalidate button and confirm to Proceed.
8.	Update Customer Details	Business Manager (Merchant Tools > AvaTax > Exemption Certificates > Customers)	AvaCert subscription.	The administrator(s) can update customer Details of the existing AvaTax exemption customer. This will update AvaTax customer record only. The Salesforce Business Manager customer details will remain the same.

6.0. Object Mapping

The following tables shows the mapping of Salesforce B2C Commerce Fields with the AvaTax Fields:

6.1. Address Validation

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields
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

6.2. Tax Calculation

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Descriptions
1.	String	Basket > UUID	code	After you place an order, the variable code gets assigned with the Order Number, and the docType gets assigned with the SalesInvoice.
2.	String	Settings > Company Code	companyCode	Specify the code of the company.
3.	String	Current date	date	Retrieved using JavaScript.
4.	String	Basket > Shipment > Email	customerCode	- It sends the Account Id or Name as a Customer Code. - If the Admin has enabled the 'Enable Certificates Management' attribute provided in the AvaTax Settings section, the customer number from customer.profile.customerNo is passed as the Customer Code.
5.	dw.order.orderAddress	Basket > Shipment > shippingAddress	addresses.shipTo	Retrieved from the Storefront shipping page.
6.	dw.order.orderAddress	Settings > shipFrom values	addresses.shipFrom	AvaTax for Salesforce B2C Commerce provides an AvaTax Configuration page where a user can enter the Origin Address.
7.	String	Shipment > Line Item > UUID	line.number	Represents line item in a transaction.

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Descriptions
8.	Number	Line Item > Quantity	line.quantity	Quantity of items in this line.
9.	dw.value.Money	Line Item > Price	line.amount	AvaTax retrieves the value from the Basket object.
10.	dw.order.orderAddress	Settings > shipFrom values	line.addresses.shipFrom	- The shipFrom address picked from the AvaTax Configuration page. - The administrator(s) can also make customized shipFrom address for specific products in JSON file located in <code>cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddresses.json</code> - The shipFrom address will be fetched during tax calculation and identified using unique Product ID.
11.	dw.order.orderAddress	Basket > Shipment > shippingAddress	line.addresses.shipTo	The shipTo address is filled by the end user on the Storefront.
12.	String	Line Item > Tax class ID OR Setting > defaultShippingMethodTaxCode	line.taxCode	Tax Code - System or Custom Tax Code.
13.	dw.order.TaxMgr.taxationPolicy	Site settings > Taxation policy	line.taxIncluded	It is a taxation policy of the current site. i.e. 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 the Product Description as a line description to the AvaTax for Tax Calculation.
16.	String	customer.profile.custom.taxID	businessIdentificationNo	Enter the VAT Business Identification Number of the customer/ administrator(s).
17.	String	customer.profile.custom.ATE exemptionNumber	exemptionNo	Value extracted from a custom field using the AvaTax metadata from the Salesforce Customer Profile page.

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Descriptions
				The populated value is passed to AvaTax for that customer during checkout.
18.	String	cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddress.json	merchantSellerIdentifier	- The administrator(s) can assign merchantSellerIdentifier for specific products in JSON file located in <i>cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddress.json</i> - The merchantSellerIdentifier will be fetched during tax calculation and identified using unique Product ID.
19.	String	cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddress.json	hsCode	- The administrator(s) can assign hsCode for specific products in the JSON file located at <i>cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddress.json</i> - The hsCode value is fetched during tax calculation and identified using a unique Product ID.
20.	String	\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json	parameters.AlcoholContent	Alcohol percentage by volume, sent as a number for beverage and alcohol products in JSON file located in <i>"\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json"</i>, identified using unique Product ID.
21.	String	\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json	parameters.ContainerSize	The administrator(s) can assign Container Size for beverage and alcohol products in JSON file located in <i>"\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json"</i>, identified using unique Product ID.
22.	String	\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json	parameters.NetVolume	The volume of only the item, substance, or product in question, exclusive of packaging, container, or other ancillary materials for beverage and alcohol products in JSON file located in <i>"\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json"</i>, identified using unique Product ID.
23.	String	\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json	parameters.PackSize	The number of taxable items in a package for beverage and alcohol products in JSON file located in <i>"\cartridges\int_avatax_svcclient\cartridge\scripts\avaBevAlcConf.json"</i>, identified using unique Product ID.

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Descriptions
				f.json", identified using unique Product ID.
24.	String	\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json	parameters.IsAlcoholSample	Used to indicate whether a beverage alcohol product is a sample product in JSON file located in "\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json", identified using unique Product ID.
25.	String	\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json	parameters.IsForeignAlcohol	Used to indicate whether a beverage alcohol product is a foreign beverage alcohol product in JSON file located in "\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json", identified using unique Product ID.
26.	String	\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json	parameters.Brand	Brand name associated with the product being sold, identified using unique Product ID in JSON file located in "\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json"
27.	String	\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json	taxCode	The administrator(s) can assign taxCode for beverage and alcohol products in JSON file located in "\\cartridges\\int_avatax_svcclient\\cartridge\\scripts\\avaBevAlcConf.json", it will be fetched during tax calculation and identified using unique Product ID.
28.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	RecipientDOB	The date of birth (DOB) associated with the "Ship To" recipient.
29.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	AlcoholRouteType	The sales channel for a beverage alcohol transaction.
30.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	PurchaserDOB	The date of birth (DOB) associated with the "Bill To" recipient. Must be formatted as YYYY-MM-DD.
31.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	TrackingNumber	A text string to indicate the tracking number of transaction.
32.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	IsDirectAlcoholImport	To indicate whether a beverage alcohol product is a direct import product.
33.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	PurchaserName	Represents the first and last name of purchaser associated with the transaction.
34.	String	cartridges\\int_avatax_sfra\\cartridge\\scripts\\helpers\\avatax\\calculateTaxHelper.js	ShipDate	The day merchandise associated with an order was

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Descriptions
				shipped. Must be formatted as YYYY-MM-DD.
35.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	SalesLocation	Distinguishes orders that were placed onsite at a business's location vs. offsite.
36.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	PurchaserStreetAddress	Street address of the purchaser associated with the transaction.
37.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	PurchaserToCity	City of the purchaser associated with the transaction.
38.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	PurchaserToState	State of the purchaser associated with the transaction.
39.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	PurchaserToZip	ZIP of the purchaser associated with the transaction.
40.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	CarrierCode	Carrier code of shipment.
41.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	FullfillmentHouseCode	Name of fulfilment house. Required for wine products.
42.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	Varietal	For wine products only, to indicate what varietal the product is classified.
43.	String	basket.currencyCode	currencyCode	- It displays the currency information. - For example: Currency Code: USD
44.	String	basket.custom.ATInvoiceMessage	response.messages.details[]	It displays the invoice messages received in the Avalara response when the order is in the checkout stage.
45.	String	order.custom.ATInvoiceMessage	response.messages.details[]	It displays the invoice messages received in the Avalara response when the order is placed.
46.	Text	basket.custom.ATTaxDetail	response.line.details[]	It is used to store Tax Detail/ type in the Basket object when the order is in the checkout stage.
47.	Text	order.custom.ATTaxDetail	response.line.details[]	It is used to store Tax Detail/ type in the Order object when the order is placed.
48.	String	basket.custom.ATCustomDuty	response.summary[i].tax	It is used to store import duty/ fees if applicable in the basket object.
49.	String	order.custom. ATCustomDuty	response.summary[i].tax	It is used to store import duty/ fees if applicable in the order object.
50.	Text	basket.custom.ATGenericMessage	response.messages[i].summary	It is used to store the transaction summary messages in the basket object.

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Descriptions
51.	Text	order.custom.ATGenericMessage	response.messages[i].summary	It is used to store the transaction summary messages in the order object.
52.	Text	basket.custom.ATLandedCost	response.messages[i].summary	It is used to store Cross Border messages in the basket object.
53.	Text	order.custom.ATLandedCost	response.messages[i].summary	It is used to store Cross Border messages in the order object.
54.	String	basket.custom.ATTax	response.summary[i].tax	It is used to store tax.
55.	String	order.custom.ATTax	response.summary[i].tax	It is used to store tax.

6.3. Enhanced VAT

Sr. No.	Type of Salesforce B2C Commerce Object	Salesforce B2C Commerce Fields	AvaTax Fields	Description
1.	String	cartridges\int_avatax_svcclient\cartridge\scripts\avaMerchantConf.json	MerchantEstablishmentCountry	- The administrator(s) can assign the MerchantEstablishmentCountry for specific products in the JSON file located at: cartridges\int_avatax_svcclient\cartridge\scripts\avaMerchantConf.json - The MerchantEstablishmentCountry is fetched during tax calculation and identified using a unique merchantSellerIdentifier.
2.	String	cartridges\int_avatax_svcclient\cartridge\scripts\avaMerchantConf.json	MerchantName	- The administrator(s) can assign the MerchantName for specific products in the JSON file located at: cartridges\int_avatax_svcclient\cartridge\scripts\avaMerchantConf.json - The MerchantName is fetched during tax calculation and identified using a unique merchantSellerIdentifier.
3.	String	cartridges\int_avatax_svcclient\cartridge\scripts\avaMerchantConf.json	MerchantVatId	- The administrator(s) can assign MerchantVatId for specific products in the JSON file located at: cartridges\int_avatax_svcclient\cartridge\scripts\avaMerchantConf.json - The MerchantVatId is fetched during tax calculation and identified using a unique merchantSellerIdentifier.
4.	String	cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddress.json and cartridges\int_avatax_sfra\cartridge\scripts\avaTax.js	transport	Product-level Transport field configuration: The administrator(s) can assign transport for specific products in the JSON file located at: cartridges\int_avatax_svcclient\cartridge\scripts\lineLevelAddress.json The Transport field is fetched during tax calculation and identified using a unique Product ID. Header-level Transport field configuration: The administrator(s) can assign transport at transaction level in the file located at: cartridges\int_avatax_sfra\cartridge\scripts\avaTax.js.
5.	String	cartridges\int_avatax_sfra\cartridge\scripts\avaTax.js	isSellerImporterOfRecord	Boolean value extracted from a custom field using the AvaTax metadata from the Salesforce Customer Profile page.
6.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	pointOfOrderOrigin	Billing address of the order during checkout.
7.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	marketplaceLiabilityType	Identifies who remits taxes on a transaction in a marketplace.
8.	String	cartridges\int_avatax_sfra\cartridge\scripts\helpers\avatax\calculateTaxHelper.js	originationSite	Name of the marketplace from where a transaction originated.

7.0. Integration Points

The following table shows the AvaTax Integration Points:

Sr. No.	Integration Page	Address Validation	Tax Calculation
1.	My Account	Yes	No
2.	Shipping Page	Yes	Yes
3.	Billing Page	No	Yes

8.0. Services

Navigate to **Merchant Tools > AvaTax > AvaTax settings > Services**

- **Test Connection** – It is used to validate the AvaTax Account credentials.
- **Void Transaction** – It is used to void/cancel the orders posted in the AvaTax. The AvaTax service response is returned and displayed in the Service Response box.
- **Commit Transaction** It is used to commit the orders posted in the AvaTax. The AvaTax service response is returned and displayed in the Service Response box.
- **Validate Address** – It is used to validate shipping address of an order and receive a validated address as response.

Note: All the above features are for the testing purpose and can be scaled to process multiple Orders on the storefront.

9.0. Workflow Diagrams

Address Validation

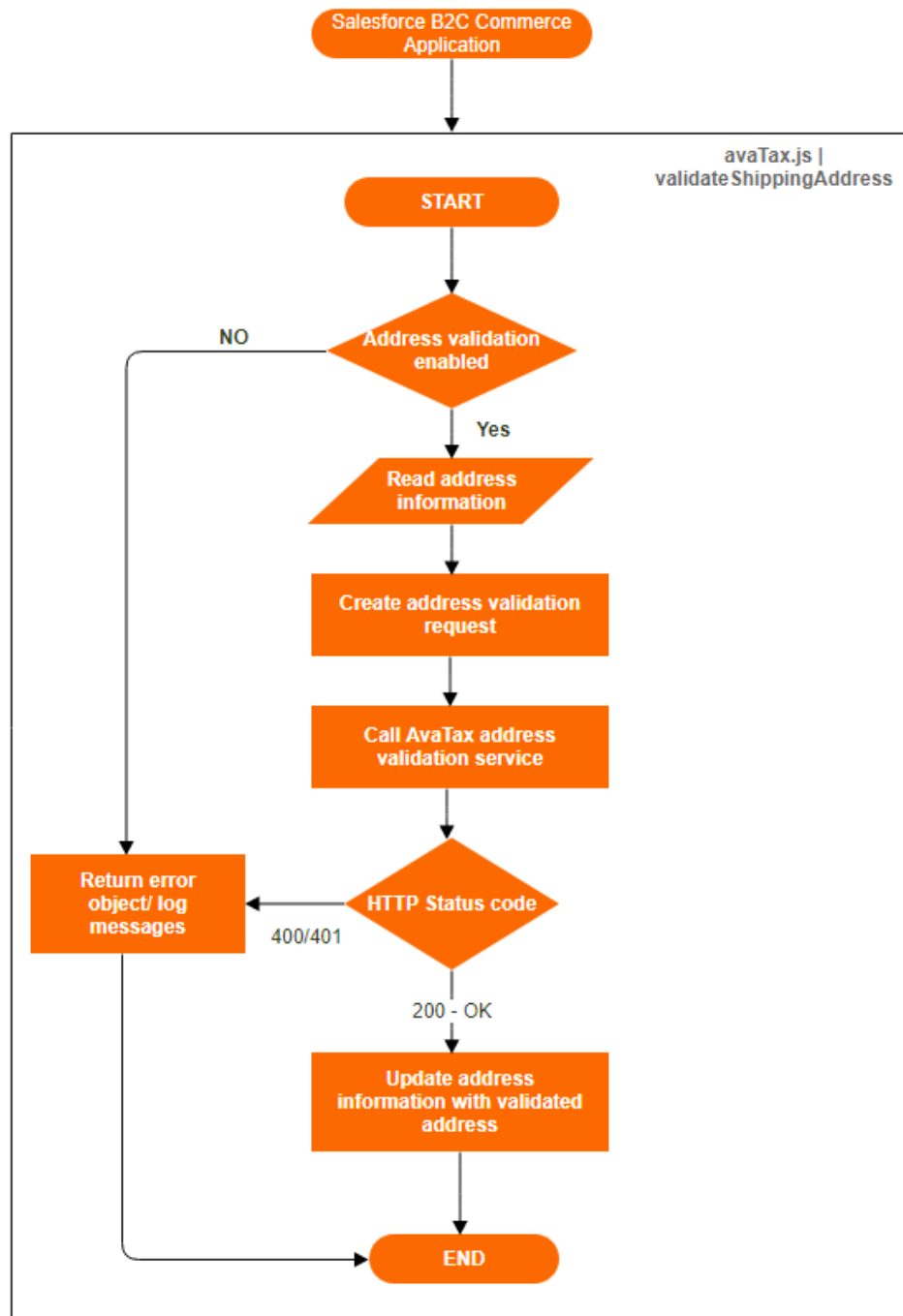


Figure 1: Address Validation

Tax Calculation

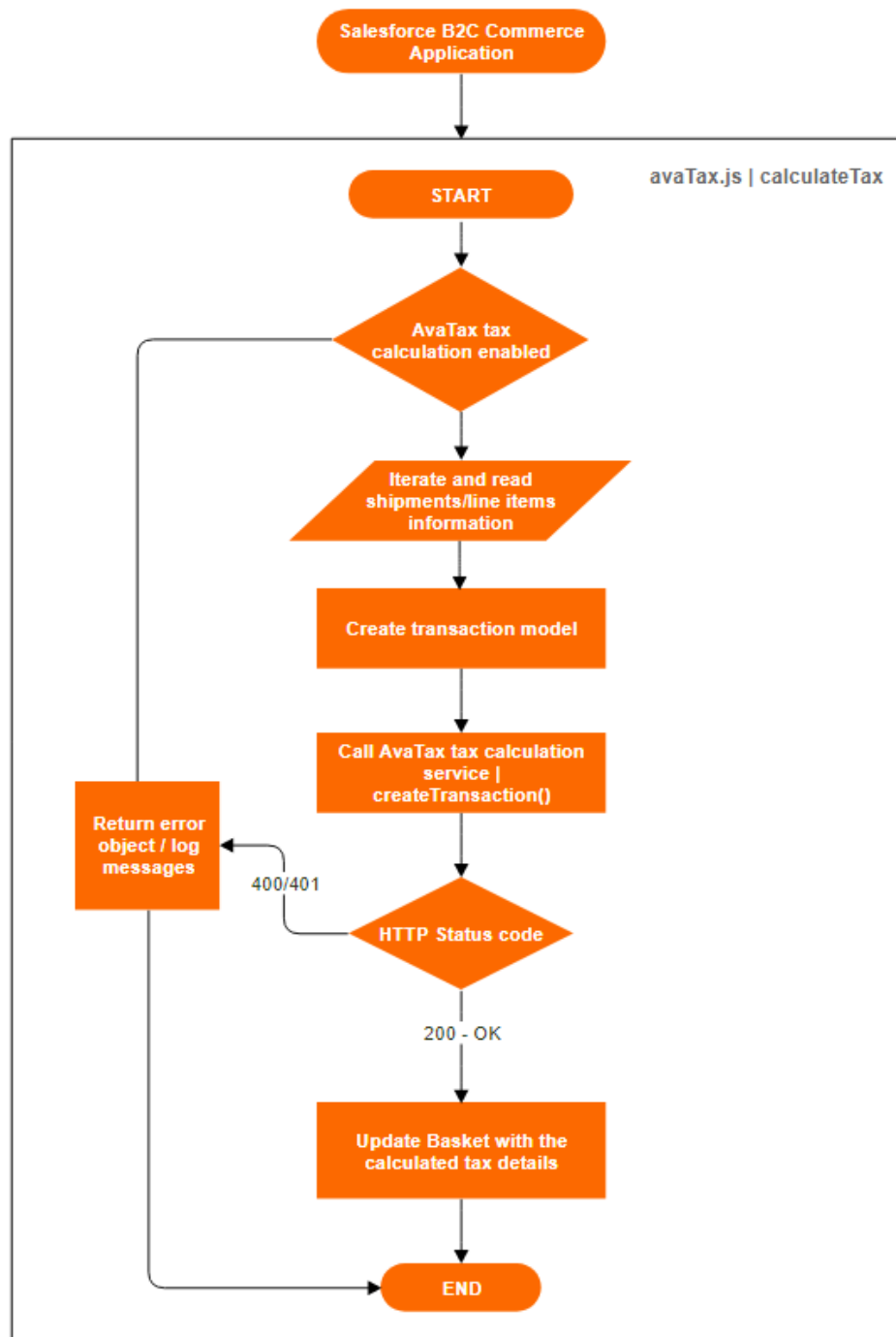


Figure 2: Tax Calculation