

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): August 12, 2020

ASPEN TECHNOLOGY, INC.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-34630
(Commission
File Number)

04-2739697
(IRS Employer
Identification No.)

20 Crosby Drive,
(Address of principal executive offices)

Bedford, MA

01730
(Zip Code)

Registrant's telephone number, including area code: **(781) 221-6400**

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol	Name of Each Exchange on Which Registered
Common stock, \$0.10 par value per share	AZPN	NASDAQ Global Select Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 2.02 **Events Results of Operations and Financial Condition.**

On August 12, 2020, we issued a press release announcing financial results for the fourth quarter and fiscal year 2020, ended June 30, 2020. The full text of the press release issued in connection with this announcement is attached as Exhibit 99.1 to this Current Report on Form 8-K.

The information in this Item 2.02, including Exhibit 99.1, shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934 except as expressly set forth by specific reference in such a filing.

Item 9.01 **Financial Statements and Exhibits.**

(d) Exhibits.

The following exhibit relating to Item 2.02 shall be deemed to be furnished, and not filed:

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press release issued by Aspen Technology, Inc. on August 12, 2020

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ASPEN TECHNOLOGY, INC.

Date: August 12, 2020

By: /s/ Karl E. Johnsen

Karl E. Johnsen

Senior Vice President and Chief Financial Officer



Contacts:

Media Contact

Lucy Millington
 Aspen Technology
 +1 781-221-6419
 lucy.millington@aspentech.com

Investor Contact

Brian Denyeau
 ICR for Aspen Technology
 +1 646-277-1251
 brian.denyeau@icrinc.com

Aspen Technology Announces Financial Results for the Fourth Quarter and Fiscal 2020

Bedford, Mass. - August 12, 2020 - Aspen Technology, Inc. (NASDAQ: AZPN), the asset optimization software company, today announced financial results for its fourth quarter of fiscal year 2020 ended June 30, 2020.

“AspenTech delivered solid fourth quarter results that exceeded expectations in the midst of unprecedented economic conditions,” said Antonio Pietri, President and Chief Executive Officer of Aspen Technology. “Customers in our core markets continued to make significant investments in AspenTech products despite the challenges facing their own businesses. Companies in the process and other capital intensive industries increasingly recognize that investing in digitalization initiatives is essential to long-term financial and operational success and we believe we are well-positioned to benefit from this trend.”

Pietri continued, “We are furthering our commitment to our customers through today’s announcement of the new AIoT Hub and our investment in the next generation of hybrid modeling software capabilities, planned for release in the coming months. We intend to introduce contextual artificial intelligence into our core products to enable better informed and more accurate decisions to improve the operating performance of assets. We are confident that these innovations will further extend the value AspenTech delivers for its customers.”

Fourth Quarter and Fiscal Year 2020 Recent Business Highlights

- Annual spend, which the company defines as the annualized value of all term license and maintenance contracts at the end of the quarter, was approximately \$593 million at the end of the fourth quarter of fiscal 2020, which increased 9.6% compared to the fourth quarter of fiscal 2019 and 3.1% sequentially.
- AspenTech repurchased approximately 1.3 million shares of its common stock for \$150 million in fiscal year 2020.

Summary of Fourth Quarter Fiscal Year 2020 Financial Results

AspenTech’s total revenue of \$199.3 million included:

- **License revenue**, which represents the portion of a term license agreement allocated to the initial license, was \$147.2 million in the fourth quarter of fiscal 2020, compared to \$148.5 million in the fourth quarter of fiscal 2019.
- **Maintenance revenue**, which represents the portion of the term license agreement related to on-going support and the right to future product enhancements, was \$45.7 million in the fourth quarter of fiscal 2020, compared to \$39.5 million in the fourth quarter of fiscal 2019.
- **Services and other revenue** was \$6.4 million in the fourth quarter of fiscal 2020, compared to \$7.8 million in the fourth quarter of fiscal 2019.

For the quarter ended June 30, 2020, AspenTech reported income from operations of \$113.7 million, compared to income from operations of \$111.2 million for the quarter ended June 30, 2019.

Net income was \$97.6 million for the quarter ended June 30, 2020, leading to net income per share of \$1.43, compared to net income per share of \$1.49 in the same period last fiscal year.

Non-GAAP income from operations, was \$122.9 million for the fourth quarter of fiscal 2020, compared to non-GAAP income from operations of \$119.9 million in the same period last fiscal year. Non-GAAP net income was \$104.9 million, or \$1.54 per share, for the fourth quarter of fiscal 2020, compared to non-GAAP net income of \$110.7 million, or \$1.59 per share, in the same period last fiscal year. These non-GAAP results add back the impact of stock-based compensation expense, amortization of intangibles and acquisition-related fees. A reconciliation of GAAP to non-GAAP results is presented in the financial tables included in this press release.

AspenTech had cash and cash equivalents of \$287.8 million and total borrowings, net of debt issuance costs, of \$427.5 million at June 30, 2020.

During the fourth quarter, the company generated \$99.7 million in cash flow from operations and \$99.5 million in free cash flow. Free cash flow is calculated as net cash provided by operating activities adjusted for the net impact of: purchases of property, equipment and leasehold improvements; payments for capitalized computer software development costs, and other nonrecurring items, such as acquisition-related payments.

Summary of Fiscal Year 2020 Financial Results

AspenTech's total revenue of \$590.2 million decreased 1.0% from \$598.3 million for fiscal year 2019.

- **License revenue**, was \$377.2 million, a decrease from \$404.1 million for fiscal year 2019.
- **Maintenance revenue**, was \$179.8 million, an increase from \$165.4 million for fiscal year 2019.
- **Services and other revenue** was \$33.2 million, an increase from \$28.8 million for fiscal year 2019.

For the fiscal year ended June 30, 2020, AspenTech reported income from operations of \$248.8 million, compared to income from operations of \$282.8 million for fiscal year 2019.

Net income was \$225.7 million for the fiscal year ended June 30, 2020, leading to net income per share of \$3.28, compared to net income per share of \$3.71 for fiscal year 2019.

Non-GAAP income from operations was \$287.0 million for fiscal year 2020, compared to non-GAAP income from operations of \$316.3 million for fiscal year 2019. Non-GAAP net income was \$255.9 million, or \$3.72 per share, for fiscal year 2020, compared to non-GAAP net income of \$289.2 million, or \$4.09 per share, for fiscal year 2019.

For the fiscal year ended June 30, 2020, the company generated \$243.3 million in cash flow from operations and \$243.1 million in free cash flow.

Business Outlook

Based on information as of today, August 12, 2020, Aspen Technology is issuing the following guidance for fiscal year 2020:

- Annual spend growth of 6-9% year-over-year
- Free cash flow of \$260 to \$270 million
- Total bookings of \$770 to \$850 million
- Total revenue of \$704 to \$754 million
- GAAP total expense of \$372 to \$377 million
- Non-GAAP total expense of \$330 to \$335 million
- GAAP operating income of \$332 to \$377 million
- Non-GAAP operating income of \$374 to \$420 million
- GAAP net income of \$290 to \$327 million
- Non-GAAP net income of \$324 to \$360 million
- GAAP net income per share of \$4.29 to \$4.83
- Non-GAAP net income per share of \$4.78 to \$5.32

These statements are forward-looking and actual results may differ materially. Refer to the Forward-Looking Statements safe harbor below for information on the factors that could cause our actual results to differ materially from these forward-looking statements.

AspenTech has not reconciled its expectations as to non-GAAP operating income and non-GAAP net income per share to their most directly comparable GAAP measure because certain items are out of AspenTech's control or cannot be reasonably predicted. Accordingly, a reconciliation for forward-looking non-GAAP total expenses, non-GAAP operating income and non-GAAP net income per share is not available without unreasonable effort.

Use of Non-GAAP Financial Measures

This press release contains "non-GAAP financial measures" under the rules of the U.S. Securities and Exchange Commission. Non-GAAP financial measures are not based on a comprehensive set of accounting rules or principles. This non-GAAP information supplements, and is not intended to represent a measure of performance in accordance with, disclosures required by generally accepted accounting principles, or GAAP. Non-GAAP financial measures should be considered in addition to, not as a substitute for or superior to, financial measures determined in accordance with GAAP. A reconciliation of GAAP to non-GAAP results is included in the financial tables included in this press release.

Management considers both GAAP and non-GAAP financial results in managing Aspen Technology's business. As the result of adoption of new licensing models, management believes that a number of Aspen Technology's performance indicators based on GAAP, including revenue, gross profit, operating income and net income, should be viewed in conjunction with certain non-GAAP and other business measures in assessing Aspen Technology's performance, growth and financial condition. Accordingly, management utilizes a number of non-GAAP and other business metrics, including the non-GAAP metrics set forth in this press release, to track Aspen Technology's business performance. None of these non-GAAP metrics should be considered as an alternative to any measure of financial performance calculated in accordance with GAAP.

Conference Call and Webcast

Aspen Technology will host a conference call and webcast today, August 12, 2020, at 4:30 p.m. (Eastern Time), to discuss the company's financial results for the fourth quarter and fiscal year 2020 as well as the company's business outlook. The live dial-in number is (866) 471-3828 or (678) 509-7573, conference ID code 8084773. Interested parties may also listen to a live webcast of the call by logging on to the Investor Relations section of Aspen Technology's website, <http://ir.aspentech.com/events-and-presentations>, and clicking on the "webcast" link. A replay of the call will be archived on Aspen Technology's website and will also be available via telephone at (855) 859-2056 or (404) 537-3406, conference ID code 8084773, through August 19, 2020.

About Aspen Technology

Aspen Technology (AspenTech) is a global leader in asset optimization software. Its solutions address complex, industrial environments where it is critical to optimize the asset design, operation and maintenance lifecycle. AspenTech uniquely combines decades of process modeling expertise with artificial intelligence. Its purpose-built software platform automates knowledge work and builds sustainable competitive advantage by delivering high returns over the entire asset lifecycle. As a result, companies in capital-intensive industries can maximize uptime and push the limits of performance, running their assets safer, greener, longer and faster. Visit AspenTech.com to find out more.

Forward-Looking Statements

The second and third paragraphs of this press release as well as the Business Outlook section contain forward-looking statements for purposes of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Actual results may vary significantly from AspenTech's expectations based on a number of risks and uncertainties, including, without limitation: delays or reductions in demand for AspenTech solutions due to the COVID-19 pandemic; AspenTech's failure to increase usage and product adoption of aspenONE offerings or grow the aspenONE APM business, and failure to continue to provide innovative, market-leading solutions; the demand for, or usage of, aspenONE software declines for any reason, including declines due to adverse changes in the process or other capital-intensive industries and due to the drop in demand for oil due to the COVID-19 pandemic, compounded by the excess supply arising from producers' failure to agree on production cuts; unfavorable economic and market conditions or a lessening demand in the market for asset process optimization software, including due to the significant drop in oil prices arising from drop in demand due to the COVID-19 pandemic and producers' failure to agree on production cuts; risks of foreign operations or transacting business with customers outside the United States; risks of competition and other risk factors described from time to time in AspenTech's periodic reports filed with the Securities and Exchange Commission. AspenTech

cannot guarantee any future results, levels of activity, performance, or achievements. AspenTech expressly disclaims any obligation to update forward-looking statements after the date of this press release.

© 2020 Aspen Technology, Inc. AspenTech, aspenONE, asset optimization and the Aspen leaf logo are trademarks of Aspen Technology, Inc. All rights reserved. All other trademarks are property of their respective owners.

Source: Aspen Technology, Inc.

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited in Thousands, Except per Share Data)

	Three Months Ended June 30,		Twelve Months Ended June 30,	
	2020	2019	2020	2019
Revenue:				
License	\$ 147,226	\$ 148,506	\$ 377,155	\$ 404,122
Maintenance	45,719	39,481	179,813	165,436
Services and other	6,386	7,782	33,213	28,787
Total revenue	199,331	195,769	590,181	598,345
Cost of revenue:				
License	1,691	1,918	7,241	7,060
Maintenance	4,909	4,967	19,248	19,208
Services and other	8,558	8,605	35,118	31,548
Total cost of revenue	15,158	15,490	61,607	57,816
Gross profit	184,173	180,279	528,574	540,529
Operating expenses:				
Selling and marketing	28,440	30,842	114,486	111,374
Research and development	23,536	21,229	92,230	83,122
General and administrative	18,510	16,985	73,035	63,231
Total operating expenses	70,486	69,056	279,751	257,727
Income from operations	113,687	111,223	248,823	282,802
Interest income	8,081	7,068	32,658	28,457
Interest (expense)	(2,494)	(2,405)	(11,862)	(8,733)
Other income, net	1,419	1,149	1,202	664
Income before income taxes	120,693	117,035	270,821	303,190
Provision for income taxes	23,065	13,170	45,113	40,456
Net income	\$ 97,628	\$ 103,865	\$ 225,708	\$ 262,734
Net income per common share:				
Basic	\$ 1.44	\$ 1.51	\$ 3.32	\$ 3.76
Diluted	\$ 1.43	\$ 1.49	\$ 3.28	\$ 3.71
Weighted average shares outstanding:				
Basic	67,634	68,839	68,000	69,925
Diluted	68,176	69,638	68,727	70,787

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Unaudited in Thousands, Except Share and Per Share Data)

ASSETS	June 30, 2020	June 30, 2019
Current assets:		
Cash and cash equivalents	\$ 287,796	\$ 71,926
Accounts receivable, net	55,750	47,784
Current contract assets	289,152	294,193
Prepaid expenses and other current assets	15,260	12,628
Prepaid income taxes	2,276	2,509
Total current assets	650,234	429,040
Property, equipment and leasehold improvements, net	5,963	7,234
Computer software development costs, net	928	1,306
Goodwill	137,055	78,383
Intangible assets, net	42,851	33,607
Non-current contract assets	328,379	325,510
Contract costs	28,614	24,982
Operating lease right-of-use assets	34,905	—
Deferred tax assets	1,735	1,669
Other non-current assets	1,838	1,334
Total assets	\$ 1,232,502	\$ 903,065
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 3,988	\$ 5,891
Accrued expenses and other current liabilities	43,556	54,594
Current operating lease liabilities	6,824	—
Income taxes payable	1,799	14,952
Current borrowings	135,163	220,000
Current deferred revenue	28,495	25,318
Total current liabilities	219,825	320,755
Non-current deferred revenue	7,953	19,573
Deferred income taxes	182,447	159,071
Non-current operating lease liabilities	33,088	—
Non-current borrowings, net	292,369	—
Other non-current liabilities	3,105	10,381
Commitments and contingencies (Note 17)		
Series D redeemable convertible preferred stock, \$0.10 par value—Authorized—3,636 shares as of June 30, 2020 and 2019		
Issued and outstanding—none as of June 30, 2020 and 2019		
Stockholders' equity:		
Common stock, \$0.10 par value—Authorized—210,000,000 shares		
Issued—103,988,707 shares at June 30, 2020 and 103,642,292 shares at June 30, 2019		
Outstanding—67,718,692 shares at June 30, 2020 and 68,624,566 shares at June 30, 2019		
Additional paid-in capital	769,411	739,099
Retained earnings	1,485,692	1,259,984
Accumulated other comprehensive income	(5,288)	336
Treasury stock, at cost— 36,270,015 shares of common stock at June 30, 2020 and 35,017,726 shares at June 30, 2019		
Total stockholders' equity	493,715	393,285
Total liabilities and stockholders' equity	\$ 1,232,502	\$ 903,065

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited in Thousands)

	Three Months Ended June 30,		Twelve Months Ended June 30,	
	2020	2019	2020	2019
Cash flows from operating activities:				
Net income	\$ 97,628	\$ 103,865	\$ 225,708	\$ 262,734
Adjustments to reconcile net income to net cash provided by operating activities:				
Depreciation and amortization	2,522	2,080	9,550	8,143
Reduction in the carrying amount of right-of-use assets	2,105	—	8,623	—
Net foreign currency gains	(1,128)	(1,274)	(945)	(1,251)
Stock-based compensation	7,415	6,119	31,548	27,573
Deferred income taxes	22,225	23,008	21,843	(26,839)
Provision for bad debts	1,864	171	5,255	645
Other non-cash operating activities	202	88	625	429
Changes in assets and liabilities:				
Accounts receivable	4,104	(2,443)	(12,324)	(6,626)
Contract assets	(5,986)	(31,925)	2,270	(59,322)
Contract costs	(2,048)	(657)	(3,570)	(4,482)
Lease liabilities	(2,197)	—	(9,037)	—
Prepaid expenses, prepaid income taxes, and other assets	(3,136)	(2,612)	(5,337)	(2,411)
Accounts payable, accrued expenses, income taxes payable and other liabilities	(2,610)	(11,059)	(23,362)	21,921
Deferred revenue	(21,290)	(184)	(7,589)	17,799
Net cash provided by operating activities	99,670	85,177	243,258	238,313
Cash flows from investing activities:				
Purchase of property, equipment and leasehold improvements	(167)	(230)	(1,278)	(436)
Payments for business acquisitions, net of cash acquired	—	(6,098)	(74,460)	(6,098)
Payments for equity method investments	(5)	—	(324)	—
Payments for capitalized computer software costs	—	(37)	(141)	(1,131)
Net cash used in investing activities	(172)	(6,365)	(76,203)	(7,665)
Cash flows from financing activities:				
Issuance of shares of common stock	3,640	4,983	9,004	10,864
Repurchases of common stock	(1,811)	(75,032)	(152,432)	(299,214)
Payment of tax withholding obligations related to restricted stock	(1,921)	(2,561)	(10,167)	(14,477)
Deferred business acquisition payments	—	—	(4,600)	(1,700)
Proceeds from borrowings, net of repayments	4,000	—	219,163	50,000
Repayments of amounts borrowed	(8,000)	—	(8,000)	—
Payments of debt issuance costs	—	—	(3,533)	—
Net cash provided by (used in) financing activities	(4,092)	(72,610)	49,435	(254,527)
Effect of exchange rate changes on cash and cash equivalents	218	132	(620)	(360)
Increase (decrease) in cash and cash equivalents	95,624	6,334	215,870	(24,239)
Cash and cash equivalents, beginning of year	192,172	65,592	71,926	96,165
Cash and cash equivalents, end of year	\$ 287,796	\$ 71,926	\$ 287,796	\$ 71,926
Supplemental disclosure of cash flow information:				
Income taxes paid, net	\$ 13,174	\$ 14,030	\$ 39,533	\$ 53,153
Interest paid	2,616	2,393	12,444	8,121
Supplemental disclosure of non-cash activities:				
Change in purchases of property, equipment and leasehold improvements included in accounts payable and accrued expenses	\$ (10)	\$ 94	\$ (99)	\$ 104

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited in Thousands)

Change in repurchases of common stock included in accounts payable and accrued expenses	(1,811)	(32)	(2,432)	786
Lease liabilities arising from obtaining right-of-use assets	2,387	—	14,013	—

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
Reconciliation of GAAP to Non-GAAP Results of Operations and Cash Flows
(Unaudited in Thousands, Except per Share Data)

	Three Months Ended June 30,		Twelve Months Ended June 30,	
	2020	2019	2020	2019
<u>Total expenses</u>				
GAAP total expenses (a)	\$ 85,644	\$ 84,546	\$ 341,358	\$ 315,543
Less:				
Stock-based compensation (b)	(7,415)	(6,119)	(31,548)	(27,573)
Amortization of intangibles	(1,831)	(1,153)	(6,572)	(4,533)
Acquisition related fees	—	(1,430)	(78)	(1,438)
Non-GAAP total expenses	\$ 76,398	\$ 75,844	\$ 303,160	\$ 281,999
<u>Income from operations</u>				
GAAP income from operations	\$ 113,687	\$ 111,223	\$ 248,823	\$ 282,802
Plus:				
Stock-based compensation (b)	7,415	6,119	31,548	27,573
Amortization of intangibles	1,831	1,153	6,572	4,533
Acquisition related fees	—	1,430	78	1,438
Non-GAAP income from operations	\$ 122,933	\$ 119,925	\$ 287,021	\$ 316,346
<u>Net income</u>				
GAAP net income	\$ 97,628	\$ 103,865	\$ 225,708	\$ 262,734
Plus:				
Stock-based compensation (b)	7,415	6,119	31,548	27,573
Amortization of intangibles	1,831	1,153	6,572	4,533
Acquisition related fees	—	1,430	78	1,438
Less:				
Income tax effect on Non-GAAP items (c)	(1,942)	(1,827)	(8,022)	(7,044)
Non-GAAP net income	\$ 104,932	\$ 110,740	\$ 255,884	\$ 289,234
<u>Diluted income per share</u>				
GAAP diluted income per share	\$ 1.43	\$ 1.49	\$ 3.28	\$ 3.71
Plus:				
Stock-based compensation (b)	0.11	0.09	0.46	0.40
Amortization of intangibles	0.03	0.02	0.10	0.06
Acquisition related fees	—	0.02	—	0.02
Less:				
Income tax effect on Non-GAAP items (c)	(0.03)	(0.03)	(0.12)	(0.10)
Non-GAAP diluted income per share	\$ 1.54	\$ 1.59	\$ 3.72	\$ 4.09
Shares used in computing Non-GAAP diluted income per share	68,176	69,638	68,727	70,787

ASPEN TECHNOLOGY, INC. AND SUBSIDIARIES
Reconciliation of GAAP to Non-GAAP Results of Operations and Cash Flows
(Unaudited in Thousands, Except per Share Data)

	Three Months Ended June 30,		Twelve Months Ended June 30,	
	2020	2019	2020	2019
Free Cash Flow				
GAAP net cash provided by operating activities	\$ 99,670	\$ 85,177	\$ 243,258	\$ 238,313
Purchase of property, equipment and leasehold improvements	(167)	(230)	(1,278)	(436)
Payments for capitalized computer software development costs	—	(37)	(141)	(1,131)
Acquisition related payments	—	—	1,264	27
Free Cash Flow	\$ 99,503	\$ 84,910	\$ 243,103	\$ 236,773

(a) GAAP total expenses

	Three Months Ended June 30,		Twelve Months Ended June 30,	
	2020	2019	2020	2019
Total costs of revenue	\$ 15,158	\$ 15,490	\$ 61,607	\$ 57,816
Total operating expenses	70,486	69,056	279,751	257,727
GAAP total expenses	\$ 85,644	\$ 84,546	\$ 341,358	\$ 315,543

(b) Stock-based compensation expense was as follows:

	Three Months Ended June 30,		Twelve Months Ended June 30,	
	2020	2019	2020	2019
Cost of maintenance	\$ 337	\$ 366	\$ 1,441	\$ 1,282
Cost of services and other	484	382	1,961	1,420
Selling and marketing	1,428	1,162	5,656	4,849
Research and development	2,113	1,472	8,306	6,923
General and administrative	3,053	2,737	14,184	13,099
Total stock-based compensation	\$ 7,415	\$ 6,119	\$ 31,548	\$ 27,573

(c) The income tax effect on non-GAAP items for the three and twelve months ended June 30, 2020 and 2019, respectively, is calculated utilizing the Company's statutory tax rate of 21 percent.