



Avalara AvaTax for Magento 2 for Sales Tax

System Integration Document for Avalara AvaTax

Release Date: 06/09/2023

Product Release: 2.5.3

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1.0 Connector Overview

The Magento 2 for Sales Tax provides rapid integration for Magento implementations. The extension is open-sourced package that can easily integrate into any Magento 2 instance. This extension can be configured in the Magento Administrator and contain all the elements necessary to perform a successful implementation of AvaTax **Tax Calculation**, **Address Validation**, **Tax Certificate**, **VAT** and **Cross Border** services.

2.0 Configuration

To configure the Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Sales Tax**.

The following table informs you about the configuration details:

2.1. Extension Mode

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Extension Mode**.

Sr. No.	Labels	Values	Default Values	Descriptions
1.	AvaTax Extension Version	<ul style="list-style-type: none"> Extension Version 	2.4.2	<ul style="list-style-type: none"> The extension version of AvaTax.
2.	Enable AvaTax	<ul style="list-style-type: none"> Yes No 	No	<ul style="list-style-type: none"> Module status.
3.	Mode	<ul style="list-style-type: none"> Development Production 	Development	<ul style="list-style-type: none"> Determine Tax API environment.
4.	Account Number (Production)			<ul style="list-style-type: none"> Production/Development Account Number.
5.	License Key (Production)			<ul style="list-style-type: none"> Production/Development License Key.
6.	Company	<ul style="list-style-type: none"> Company list 		<ul style="list-style-type: none"> Auto populate based on account number and license key.

2.2. Sales Tax

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Sales Tax**.

Sr. No.	Labels	Values	Default Values	Descriptions
1.	Taxation Policy	<ul style="list-style-type: none"> Net Gross 	Net	<ul style="list-style-type: none"> Net: Tax Exclusive Gross: Tax Inclusive
2.	Tax Mode	<ul style="list-style-type: none"> Disabled Estimate Tax Estimate Tax & Submit Transactions to AvaTax 	Estimate Tax & Submit Transactions to AvaTax	<ul style="list-style-type: none"> Disabled — AvaTax tax estimation will be disabled, and native Magento tax estimation will be used. Only use this option if you want to use Address Validation without tax estimation. Estimate Tax — AvaTax tax estimation will run during checkout but completed orders will not be submitted to AvaTax. Estimate Tax & Submit Transactions to AvaTax — AvaTax tax estimation will run during checkout and invoices and credit memos will be submitted to AvaTax.
3.	Taxable Countries	<ul style="list-style-type: none"> All Countries List 	United State Canada	<ul style="list-style-type: none"> Select which countries to enable for tax calculation
4.	Filter Tax Calculation By Region	<ul style="list-style-type: none"> Yes No 	No	<ul style="list-style-type: none"> Should tax calculation only apply to certain regions? Only change this to Yes if you have a specific reason to do so

Sr. No.	Labels	Values	Default Values	Descriptions
5.	Calculate Tax Before Discount	<ul style="list-style-type: none"> • Yes • No 	No	<ul style="list-style-type: none"> • Should tax be calculated on each item before discounts are applied
6.	Commit Submitted Transactions	<ul style="list-style-type: none"> • Yes • No 	Yes	<ul style="list-style-type: none"> • Should transactions sent to AvaTax be committed? Only change to No if you have specific reason to do so.
7.	Customer Code Format	<ul style="list-style-type: none"> • List of Customer Attributes 	ID	<ul style="list-style-type: none"> • Select a format for customers to be identified in AvaTax
8.	UPC Attribute To Use As Item Code	<ul style="list-style-type: none"> • List of Product Attributes 	No Attribute	<ul style="list-style-type: none"> • Optional. By default, this extension sends the Magento product SKU to the AvaTax ItemCode field
9.	Ref1 Attribute	<ul style="list-style-type: none"> • List of Product Attributes 	No Attribute	<ul style="list-style-type: none"> • Optional. AvaTax allows you to pass arbitrary information into two reference fields for each line item
10.	Ref2 Attribute	<ul style="list-style-type: none"> • List of Product Attributes 	No Attribute	<ul style="list-style-type: none"> • Optional. AvaTax allows you to pass arbitrary information into two reference fields for each line item
11.	Location Code			<ul style="list-style-type: none"> • Optional, unless outlet-based reporting is needed. Location code is a value assigned by some State jurisdictions that identifies a particular store location. These States may require tax liabilities to be broken out separately for each store Location. Read more in the AvaTax documentation.
12.	Shipping Tax Code		FR020100	<ul style="list-style-type: none"> • The Avalara tax code used to classify the shipping service type.
13.	Shipping SKU		Shipping	<ul style="list-style-type: none"> • The SKU sent to denote shipping costs.
14.	Adjustment Refund SKU		Adjustment	<ul style="list-style-type: none"> • The SKU sent to denote positive adjustments on Credit Memos.
15.	Adjustment Fee SKU		Adjustment	<ul style="list-style-type: none"> • The SKU sent to denote negative adjustments on Credit Memos.
16.	Gift Wrap Order SKU		GwOrder	<ul style="list-style-type: none"> • The SKU sent AvaTax to denote gift wrap order costs. Only relevant for Magento Enterprise.
17.	Gift Wrap Items SKU		Gwltems	<ul style="list-style-type: none"> • The SKU sent AvaTax to denote gift wrap item costs. Only relevant for Magento Enterprise.
18.	Gift Wrap Printed Card SKU		GwPrintedCard	<ul style="list-style-type: none"> • The SKU sent to denote gift wrap printed card costs. Only relevant for Magento Enterprise.

2.3. Address Validation

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Address Validation**.

Sr. No.	Labels	Values	Default Values	Descriptions
1.	Enable Address Validation	<ul style="list-style-type: none"> • Yes • No 	No	<ul style="list-style-type: none"> • Enable validation of shipping address using the AvaTax Address Validation API.
2.	Enabled Countries	<ul style="list-style-type: none"> • United State • Canada 		<ul style="list-style-type: none"> • Select which countries to enable for address validation. AvaTax Address Validation currently only supports United States and Canada.

Sr. No.	Labels	Values	Default Values	Descriptions
3.	Allow User To Choose Original (Invalid) Address	<ul style="list-style-type: none"> • Yes • No 	Yes	<ul style="list-style-type: none"> • Set this to Yes to allow the user to choose between the original and validated addresses (valid address will be selected by default). If set to No, user will be required to use the validated address or update their original address. This setting is ignored in the backend and the user will always have a choice.
4.	Address Validation Instructions		To ensure accurate delivery, we suggest the changes highlighted below. Please choose which address you would like to use. If neither option is correct, edit your address .	<ul style="list-style-type: none"> • When user progresses to the Review & Payments step of the checkout, this text will be displayed above the Suggested Address and Original Address checkboxes.
5.	Address Validation Error Message		We were unable to validate your address. <p class="error-message"></p> If the address below is correct then you don't need to do anything. To change your address, click here .	<ul style="list-style-type: none"> • This text will be displayed when there is an error in the address validation process. The element assigned the "error-message" class will be filled with the error message summary returned by AvaTax.

2.4. VAT

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > VAT**.

Sr. No.	Labels	Values	Default Values	Descriptions
1.	Submit VAT Number to AvaTax	<ul style="list-style-type: none"> • Yes • No 	No	<ul style="list-style-type: none"> • Set this to Yes if you want to send VAT tax numbers to AvaTax to affect tax calculation. If a guest or customer has a VAT number set on their Magento shipping address, it will be used. Otherwise, the Tax/VAT Number attribute value from the customer record will be used. If a VAT number is not found, nothing will be sent. The VAT number will be sent to the BusinessIdentificationNo field in AvaTax.
2.	Submit VAT Transport	<ul style="list-style-type: none"> • Shipping Method: List of enabled shipping methods • Transport: Possible Transport values received from AvaTax API 	Seller	<ul style="list-style-type: none"> • Admin can assign separate Transport values for all enabled shipping methods, and this is sent in Tax Calculation request for the selected shipping method on Checkout.

2.5. Cross-Border

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Cross-Border**.

Sr. No.	Labels	Values	Default Values	Descriptions
1.	Enable Duty	<ul style="list-style-type: none"> • Yes • No 	No	<ul style="list-style-type: none"> • Duty includes duties, fees and taxes relevant to cross border shipments. This feature must be enabled in your Avalara account. Note that the proper use of this feature requires appropriate configuration of Cross Border Classes (see Stores > AvaTax > Cross Border Classes) and assignment of Cross Border Types to products.
2.	Ground Shipping Methods	<ul style="list-style-type: none"> • Yes • No 	No	<ul style="list-style-type: none"> • List of all ground shipping methods. Ensure that the shipping methods selected above are not selected in either of the other shipping method lists.

2.6. Exemption Certificate Management

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Exemption Certificate Management**.

Sr. No.	Labels	Values	Default Values	Descriptions
1.	Enable Exemption Certificate Management	<ul style="list-style-type: none"> • Yes • No 	No	<ul style="list-style-type: none"> • AvaTax Document Management allows users to upload documents that verify that they're tax exempt and if they do, they won't be charged tax in the checkout. This feature must be enabled in your Avalara account.
2.	Enabled Countries	<ul style="list-style-type: none"> • United State • Canada 		<ul style="list-style-type: none"> • Select which countries to enable for Document Management.
3.	Checkout Link Text: New Cert(No certs exist)		Add your first certificate	<ul style="list-style-type: none"> • The text of the link that appears at checkout allowing the initiation of a new certificate. This text shows if there are no existing certificates for the customer.
4.	Checkout Link Text: New Cert(Certs exist)		Add a new certificate	<ul style="list-style-type: none"> • The text of the link that appears at checkout allowing the initiation of a new certificate. This text shows if there are already existing certificates for the customer.
5.	Checkout Link Text: Manage Existing Certs		Manage existing certificates	<ul style="list-style-type: none"> • The text of the link that appears at checkout allowing the user to navigate to certificate management in My Account. This text shows only if there are existing certificates for the customer.
6.	Change Status name of the Certificate	<ul style="list-style-type: none"> • No • Yes 	No	<ul style="list-style-type: none"> • Rename Status of the Certificate
7.	'Approved' Status Name(Default name)			<ul style="list-style-type: none"> • This text will be shown instead of the default certificate status name('Approved') in the 'Tax Certificates' grid of the My Account.
8.	'Denied' Status Name(Default name)			<ul style="list-style-type: none"> • This text will be shown instead of the default certificate status name('Denied') in the 'Tax Certificates' grid of the My Account.

Sr. No.	Labels	Values	Default Values	Descriptions
9.	'Pending' Status Name(Default name)			<ul style="list-style-type: none"> This text will be shown instead of the default certificate status name('Pending') in the 'Tax Certificates' grid of the My Account.
10.	Disable Certificates Auto Validation	<ul style="list-style-type: none"> Yes No 	No	<ul style="list-style-type: none"> Select to disable the auto-validation

2.7. Error, Logs and Queue

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Error, Logs and Queue.**

Sr. No.	Labels	Values	Default Values	Descriptions
Error Handling Settings				
1.	Error Action	<ul style="list-style-type: none"> Allow checkout & fall back to native Magento tax calculation (no error message) Disable checkout & show error message 	Allow checkout & fall back to native Magento tax calculation (no error message)	<ul style="list-style-type: none"> What should happen if Magento is unable to retrieve taxes from the AvaTax API. Regardless of which option is selected, if there is an error in the AvaTax tax estimation, the extension will fall back to using native Magento tax rules. However if Disable checkout & show error message is selected, the extension will prevent users and admins from placing orders.
2.	Enable logging of AvaTax response data	<ul style="list-style-type: none"> Yes No 	Yes	<ul style="list-style-type: none"> By default, AvaTax API response data for Orders, Invoices, and Credit Memo API calls are stored in the avatax_sales_order, avatax_sales_invoice, and avatax_sales_creditmemo tables. This data is stored in case there is ever a need to compare the exact response data from AvaTax with what is saved on the Magento tax fields. Disable this logging if you won't ever need this
3.	AvaTax API Timeout		15	<ul style="list-style-type: none"> (Seconds) This field defines how long Magento should wait to hear from AvaTax's servers before assuming no response will be given.
Logging Settings				
4.	Database Log Level	<ul style="list-style-type: none"> Debug Info Notice Warning Error Critical 	Warning	<ul style="list-style-type: none"> Warning is recommended for production use.
5.	Database Log Detail	<ul style="list-style-type: none"> Minimal Normal Extra 	Minimal	<ul style="list-style-type: none"> Minimal is recommended for production use.
6.	Database Log Record Lifetime		180	<ul style="list-style-type: none"> Required. Days before entries are auto-purged.
7.	Enable Logging To File	<ul style="list-style-type: none"> Yes No 	Yes	<ul style="list-style-type: none"> Archiving of log files is affected by System -> Admin Actions Log Archiving

Sr. No.	Labels	Values	Default Values	Descriptions
8.	File Log Mode	<ul style="list-style-type: none"> • Separate AvaTax Log File • Combined With Magento Log Files 	Separate AvaTax Log File	<ul style="list-style-type: none"> • Log files are located in the magento var/log/ directory
9.	Enable Built-In Log File Rotation	<ul style="list-style-type: none"> • No • Yes 	No	<ul style="list-style-type: none"> • Automatic log file rotation will allow you to control how much history is maintained in the AvaTax log files, and separate them by day. For more efficient management of log files you should disable this option and use something like logrotate to handle the rotation of log files at the system level.
10.	Built-In Log File Rotation Max Files		60	<ul style="list-style-type: none"> • The number of files/days to maintain in the log directory when rotating. The log file rotator will create a new file each day.
11.	File Log Level	<ul style="list-style-type: none"> • Debug • Info • Notice • Warning • Error • Critical 	Warning	<ul style="list-style-type: none"> • Warning is recommended for production use.
12.	File Log Detail	<ul style="list-style-type: none"> • Minimal • Normal • Extra 	Normal	<ul style="list-style-type: none"> • Normal is recommended for production use.

Queue Processing Settings

If Tax Mode is set to Estimate Tax & Submit Transactions to AvaTax, then queue processing is enabled. Otherwise, the queue will not submit invoices and credit memos to AvaTax as transaction submissions are disabled.

13.	Queue Processing Type	<ul style="list-style-type: none"> • Normal • Batch 	Normal	<ul style="list-style-type: none"> • Normal Queue Processing - each item of Queue will be processed separately. Batch Queue Processing - Queue will be processed by 1000 items batch.
14.	Enable Queue Admin Notification	<ul style="list-style-type: none"> • Yes • No 	Yes	<ul style="list-style-type: none"> • A notification will be displayed at the top of any admin page if there are pending queue records waiting to be submitted to AvaTax but no attempts have been made in the last 24 hours to submit them.
15.	Enable Queue Failure Notification	<ul style="list-style-type: none"> • Yes • No 	Yes	<ul style="list-style-type: none"> • A notification will be displayed at the top of any admin page if there are any failed queue records.
16.	Max Queue Retry Attempts		15	<ul style="list-style-type: none"> • Please enter a number 1 or greater in this field.
17.	Complete Queue Lifetime		60	<ul style="list-style-type: none"> • Required. Days before entries are auto-purged.
18.	Failed Queue Lifetime		180	<ul style="list-style-type: none"> • Required. Days before entries are auto-purged.
19.	Queue Processing Type	<ul style="list-style-type: none"> • Normal • Batch 	Normal	<ul style="list-style-type: none"> • Normal Queue Processing - each item of Queue will be processed separately. Batch Queue Processing - Queue will be processed by 1000 items batch.
20.	Enable Queue Admin Notification	<ul style="list-style-type: none"> • Yes • No 	Yes	<ul style="list-style-type: none"> • A notification will be displayed at the top of any admin page if there are pending queue records waiting to be submitted to AvaTax but no attempts have been made in the last 24 hours to submit them.

Sr. No.	Labels	Values	Default Values	Descriptions
21.	Enable Queue Failure Notification	<ul style="list-style-type: none"> • Yes • No 	Yes	<ul style="list-style-type: none"> • A notification will be displayed at the top of any admin page if there are any failed queue records.

2.8. Advanced

To configure the Extension Mode for Magento 2 for Sales Tax Connector, navigate to **Admin > Stores > AvaTax Configuration > Advanced.**

Sr. No.	Labels	Values	Default Values	Descriptions
1.	Enable tax calculation for Adjustment Refund and Adjustment Fee	<ul style="list-style-type: none"> • No • Yes 	No	<ul style="list-style-type: none"> • By default, Magento does not calculate taxes for Adjustment Refund and Adjustment Fee. If this option will be enabled, AvaTax will calculate Adjustment related taxes.
2.	Tables Exemptions List (comma-separated list)		negotiable_quote_item,company_order_entity	<ul style="list-style-type: none"> • At each stage of ordering (adding to cart, choosing the payment address and delivery address, delivery method, etc.) the ClassyLama_Avatax extension monitors the correctness of the calculated taxes, updates their values through the Avalara service API and writes to certain tables in the database of the website. • What should happen if Magento is unable to retrieve taxes from the AvaTax API. Regardless of which option is selected, if there is an error in the AvaTax tax estimation, the extension will fall back to using native Magento tax rules. However, if Disable checkout & show error message is selected, the extension will prevent users and admins from placing orders.

3.0 List of Integration Points

The following table informs you about the list of integration points given on the Magento 2 integration pages:

Sr. No.	Platform Functionality	Address Validation	Tax Calculation	Tax Certificate	Cross Border
1.	Magento Admin - Customer Add/Update Address	Yes	No	No	No
2.	Magento Admin - Customer Add/Invalidate Tax Certificate	No	No	Yes	No
3.	Magento Admin – View/Add/Delete Customer Tax Classes	No	Yes	No	Yes
4.	Magento Admin – View/Add/Delete Product Tax Classes	No	Yes	No	No
5.	Magento Admin – View/Add/Delete Cross Border Types	No	Yes	No	Yes
6.	Magento Admin – View/Add/Delete Cross Border Classes	No	Yes	No	Yes
7.	Magento Admin – View/Clear Logs	Yes	Yes	No	Yes
8.	Magento Admin – View/Clear/Process Queue Items	No	Yes	No	No
9.	Magento Admin – Add/Update Product	No	No	No	Yes
10.	Magento StoreFront - My Account Address Add/Update Address	Yes	No	No	No
11.	Magento StoreFront - My Account List/Add/Invalidate Tax Certificates	No	No	Yes	No
12.	Magento StoreFront Checkout - Shipping	Yes	No	No	No
13.	Magento StoreFront Checkout - Review & Payments	No	Yes	Yes	Yes
14.	Magento Admin – Invoice Generation	No	Yes	No	No
15.	Magento Admin - Credit Memo	No	Yes	No	No
16.	Magento Admin - New Order	Yes	Yes	Yes	Yes

4.0 Request Mapping

The following fields/attributes displays the integration points used for the Address Validation:

4.1. Address Validation

Sr. No.	Magento Fields	AvaTax Fields	Data Types
1.	street	line1	String
2.	street	line2	String
3.	street	line3	String
4.	city	city	String
5.	regionId	region	String
6.	countryId	country	String
7.	postalCode	postalCode	String

4.2. Tax Calculation

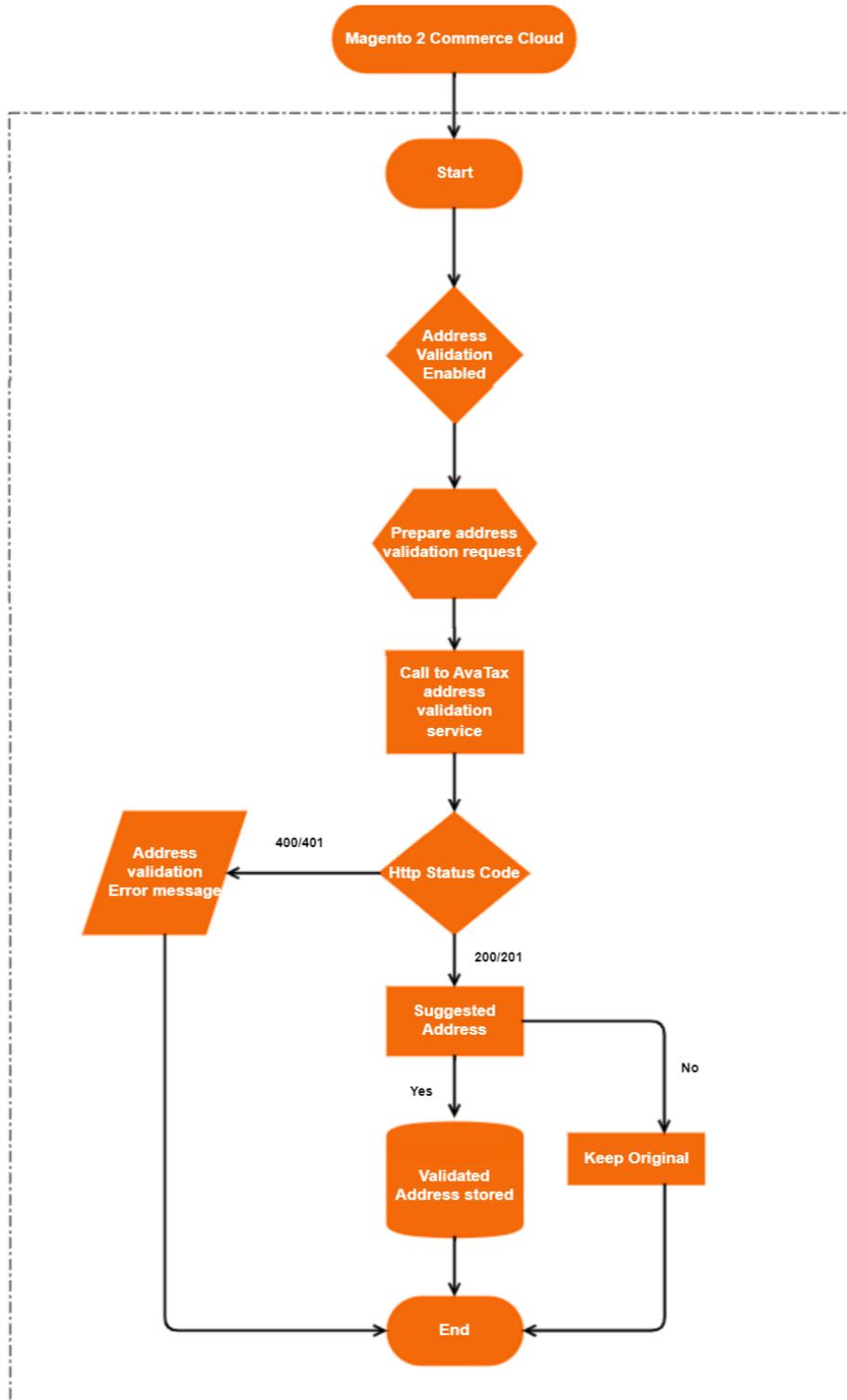
The following fields/attributes displays the integration points used for the Tax Calculation:

Sr. No.	API Fields	Magento Fields	Data Type	Descriptions
1.	X-Avalara-Client	Header (Magento Base Url)	String	<ul style="list-style-type: none"> App Name + App Version + Adapter Name + Adapter Version + Machine Name Example: Magento for SalesTax 2.3.1v2;2.3.1; PhpRestClient; 22.3.0; www.local-salestax.com
2.	code	QuoteId/InvoiceId/CreditMemoId	String	<ul style="list-style-type: none"> The internal reference code used by the client application. This is used for operations such as Get, Adjust, Settle, and Void. If you leave the transaction code blank, a GUID will be assigned to each transaction. Example: quote-1, INV000001, CM000001
3.	lines	Product/QuoteItems/OrderItems/InvoiceItems/ProductTax Classes	LineItemModel	<ul style="list-style-type: none"> A list of line items that will appear on this transaction. LineItemModel
4.	type	entity_type from eav_entity_types	String	<ul style="list-style-type: none"> Specifies the type of document to create. A document type ending with Invoice is a permanent transaction that will be recorded in AvaTax. A document type ending with Order is a temporary estimate that will not be preserved.

Sr. No.	API Fields	Magento Fields	Data Type	Descriptions
				<ul style="list-style-type: none"> Example: SalesOrder, SalesInvoice, PurchaseOrder, Purchase Invoice, ReturnOrder, ReturnInvoice
5.	companyCode	AvaTax Company Code	String	<ul style="list-style-type: none"> Specify the code of the company creating this transaction here. If you leave this value null, your account's default company will be used instead.
6.	date	created_at	String	<ul style="list-style-type: none"> Transaction Date - The date on the invoice, purchase order, etc.
7.	customerCode	Customer ID/Email depend upon Customer Code Format setting	String	<ul style="list-style-type: none"> The client application customer reference code. Note: This field is case sensitive. To have exemption certificates apply, this value should be the same as the one passed to create a customer.
8.	entityUseCode	Based on Customer Class	String	<ul style="list-style-type: none"> The client application customer or usage type.
9.	businessIdentificationNo			<ul style="list-style-type: none"> VAT business identification number for the customer for this transaction
10.	currencyCode	Currency table	String	<ul style="list-style-type: none"> The three-character ISO 4217 currency code for this transaction.
11.	exchangeRate	Currency rate table	Float	<ul style="list-style-type: none"> Currency exchange rate from this transaction to the company base currency.
12.	exchangeRateEffectiveDate	Currency rate table	String	<ul style="list-style-type: none"> Effective date of the exchange rate.
13.	reportingLocationCode		String	<ul style="list-style-type: none"> Sets the sale location code (Outlet ID) for reporting this document to the tax authority.
14.	purchaseOrderNo	Increment_id	String	<ul style="list-style-type: none"> Purchase Order Number for this document.
15.	addresses	Address Tables	AddressesModel	<ul style="list-style-type: none"> Default addresses for all lines in this document. AddressesModel
16.	parameters	AvaTax – General Config's transport and transport_shipping Shipping: "country:region:shipping method:amount currency" Example: "US:WA:flatrate_flatrate:50:00 USD"	String	<ul style="list-style-type: none"> Admin can assign separate Transport values for all enabled shipping methods, and this is sent in Tax Calculation request for the selected shipping method on Checkout.

5.0 Workflows

Address Validation:



Tax Calculation:

