

# AvaTax for Communications Custom Sort Utility User Manual

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# **Document Revision History**

The Revision History log lists the date and description of the most recent revisions or versions of the document.

Date	Version	Description
03/02/2016	0003	Avalara branding updates to reflect the transition to the new company
		and product names have been incorporated into this document.
		Please see <b>Appendix B – Avalara Product Names</b> for specific changes in
		product references and descriptions.
04/05/2016	0004	Updates and additions in Section 1.1 AFC License and Section 1.2 AFC
		SaaS Standard to address use of the Custom Sort Utility.
04/25/2016	0005	Update to table in Section 2.2 Configuration Fields for
		Sorting/Reporting. Added descriptions for values TAX_TYPE_DESC,
		TAX_CAT and TAX_CAT_DESC to table.
05/13/2016	0006	Inserted new <b>Section 1.3 AFC SaaS Pro</b> related to custom reports.
06/24/2016	0007	Updated Section 1.1.2 Arguments and Section 1.1.3 Examples with
		custom sort option details.
02/23/2017	8000	Updated tax category values and descriptions in table of <b>Section 2.2</b> .
07/27/2017	0009	Added note related to log file path in Section 1.1.2 Arguments.
10/25/2017	0010	Updated Avalara contact information (address and support site).
		Removed <b>Appendix B – Avalara Product Names</b> .

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# 1. Overview

The Custom Sort Utility is designed to allow clients to produce taxation reports which are sorted and summarized using client-specified fields and/or options. The utility is restricted to fields available in the AvaTax for Communications (AFC) transaction log, which can be affected by configuration settings in the EZtax.cfg.

This utility uses the AvaTax for Communications (AFC) API library.

#### 1.1 AFC License

#### 1.1.1 Command Line Usage

customsort -cfg customsort.cfg [-log logfile] [-data datapath] [-work workpath] [-ext extension] [-?]

# 1.1.2 Arguments

-cfg customsort.cfg : Required. Custom sort configuration to be used.

-log logfile\* : EZTax log file to be processed (DEF: EZTax.log).

\*The full path for the log file must be specified.

-data <path> : Data directory; overrides config file value.

-work <path> : Working directory; overrides config file value.

-ext <ext> : Result file extension without '.'; overrides reserved config file extension.

-summarize <sumfile> : Log file is summarized into sumfile. On large log files, this option can

substantially speed up the sorting process.

-out <fname> : Output base filename; overrides config file. This option can be used when there

is a need to set the output files from a script so that different sorts can share the

same configuration file.

-? : Display usage and exit

# 1.1.3 Examples

customsort -cfg customsort.cfg

customsort -cfg customsort.cfg -log mylogfile.log

customsort -cfg customsort.cfg -log mylogfile.log -data path/to/data customsort -cfg customsort.cfg -log mylogfile.log -work path/to/workingdirectory customsort -cfg customsort.cfg -log mylogfile.log -ext csv customsort -cfg customsort.cfg -log mylogfile.log -summarize quicksort.log customsort -cfg customsort.cfg -log mylogfile.log -out mysort

# 1.1.4 Output (in working directory)

Taxation Reports - Sorted and summarized taxation reports per configuration options

Metrics Report - Custom sort processing metrics

Status file - Processing status and any errors that might have occurred

# 1.2 AFC SaaS Standard

# 1.2.1 Usage

The Custom Sort Utility can be called in AFC SaaS Standard to allow clients to produce taxation reports which are sorted and summarized using client-specified fields and/or options based on the transactions contained within the ftp.zip input file. The resulting report is a CSV file that can then be opened and edited within a spreadsheet program such as Microsoft Excel. In order for the custom sort feature to be applied, a configuration file – customsort.cfg – must be either be persisted in your account or embedded in the input zip file (ftp.zip) along with the transaction input file in the Extended AFC SaaS Standard format.

To make the Custom Sort Config file a persisted file, please contact <a href="mailto:communicationsupport@avalara.com">communicationsupport@avalara.com</a> for further assistance. Persisting the file is the preferred method of generating the Custom Sort report.

To embed the Custom Sort Config file, place the customsort.cfg file into the ftp.zip file along with an Extended Format input file.

# 1.2.2 AFC SaaS Standard Custom Sort Example

# 1.2.2.1 Sample customsort.cfg file

BASE: srtcomma201
FIELD: P\_CODE
FIELD: CUST\_NO
FIELD: INV\_NO
OPTION: NBA\_FILE
OPTION: NCA\_FILE
OPTION: NO DELETE LOG

OPTION: HEADER

CALCULATED\_VALUE\_PRECISION: 6

DEFAULT\_EXT: csv DELIMITER: ','

# 1.2.2.2 Sample input file with the base name KML150117AA.csv

Request		BillTo	BillTo	BillTo	BillTo	BillTo		Transaction	Service	Customer	Invoice
Type	Date	Country ISO	State	County	Locality	ZipCode	Charge	Type	Type	Number	Number
CalcTaxes	20160315	USA	FL	Brevard	Cocoa Beach	32931	50	19	6	Customer 1	987654
CalcTaxes	20160315	USA	FL	Brevard	Cocoa Beach	32931	15	19	50	Customer 1	123456
CalcTaxes	20160315	USA	CA	San Francisco	San Francisco	94102	50	13	6	Customer 2	4567890
CalcTaxes	20160315	USA	CA	San Francisco	San Francisco	94102	15	13	50	Customer 2	4567890
CalcTaxes	20160315	USA	NY	New York	New York	10001	50	16	6	Customer 3	1234
CalcTaxes	20160315	USA	NY	New York	New York	10001	25	16	36	Customer 3	5678

# 1.2.2.3 Output Files

# EZtax\_160405.rpt

Custom Sort Processing Metrics

Start Time: Tue Apr 05 10:53:57 2016
End Time: Tue Apr 05 10:53:57 2016

Taxes Input Metrics

Records: 22 File: C:\BILLSOFTONLINE\KML\KML\EZTax\EZTax.log

Taxes Output Metrics

Summarized Records: 19 File: EZtax\_160405\_ssf.csv
Non-billable Records: 3 File: EZtax\_160405\_nba.csv
Non-compliance Records: 0 File: EZtax\_160405\_nca.csv
Total Summarized Records: 22

End of Report

# EZtax\_160405\_nca.csv

C	Country	State	County	Locality	ТахТуре	TaxLvl	TaxRate	TaxAmount	SaleAmt	ExemptAmt	AdjustmentAmt	NetTaxable	Minutes	Lines	PCode	CustNo	InvoiceNo
Γ																	

# EZtax\_160405\_nba.csv

Country	State	County	Locality	ТахТуре	TaxLvl	TaxRate	TaxAmount	SaleAmt	ExemptAmt	AdjustmentAmt	NetTaxable	Minutes	Lines	PCode	CustNo	InvoiceNo
USA				232	0	0.01635	0.303293	50	31.45	0	18.55	0	0	0	Customer 2	4567890
USA				235	0	0.01635	0.159167	15	5.265	0	9.735	0	0	0	Customer 1	123456
USA				235	0	0.01635	0.530558	50	17.55	0	32.45	0	0	0	Customer 1	987654

# EZtax\_160405\_ssf.csv

Country	State	County	Locality	ТахТуре	TaxLvl	TaxRate	TaxAmount	SaleAmt	ExemptAmt	AdjustmentAmt	NetTaxable	Minutes	Lines	PCode	CustNo	InvoiceNo
USA				55		0.182	3.3761	50	31.45	0	18.55	0	0	0	Customer 2	4567890
USA				72	0	0.08	0.08	50	0	0	50	0	0	0	Customer 3	1234
USA				162	0	0.182	1.77177	15	5.265	0	9.735	0	0	0	Customer 1	123456
USA				162	0	0.182	5.9059	50	17.55	0	32.45	0	0	0	Customer 1	987654
USA				170	0	0.014167	0.014167	50	0	0	50	0	0	0	Customer 2	4567890
USA				226	0	0.00331	0.032223	15	5.265	0	9.735	0	0	0	Customer 1	123456
USA				226	0	0.00331	0.10741	50	17.55	0	32.45	0	0	0	Customer 1	987654
USA	FL	BREVARD		64	1	0.0492	0	15	15	0	0	0	0	539600	Customer 1	123456
USA	FL	BREVARD		64	1	0.0492	0	50	50	0	0	0	0	539600	Customer 1	987654
USA	FL	BREVARD	COCOA BEACH	14	1	0.0237	0.398255	16.803993	0	0	16.803993	0	0	540000	Customer 1	123456
USA	FL	BREVARD	COCOA BEACH	14	1	0.0237	1.327515	56.013309	0	0	56.013309	0	0	540000	Customer 1	987654
USA	FL	BREVARD	COCOA BEACH	64	3	0.0552	0	15	15	0	0	0	0	540000	Customer 1	123456
USA	FL	BREVARD	COCOA BEACH	64	3	0.0552	0	50	50	0	0	0	0	540000	Customer 1	987654
USA	FL	BREVARD	COCOA BEACH	160	1	0.0015	0.025206	16.803993	0	0	16.803993	0	0	540000	Customer 1	123456
USA	FL	BREVARD	COCOA BEACH	160	1	0.0015	0.08402	56.013309	0	0	56.013309	0	0	540000	Customer 1	987654
USA	NY			180	1	0.000975	0.048828	50.08	0	0	50.08	0	0	2502500	Customer 3	1234
USA	NY			180	1	0.000975	0.024375	25	0	0	25	0	0	2502500	Customer 3	5678
USA	NY	NEW YORK	NEW YORK	73	3	0.049025	2.58154	52.657618	0	0	52.657618	0	0	2604100	Customer 3	1234
USA	NY	NEW YORK	NEW YORK	73	3	0.049025	1.288809	26.288809	0	0	26.288809	0	0	2604100	Customer 3	5678

# 1.2.3 Output (in working directory)

Taxation Reports

- Compliance, non-compliance (as applicable) and non-billable (as applicable) custom sort reports located in the Report zip file. Examples: {output\_filename\_format}\_ssf.csv, {output\_filename\_format}\_nca.csv, {output\_filename\_format}\_nba.csv

Note: {output\_filename\_format} is defined in customsort.cfg.

**Metrics Reports** 

- Custom Sort report metrics located in the Report zip file.

Example: {output\_filename\_format}.rpt

Note: {output\_filename\_format} is defined in customsort.cfg.

#### 1.3 AFC SaaS Pro

# 1.3.1 Usage

AFC SaaS Pro provides the ability to dynamically generate a custom report containing the transactional data available in the database for a specified timeframe. The general process is as follows:

- 1. Invoke the **CreateReport** API in the web service. The **ReportOptions** parameter specifies which data to include in the report.
- 2. The report is processed in the background. The resulting output file is placed in the designated client FTP folder where it can be downloaded. This process takes anywhere from 30-90 minutes to complete.
- 3. Once the report has been generated and is ready for download, an email notification is sent to the email address(s) included in the **ReportOptions**.

**Note:** Prior to the first time executing the CreateReport API call, please notify <a href="mailto:communicationsupport@avalara.com">communicationsupport@avalara.com</a>. If not already established, an FTP account needs to be created and the FTP credentials provided.

Please refer to TM\_00116\_AFC SaaS Pro Telecom Developer Manual and TM\_00117\_AFC SaaS Pro SAU Developer Manual for further information.

# 2. Custom Sort Configuration Format/Options

# General Rules / Notes

- Configuration file should be in standard text file format.
- You can use the slash-slash ("//") string to indicate a comment
- You must define, at a minimum, either the base format and/or fields to be reported.
- If you specify the tax data directory, you do not need a filelocs.txt.
- Fields will be sorted in the order they are listed in the configuration file.

# 2.1 Configuration Options

Token	Description
OUTPUT_FILENAME_FORMAT	Format to be used for output / reports Values: Valid filename or supported pattern. Default is EZTax.
	EXAMPLE: OUTPUT_FILENAME_FORMAT: EZtax_{%y%m%d}

Token	Descriptio	n					
	Pattern	Desc	Example				
	%d	Day of the month (01-31)	19				
	%H	Hour in 24h format (00-23)	14				
	%I	Hour in 12h format (01-12)  Day of the year (001-366)	05				
	%j	231					
	%m	08					
	%M	Minute (00-59)	55				
	%р	AM or PM designation	PM				
	%S	Second (00-61)	02				
	%у	Year, last two digits (00-99)	01				
	%Y	Year	2012				
DACE	Th						
BASE		ormat to be used.					
	NONE	pose 1): Default value in <b>BOLD</b> .					
		MMA20L					
		MMA20L-P					
		MMA20LD					
	EZLOG						
		CUSTPTS					
	EXAMPLE:						
	BASE: SRTCOMMA20L						
OPTION	User supplied option.						
		pose 1 per line): Default values in <b>BOLD</b> .					
	NBA_F	ILE   DISCARD_NBA_RECS   INCLUDE_NBA_	_RECS				
	NCA_F	<b>ILE</b>   DISCARD_NCA_RECS   INCLUDE_NCA_	_RECS				
	NO_DE	ELETE_LOG   DELETE_LOG					
	NO_HE	EADER   <b>HEADER</b>					
	EXAMPLE:						
		N: NBA_FILE					
		N: NCA_FILE					
		N: NO_DELETE_LOG					
	OPTIO	N: HEADER					
	Note: Plan	se be aware that <b>NO_DELETE_LOG</b>   DELET	FING only applies to				
		e clients.  AFC SaaS Standard clients must so					
	NO_DELETI		ει απο ορασιτιο				
ALGORITHM		for calculating net taxable sale amount					
	_	pose 1): Default value in <b>BOLD</b> .					
		MMA20L					
		MMA20LD					
	ALLOW	/_NEG_NET					
	EXAMPLE:						
		RITHM: SRTCOMMA20L					
CALCULATED_VALUE_PRECISION		be used in reports for calculated floating	point.				
	Values: 0 -	- 6 (Default is 6)					

Token	Description
	EXAMPLE:
	CALCULATED_VALUE_PRECISION: 2
DEFAULT_EXT	Precision to be used in reports for calculated floating point.
	Values: valid file alpha numeric extension. Default is ssf.
	EXAMPLE:
	DEFAULT_EXT: ssf
	<b>Note:</b> Please be aware that this default value only applies to AFC License clients. AFC SaaS Standard clients must use CSV file format <sup>3</sup> .
DATA_DIR	Directory specify where the EZtax data resides.
	If this value is not set, then the file <b>filelocs.txt</b> must exist.
	VALUES: valid directory specification. There is no default.
	EXAMPLE (windows):
	DATA_DIR: C:\BillSoft\EZTax\Data
	EXAMPLE (unix/linux):
	DATA_DIR: /home/EZtax/install/db
WORKING_DIR	Working directory for custom sort.
	VALUES: valid directory specification. There is no default.
	EXAMPLE (windows):
	WORKING _DIR: E:\BillingApp\Working
	EXAMPLE (unix/linux):
	DATA_DIR: /home/BillingApp/Working

# 2.2 Configuration Fields for Sorting/Reporting

Token	Description
FIELD or NORPT	Usage of FIELD will be used both in the sort and the report output. Specifying NORPT will use the field in the sort be exclude it from the report.

Values	Description
P_CODE	Jurisdiction code used by EZtax (numeric)
ADDRESS	Country, State, County, Locality (alpha). Sort will be on PCode value.
TRANS_TYPE <sup>1</sup>	Transaction type (numeric)
SRV_TYPE <sup>1</sup>	Service Type (numeric)
TAX_TYPE	Tax Type (numeric)
TAX_TYPE_DESC	Tax Type Description (alpha). Sort will be on numeric value.
TAX_CATEGORY	Tax Category (numeric)
TAX_CATEGORY_DESC	Tax Category Description (alpha). Sort will be on numeric value.
TAX_LEVEL	Tax Level (numeric)

Values	Description
TAX_LEVEL_DESC	Tax Level Description (alpha). Sort will be on numeric value.
TAX	Tax Rate (numeric)
TAX_AMOUNT	Tax Amount (numeric)
SALE_AMT	Sale Amount (numeric)
EXEMPT_SALE_AMT	Exempt Sale Amount (numeric)
REFUND_UNCOLLECT	Adjustment (numeric)
NET_TAXABLE	Net Taxable Amount (numeric)
MINUTES	Minutes (numeric)
INV_NO	Invoice Number (numeric)
SRV_LVL_NO	Service Level Number (numeric)
OPTIONAL	Optional Field (numeric)
LINES	Lines (numeric)
LOCATIONS	Locations (numeric)
CALC_TYPE	Calculation Type (numeric)
CALC_TYPE_DESC	Calculation Type Description (alpha). Sort will be on numeric value.
BILLABLE	Tax is Billable Flag (numeric: 1=True, 0=False)
COMPLIANCE	Whether tax should be filed or retained (numeric: 1=True, 0=False)
CUST_NO	Customer Number (alpha – max 20 bytes)
ADJ_TYPE	Adjustment Type (numeric)
ADJ_TYPE_DESC	Adjustment Type Description (alpha). Sort will be on numeric value.
EXEMPT_TYPE	Exemption Type (numeric)
EXEMPT_TYPE_DESC	Exemption Type Description (alpha). Sort will be on numeric value.
SURCHARGE_FLAG	Surcharge Flag (numeric: 1=True, 0=False)
LOG_COUNTER	Log Counter (numeric)
OPT_ALPHA_1 <sup>2</sup>	Optional Field (alpha)
COMPANY_IDENTIFIER <sup>2</sup>	Company Identifier (alpha)
OPT_4 <sup>2</sup>	Optional 4 (numeric)
OPT_5 <sup>2</sup>	Optional 5 (numeric)
OPT_6 <sup>2</sup>	Optional 6 (numeric)
OPT_7 <sup>2</sup>	Optional 7 (numeric)
OPT_8 <sup>2</sup>	Optional 8 (numeric)
OPT_9 <sup>2</sup>	Optional 9 (numeric)
OPT_10 <sup>2</sup>	Optional 10 (numeric)

<sup>&</sup>lt;sup>1</sup> Only can be used if configuration option [logtransserv=true] is set. AFC SaaS Standard clients must contact <u>communicationsupport@avalara.com</u> for assistance with configuration options.

<sup>&</sup>lt;sup>2</sup> Only can be used if configuration option [loglength=long] is set. AFC SaaS Standard clients must contact communicationsupport@avalara.com for assistance with configuration options.

<sup>&</sup>lt;sup>3</sup> AFC SaaS Standard clients with a persisted customsort.cfg file must contact communicationsupport@avalara.com for assistance with configuration options.

# 3. Appendix A – Samples

For further information on the base format samples provided within this section, please reference the documents identified in the table below.

Base Format	Document Name
srtcomma20l	TM_00523_srtcomma20l.pdf
srtcomma 20 ld	TM_00524_srtcomma20ld.pdf
ezlogcust	TM_00513_ezlogcust.pdf
ezlogcustpts	TM_00515_ezlogcustpts.pdf

**Note:** These additional documents are located in the monthly distribution package.

# 3.1 Sample Configuration Files

#### 3.1.1 Base Format: srtcomma20l

Example that will produce ssf/nba/nca in the same format as srtcomma20l utility.

# 3.1.2 Base Extended Format: srtcomma20l

Example that will produce ssf/nba/nca similar to srtcomma20l, but with the jurisdiction Address, Company Identifier and Invoice Number added to the report, and a column header row added. Additional, all calculated values will be rounded to 2 decimal places.

```
FIELD: COMPANY_IDENTIFIER
FIELD: INV_NO
OPTION: NBA_FILE
OPTION: NCA_FILE
OPTION: NO_DELETE_LOG
OPTION: HEADER
CALCULATED_VALUE_PRECISION: 2
DEFAULT_EXT: ssf
DELIMITER: ','
DATA_DIR: C:\BillSoft\EZTax\Data
WORKING_DIR: E:\Logs\customsort
```

#### 3.1.3 Base Format: srtcomma20l-p

Example that will produce ssf/nba/nca in the same format as srtcomma20l with the -p cmd line option.

# 3.1.4 Extended Format: srtcomma20l-p

Example that will produce ssf/nba/nca similar to srtcomma20l with the –p cmd line option, but with Pcode, Company Identifier and Invoice Number added to the report, and a column header row added. Additional, all calculated values will be rounded to 2 decimal places.

```
//// ext_srtcomma20l_p.cfg ////
OUTPUT_FILENAME_FORMAT: EZtax_{%y%m%d}
BASE: srtcomma201
FIELD: P_CODE
FIELD: COMPANY_IDENTIFIER
FIELD: INV NO
OPTION: NBA FILE
OPTION: NCA FILE
OPTION: NO_DELETE_LOG
OPTION: HEADER
CALCULATED_VALUE_PRECISION: 2
DEFAULT_EXT: ssf
DELIMITER: ','
DATA_DIR: C:\BillSoft\EZTax\Data
WORKING_DIR: E:\Logs\customsort
```

#### 3.1.5 Base Format: srtcomma20ld

Example that will produce ssf/nba/nca in the same format as the srtcomma20ld utility.

# 3.1.6 Base Format: ezlogcust

Example that will produce reports in the same format as the ezlogoust utility.

# 3.1.7 Base Format: ezlogcustpts

Example that will produce reports in the same format as the ezlogoustpts utility.

# 3.1.8 Fully Defined Format: srtcomma20l-p

Example of a fully defined configuration file that will produce reports in the format of srtcomma20l with the -p cmd line option. Similar to srtcomma20l, this sample uses filelocs.txt and deletes the log when complete.

```
//// srtcomma201_p.cfg ////
OUTPUT_FILENAME_FORMAT: EZtax_{%y%m%d}
BASE: none
FIELD: ADDRESS
FIELD: TAX TYPE
FIELD: TAX LEVEL
FIELD: TAX
FIELD: TAX AMOUNT
FIELD: SALE AMT
FIELD: EXEMPT_SALE_AMT
FIELD: REFUND_UNCOLLECT
FIELD: NET TAXABLE
FIELD: MINUTES
FIELD: LINES
NORPT: BILLABLE
OPTION: NBA FILE
OPTION: NCA FILE
OPTION: DELETE LOG
OPTION: NO HEADER
CALCULATED VALUE PRECISION: 6
DEFAULT EXT: ssf
DELIMITER: ','
```

#### 3.1.9 Fully Define Format: ezlogcust

Example of a fully defined configuration file that will produce reports in the format of ezlogcust. Similar to ezlogcust, this sample uses filelocs.txt and deletes the log when complete.

Note that CUST\_NO leads off the list as a NORPT and appears again at the end of the list as a FIELD. This is to mimic the ezlogcust functionality that used the customer number as the first item in the sort, but output it as the last column in the report.

FIELD: NET\_TAXABLE
FIELD: MINUTES
FIELD: LINES
FIELD: LOCATIONS
NORPT: BILLABLE
FIELD: CUST\_NO
OPTION: NBA\_FILE
OPTION: NCA\_FILE
OPTION: NO\_DELETE\_LOG
OPTION: NO\_HEADER

CALCULATED\_VALUE\_PRECISION: 6

DEFAULT\_EXT: rpt
DELIMITER: ','