

Hewlett Packard Enterprise Company

Second Quarter 2019 Earnings Conference
Call

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CORPORATE PARTICIPANTS

Antonio Neri- *President, Chief Executive Officer*

Tarek Robbiati – *Executive Vice President, Chief Financial Officer*

Andrew Simanek – *Head of Investor Relations*

PRESENTATION

Operator

Good morning, good afternoon and good evening and welcome to the Second Quarter 2019 Hewlett Packard Enterprise Earnings Conference Call. My name is Jaime, and I will be your conference moderator for today's call. At this time, all participants will be in a listen-only mode. We will be facilitating a question and answer session towards the end of the conference. Should you need assistance during the call, please signal a conference specialist by pressing the "*" key followed by "0." As a reminder, this conference is being recorded for replay purposes.

I would now like to turn the presentation over to your host for today's call, Mr. Andrew Simanek, Head of Investor Relations. Please proceed.

Andrew Simanek

Good afternoon. I'm Andy Simanek, Head of Investor Relations for Hewlett Packard Enterprise. I'd like to welcome you to our fiscal 2019 second quarter earnings conference call with Antonio Neri, HPE's President and Chief Executive Officer, and Tarek Robbiati, HPE's Executive Vice President and Chief Financial Officer. Before handing the call over to Antonio, let me remind you that this call is being webcast.

A replay of the webcast will be made available shortly after the call for approximately one year. We posted the press release and the slide presentation accompanying today's earnings release on our HPE Investor Relations webpage at investors.hpe.com. As always, elements of this presentation are forward-looking and are based on our best view of the world and our businesses as we see them today. For more detailed information, please see the disclaimers on the earnings materials relating to forward-looking statements that involve risks, uncertainties and assumptions.

For a discussion of some of these risks, uncertainties and assumptions please refer to HPE's filings with the SEC including its most recent Form 10-K. HPE assumes no obligation and does not intend to update any such forward-looking statements. We also note that the financial information discussed on this call reflects estimates based on information available at this time and could differ materially from the amounts ultimately reported in HPE's quarterly report on Form 10-Q for the fiscal quarter ended April 30, 2019. Also, for financial information that has been expressed on a non-GAAP basis, we have provided reconciliations to the comparable GAAP information on our website.

Please refer to the tables and slide presentation accompanying today's earnings release on our website for details. Throughout this conference call all revenue growth rates unless noted otherwise, are presented on a year-over-year basis, and adjusted to exclude the impact of currency.

Finally, please note that after Antonio provides his high-level remarks, Tarek will be referencing the slides and our earnings presentation throughout his prepared remarks. As mentioned, the earnings presentation can be found posted to our website and it is also embedded within the webcast player for this earnings call.

With that, let me turn it over to Antonio.

Antonio Neri

Thanks Andy. Good afternoon, everyone. Thank you for joining us. Our Q2 performance reflects our continued progress on shifting our portfolio to higher margin products and services to deliver positive and consistent earnings growth.

As a result of this focus, we delivered strong growth and operating margin improvement, expanding non-GAAP EPS and grew cash flow versus the prior year. We also made a number of bold strategic moves to drive innovation, strengthen our culture and win new customers.

While our Q2 revenue growth was impacted by a combination of both intentional and unanticipated factors, we delivered on our SAM commitment to grow revenue, and we are raising our EPS outlook for the year. In Q2, we delivered revenue of \$7.2 billion, up 1% year-over-year excluding the Tier 1 sales and the currency impact.

We grew in key businesses, including storage, high-performance compute, composable cloud, Aruba services and GreenLake orders. Strength in these areas partially offset continued intentional declines in Tier 1 sales and sales into China, as well as some market and execution factors, which I will talk more about in a minute.

As we shifted the mix of our portfolio toward higher value solutions, our underlying profitability improved across the board. Our gross margin of 32.2% expanded 200 basis points and our non-GAAP operating margin of 8.9% was up 70 basis points year-over-year. All of this combined with favorable OI&E drove a strong non-GAAP EPS performance of \$0.42, well above the midpoint of our outlook, and positive free cash flow of \$402 million, up over \$650 million versus the prior year.

From a macroeconomic perspective, we continue to see global demand driven by the need to process ever-growing amounts of data. However, like others in the industry, we did see some changes in market dynamics.

For example, trade tensions are creating uncertainty. We continue to believe that an open market where everyone can innovate and participate is important for market stability and customer confidence. We also recently experienced an elongation in sales cycles with some customers. We will continue to monitor these and other macroeconomic factors.

By business segments, I will start with Intelligent Edge. We continue to see the Edge as a significant opportunity for the company, the explosion of data, devices and apps is driving strong demand for connectivity, security, analytics and cloud computing capabilities of the Edge. Given our strong portfolio and ongoing investment in this business, we are well positioned to capitalize on the strength over the long-term.

In Q2 Intelligent Edge revenue was \$666 million, down 5% year-over-year. We saw solid growth in EMEA and APJ and in Aruba services and we won new customers and introduced new compelling products. This positive momentum was offset by some unexpected execution issues and changes in market dynamics. We uncovered some uneven execution in North America, mainly driven by our current sales coverage model, which we are actively addressing.

From a market perspective, we experienced some deals not closing in the timeframe we anticipated. While we will continue to monitor the demand environment closely, we are confident in our position going forward based on the new customer wins we closed and the positive reception to the products we introduced this quarter.

For example, we won a deal with C&S Wholesale Grocers, the largest wholesale grocery supply company in the United States, with 14,000 stores in 50 locations. C&S selected Aruba wireless solutions to address its network and security needs.

McKesson Corporation, a global healthcare leader currently ranked six on the Fortune 100, will be deploying Aruba's wire and wireless infrastructure. And, Amherst College has updated its entire campus network with Aruba's solutions. We continue to invest in key capabilities like AI and security. For example, in Q2 Aruba introduced two new offerings to help enterprise customers simplify the adoption of IoT by eliminating security and connectivity barriers and decreasing associated operational costs and complexities.

Aruba ClearPass Device Insight deliver a single panel glass for device visibility, employing automated device discovery, machine learning based fingerprinting and identification. And new access points built on the industry's most advanced family of Wi-Fi 6 IoT ready access points. We expect these new solutions and additional introductions later this year to contribute to growth in our Intelligent Edge segment in the long-term.

Turning to Hybrid IT, we delivered revenue of \$5.6 billion, up 2% year-over-year, excluding Tier 1. Our segmented approach and investment in high value products and as-a-service offerings are paying off. We saw continued strong performance in key areas of the business, including storage, up 5% year-over-year; high performance compute, up 25% year-over-year, hyper converged up 25% year-over-year, and composable cloud, up 78% year-over-year.

Our ability to offer all of this technology as-a-service is a key differentiator for HPE. We are the only company on the market that can provide a true consumption-driven offering in a hybrid cloud environment.

HPE GreenLake is a key element of our push towards subscription-based revenue, which also includes Aruba services, and other software defined solutions. GreenLake continues to see very strong customer momentum and recorded its largest quarter ever, with orders that grew 39% year-over-year.

This contributed to our overall HPE Pointnext performance, which exited the quarter with a book-to-bill ratio of 1.12 highlighting the potential for future revenue growth. These growth areas offset the impact from some unexpected market dynamics and execution, as well as the intentional decline in Tier 1 sales and revenue coming from our H3C relationship in China.

From a market perspective, we saw extended sales cycles, which indicates slightly softer demand environment from what we saw earlier in the quarter. And like the Intelligent Edge, although to a lesser extent, we did not execute as well as we could have in North America. We are taking steps to improve our execution including realigning our sales coverage in specific segments of the market.

Separately, as we have discussed in prior quarters, while our H3C partnership continues to be strong, we are working to balance the right mix of HPE products with H3C local offerings to optimize profitable growth for the overall entity. This had some impact on our revenue in Q2, which Tarek will talk more about in a minute.

In Q2, we continued to attract new customers and partners. For example, we won a significant technology and services deal with electrical utility company, Southern California Edison, as they

upgrade all their customer-facing applications. We also expanded the HPE GreenLake ecosystem by announcing a strategic global partnership with Nutanix to provide customers with more choice for building their hybrid cloud strategy. We also announced a similar partnership with Google Cloud. These partnerships show the growing understanding and acceptance of the fact that the world will be hybrid.

From an innovation standpoint, we are continuing to invest in BlueData, which we acquired early this year. In Q2, we announced a new integrated offering that combines the HPE BlueData software platform with the HPE Apollo System and HPE Pointnext services to provide customers with a powerful solution for AI and data-driven business innovation.

Finally, we are very excited about our intent to acquire Cray. As you know, Cray is a premier provider of high end supercomputing solutions. I believe this acquisition will position us to tackle the most data intensive workloads in the high growth segment of high performance computing.

HPC has been and continues to be a strategic focus area for HPE and one where we have the clear differentiation. Over the years, we have invested organically to build a strong portfolio and completed acquisitions, including SGI to take advantage of the rapidly growing demand for powerful computing capabilities.

With its leading presence in the government, academic, life science, energy and manufacturing segments, Cray will bring complementary technology in end markets to further strengthen our position.

Customer benefits will include new offerings in AI, machine learning, analytics and new consumption models with HPE GreenLake in the near future. Together, the companies can achieve greater scale by combining engineering talent and technologies and enabling R&D innovation leadership. We will also have enhanced supply chain capabilities with its improved U.S. based manufacturing. So overall, I couldn't be more excited to have Cray join the HPE team once we close the deal in the first quarter of fiscal 2020.

Just as we are investing in bringing innovative offerings to the market, we also remain committed to thoughtfully investing in our own culture. I believe attracting and retaining the best people is critical and our renewed focus on culture is bringing energy to our employees and attracting new attention from recruits.

The day we celebrated our official grand opening in San Jose last month, we also launched several new employee benefits, including six months of paid family leave for the birth or adoption of a new child. I believe strongly in supporting both the career and personal development of our people, and I am proud of the new ways we're able to do so.

In summary, I am pleased that we delivered strong margin improvements, EPS above our outlook and robust cash flow in Q2. While we experienced some changes in microeconomic dynamics, and could have executed better in certain areas, we are on track to deliver on our commitments we laid out at SAM.

I am excited about our future as we continue to deliver what customers need most. Our strategy at the Edge is to provide connectivity, security, analytics and cloud computing. At the core, we provide workload optimized, cloud enabled and consumption driven solutions for a

hybrid world. I remain confident that our execution against this strategy will drive profitable growth and solid free cash flow, generating strong shareholder returns.

And with that, I would like to turn it now to Tarek.

Tarek Robbiati

Thank you very much, Antonio. Now, let me provide more details on our financial results for the quarter. As I did before, I'll be referencing the slides from our earnings presentation to better highlight our performance in the second quarter of our fiscal year.

Starting with slide one, you'll see as Antonio said, that we are on track to deliver our key financial metrics that we committed to at our Securities Analyst Meeting. Revenue grew in line with our commitment at SAM for constant currency growth excluding Tier 1.

We continue to expand both gross and operating margins, enabling us to deliver non-GAAP earnings per share above our quarterly outlook. Most importantly, the quality of our earnings is improving. This has enabled us to deliver free cash flow of \$402 million in Q2 and \$212 million in the first half. This is the first time we've achieved positive first half free cash flow as Hewlett Packard Enterprise since the company was spun-off from the Hewlett Packard Company in November 2015.

Now let me take this opportunity to explain our revenue growth story in this quarter, as shown on slide two. This quarter, we continue to take deliberate actions to improve our profitability. We continued the wind down of our Tier 1 business. The business made up 5% of our total revenue in the prior year, and is now just under 2%, but at much better gross margins.

And as Antonio mentioned, we are selling fewer HPE products to our H3C business in China in order to optimize our H3C joint venture for profitable growth. I will talk about China and the H3C entity there in more details shortly. Currency was also a greater headwind to revenue this quarter. As you can see, after adjusting for deliberate actions in currency, the underlying core business is growing, driven by our strategic focus area.

Turning to the macroeconomic environment, I'll start with China. As you see on slide three, China continues to be an important market for us as the largest and fastest growing IT market in the world. We have a strong presence in China through a very unique structure with H3C, where we own a 49% equity stake, and UNIS owns the other 51%. UNIS is an \$8 billion market cap company listed in China. UNIS derives the vast majority of its profits from H3C.

As mentioned earlier, we continue to focus on balancing the amount of HPE products versus H3C's local offerings to optimize the overall entity for profitable growth. While selling fewer units to H3C does impact our revenue, keep in mind that we sell product at preferential prices to H3C. As a result of the balancing, we are recognizing higher equity interest year-over-year in the OI&E line of our non-GAAP P&L for which we receive regular cash dividends. H3C's performance, which is operational in nature, is an important component of the OI&E results in our non-GAAP P&L.

Also, since the beginning of this month of May 2019, we have the right over the next three years to exercise our put option to sell all or part of our 49% stake to UNIS. The put option is valued at 15 times trailing 12 month net earnings. It's worth noting that the publicly traded shares of UNIS are trading at a much higher multiple than the multiples of our put option. However, we do

not currently intend to exercise our put at this time, given the strategic importance of the China market, and H3C's growing revenues and earnings.

Moving on to a broader view of each global region on the right hand side of slide four, we did witness some shifts in market dynamics, with global trade often mentioned as a concern by our customers. We are taking actions ourselves to mitigate the risks of the recent tariff increase from 10% to 25%, and have factored that into our outlook.

Moreover, foreign exchange rates have continued to move unfavorably the last few quarters, and we faced a significant year-over-year headwind in Q2 of 210 basis points. We now expect currency to be close to a two point headwind to revenue growth on a full year basis in fiscal year 2019, based on current spots rates instead of just over one point as stated at SAM in October 2018.

Geographically, Americas revenue was down 7% in constant currency or down 2% when normalizing for Tier 1 sales. Revenue growth in EMEA was up 1% in constant currency with solid double-digit growth in both France and Germany. Asia Pacific was up 1% in constant currency and up 6% in constant currency excluding China.

Slide five shows our performance in the quarter by segment. I won't take you through every number, but let me hit a few key points. In Intelligent Edge, we had solid performance in both EMEA and APJ, but as Antonio mentioned, we have some go to market execution issues in North America that we are working through in the coming quarters.

In Hybrid IT, our higher margin value compute portfolio grew at 8% and within storage we saw notable strength in Nimble storage which grew 45%. In Operational Services, we grew orders again including Nimble services. And within HPE Financial Services we saw solid single-digit growth in our asset management business and continued strength in return of equity, which again exceeded 15% this quarter.

Let me bring everything together on slide six and put into perspective the key metrics to measure our business as we pivot our portfolio. The left hand side of the chart shows how the various businesses within Hybrid IT contributed to HPE's overall revenue growth.

First, it is important to separate out our deliberate actions in both Tier 1 and China that diluted growth by 4 points combined. The volume compute business remained stable contributing 20 basis points to growth and more importantly, our higher margin value compute business grew 8%, contributing 1.2 points to overall growth.

We are seeing strong growth in these categories with HPC up 25%, contributing 1.5 points, composable cloud up 78%, contributing 1.3 points, and HCI up 25%, contributing another 20 basis points. Storage also was up 5%, contributing 60 basis points to overall growth. While Pointnext revenue was down in the quarter, we're growing Operational Services orders including Nimble services at 1% year-over-year and GreenLake subscription services which were up 39%. These are both important lead indicators to overall future Pointnext revenue growth.

This portfolio mix shift combined with supply chain efficiencies and improvements in manufacturing overhead drove margin expansion of 200 basis points year-over-year in Q2. Roughly two-thirds of that was driven by the mix shift and the remaining one-third was other costs of sales efficiencies including lower commodity costs.

We have also been able to hold non-GAAP operating expenses relatively flat through our continued savings and reinvestments from HPE Next. As a result, non-GAAP operating profits continue to expand and were up 70 basis points year-over-year in Q2. All of this has resulted in significantly improved non-GAAP EPS. We're also focused on working capital and we have been able to decrease our one-time payments for HPE Next. As a result, Q2 cash flow from operations was \$1 billion, up 300% versus the prior year. The key takeaway is that our underlying profitability and quality of earnings is materially improving.

Slide seven shows our EPS performance to-date. Non-GAAP diluted net earnings per share of \$0.42 was up 31% year-over-year and above our previously provided outlook of \$0.34 to \$0.38 due to solid operational performance and favorable other income and expense. OI&E was favorable due to lower interest expense, favorable currency hedging, stronger earnings from H3C and one-time asset sales. This marks the sixth consecutive quarter of robust double-digit growth in continuing operations and we continue to outperform the high end of outlook range.

GAAP diluted net earnings per share was \$0.30, well above our previously provided outlook range of \$0.19 to \$0.23 per share, primarily due to the same reasons for the non-GAAP outperformance and lower than expected transformation costs.

Turning to margins on slides eight and nine, we continue to deliver significant margin expansion as we focus on profitable growth in Hybrid IT, shifting our portfolio towards higher value, higher gross margin offerings and executing HPE Next initiatives.

Gross margin of 32.2% was up 200 basis points year-over-year and up 110 basis points quarter-over-quarter, the fifth quarter of sequential expansion. Expanding gross margins is very important, as it demonstrates that we have a rich portfolio of software defined offerings of significant value to our customers.

Non-GAAP operating margin of 8.9% was up 70 basis points year-over-year. As mentioned, HPE Next has enabled us to redirect investments back into the business, including a double-digit increase year-over-year in R&D to drive organic innovation.

Now, turning to the segment and business units starting on slide 10, in the Intelligent Edge revenue was down 5% year-over-year. While we saw solid growth in EMEA and APJ we underperformed in North America.

We're taking action to address several improvement opportunities in our go to market execution and remain confident in the long-term growth opportunity for this business. Operating margins of 3% were down 490 basis points year-over-year due to ongoing investments in sales and R&D, as part of our announced plan to invest \$4 billion into the Intelligent Edge in four years.

Aruba product declined 7% due to the execution issues just highlighted in North America and longer sales cycles at some customers. Despite these challenges, we feel very good about Intelligent Edge strategy and are launching our next generation of Wi-Fi 6 products that are just beginning to sell into the installed base and will ramp more significantly in the upcoming quarters. Aruba services, was up 18% on continued installed base growth. We will continue to push high margin Aruba services to represent a higher portion of Aruba's total revenue. This will be a source of continued gross margin expansion for us.

Moving on to slide 11, in Hybrid IT revenue was down 3% year-over-year, but up 2% excluding Tier 1 sales. Operating margins were 11.4%, up 140 basis points year-over-year at a two year high level.

Similarly, to Edge we saw some execution weakness in North America and some lengthening sales cycles that slowed our growth in the quarter. Compute revenue was down 4%, but up 4% excluding Tier 1. Most importantly, our higher margin value compute business was up nearly 8% contributing 120 basis points of growth to HPE.

Storage revenue was up 5% year-over-year which marks our eighth consecutive quarter of growth. This quarter, we saw particular strength in Nimble storage which grew 45% year-over-year. We have also seen significant margin expansion as our customers embrace our intelligent storage offerings. We have also made good progress installing InfoSight across 3PAR, which is now on approximately one-third of our installed base and is shipping on all units.

HPE Pointnext revenue declined 3% year-over-year, driven by our continued intentional exit from lower margin countries in the Advisory and Professional Services business. As mentioned on earlier calls this will become less dilutive as the year progresses.

Our book-to-bill ratio was 1.12 which is an indicator of future revenue growth. Operational Services orders including Nimble services orders grew 1% in constant currency driven by growth in new attached to our higher value offerings like Nimble and increasing adoption of our flexible capacity offerings with GreenLake, which had its best quarter and was up 39% year-over-year.

Moving to slide 12, HPE Financial Services revenue was up 2% year-over-year in constant currency on strength in our higher margin asset management business. Financing volume was down 6% year-over-year in constant currency, mainly driven by our business with DXC. We ended the quarter with net portfolio assets of \$13 billion and loss ratios continued to be best in class at approximately 50 basis points.

Operating margins increased 70 basis points year-over-year to 8.6% and return on equity was a robust 15.6%. Our financial services business continues to play a vital role, unlocking value for customers through our traditional leasing offerings, asset management services and flexible consumption offerings with GreenLake that we look to accelerate for years to come.

Turning to cash flow on slide 13, free cash flow was seasonally very strong at \$402 million in Q2. This is an improvement of more than \$650 million versus the prior year, driven by higher profitability, improved working capital management and lower one-time payments.

Given our performance to-date and based on our historical ramp up in the second half of the year, we feel confident that we will achieve our full-year outlook of \$1.4 billion to \$1.6 billion of free cash flow. With respect to working capital, the cash conversion cycle was a negative 21 days in Q2, as inventory became a source of cash versus being a use of cash in the same period last year.

Finally, as part of our continued \$7 billion capital return plan through fiscal year 2019, we returned \$728 million to shareholders during the quarter. We paid \$154 million in dividends and repurchased \$574 million worth of shares in the quarter.

As you can see from slide 14, our balance sheet remains strong and we ended the quarter with an operating company net cash balance of \$1.7 billion. Also as a reminder, the vast majority of our debt is associated with the \$13 billion book of net portfolio assets of our financing business. With approximately 50 basis points of bad debt as a percentage of average net receivables the underwriting performance of HPEFS is best-in-class. As a result, the levels of cash support for HPEFS are minimal which enables HPEFS to generate a high return on financial assets and double-digit returns on equity, as mentioned before.

Now, turning to our outlook on slide 15, as a reminder at SAM, we originally guided our non-GAAP FY'19 EPS outlook to be \$1.51 to \$1.61. Due to our strong non-GAAP EPS performance in Q1 we raised our full year EPS guidance by \$0.05, to \$1.56 to \$1.66. With our continued outperformance in Q2, we are again raising our EPS guidance for the full year. We now expect to finish fiscal year 2019 with non-GAAP diluted net earnings per share of \$1.62 to \$1.72 and we expect our fiscal year 2019 GAAP diluted net earnings per share to be \$0.98 to \$1.08. This is now the sixth consecutive quarter that we are raising our non-GAAP EPS outlook.

For Q3 of fiscal year 2019, we expect non-GAAP diluted net earnings per share of \$0.40 to \$0.44 and we expect GAAP diluted net earnings per share to be \$0.29 to \$0.33. So overall, while we have some work to do in North America sales execution, I am pleased that we continue to make progress against our strategy of shifting our portfolio towards profitable growth that will drive our free cash flow and ultimately, shareholder returns.

Now with that, let's open it up for questions.

QUESTION AND ANSWER

Operator

Ladies and gentlemen, we will now begin the question and answer session. To ask a question you may press "*" and then "1" on your touchtone phones. If you are using a speakerphone, we do ask you please pick up your handset before pressing the keys. To withdraw your question you may press "*" and "2." We also request that you only ask one question and one follow-up question.

Our first question comes from Katy Huberty from Morgan Stanley. Please go ahead with your question.

Katy Huberty

Thank you. Good afternoon. First, just a couple of clarifications on EPS in the quarter, what would be the net impact of shipping fewer units into China, and then offset by the higher H3C earnings that flow through OI&E. And similarly, what was the impact of one time asset sales on EPS in the quarter? Then I have a follow-up.

Tarek Robbiati

Hi, Katy. When you look at overall our business in China, you can look at page two and see the contribution it makes from a revenue standpoint and what comes at the bottom, by way of OI&E. What we explained today is that the revenue that comes from the products we sell through H3C is at preferential prices and therefore you can assume that that revenue is relatively low gross margin. So from the top line side, the impact to the EPS is practically negligible.

Within the OI&E side, you do get the benefit of the equity interest that comes from H3C from selling their products in China plus, of course, our products through their channels in China.

And we received a pretty high equity interest in the quarter, but that was not the sole driver for our performance in OI&E. There were other drivers there as well, such as, currency hedges, one-off asset sales and, of course, the contribution of our H3C business in China. So on the whole it's a mix of factors that have driven up OI&E and from the top line, the contribution to EPS growth is negligible.

Katy Huberty

And what was the impact of the one-time asset sales in OI&E?

Tarek Robbiati

Relatively on an EPS standpoint, less than \$0.01.

Katy Huberty

Okay, thank you. And then just as a follow-up, given such strong free cash flow in the quarter, why not raise the full year and flow through that strength? I guess you knew you were going to get that question.

Tarek Robbiati

Yes, it's pretty obvious, the thing as we remind ourselves of where we were on a free cash flow basis when we started this fiscal year. In the first quarter, we did flag that for the first time working capital would be a contributor to cash in this fiscal year as opposed to a use of cash. So in the performance on a free cash flow basis you have the three components. Number one, the cash earnings, which are much stronger, thanks to the improvement in gross margin and everything we've done from a cash earning standpoint. Number two, the working capital which is a very important part of the free cash flow equation. And number three, we are having less transformation costs than originally anticipated. The guidance that we provided on free cash flow is sufficiently wide \$1.4 [billion] to \$1.6 billion and we're comfortable with that level of guidance at this stage, we may want to choose during the course of the year to calibrate some investments and that's why we are not changing the guidance.

Katy Huberty

Thank you.

Andrew Simanek

Thank you, Katy. Can we go to the next question, please?

Operator

Our next question comes from Shannon Cross from Cross Research. Please go ahead with your question.

Shannon Cross

Thank you very much for taking my question. I just wanted to understand a bit more of what's going on in North America with Aruba, it seems like a pretty abrupt change from a business that was doing pretty well and you were highlighting significantly. So I guess, if you can give us any more color as to, what went wrong and then the specific steps you are taking to improve the go to market? Thank you.

Antonio Neri

Yes, thanks for the question and good afternoon. Listen, we drove solid growth in EMEA and APJ and we continue to see the momentum going. What we uncover in North America was the market dynamic and the demand shifted in different segments of the market and we have to

make some quick adjustments on how we cover those markets where the growth is understanding that now there is a transition on new technology with Wi-Fi 6 and other software capabilities that we just introduced to the market.

But at the core of this, Shannon, was nothing more than making sure our resources in covering the market are aligned where the growth is. And there was that. The second, was the elongated sales cycles that we saw. And the third one was also the fact that as people assess what's going on here in North America, particularly with global trade, we saw this elongated cycles in the decision-making and that had an impact on a few deals that shifted from Q2 to Q3. And so, that come altogether in a way that drove that decline in North America, but I am really confident, a) number one, we know exactly what it is, and we have taken active action to address it. Number two, is the fact that our products and services are very differentiated and we feel comfortable about that. But to be fair, we could have executed better in that specific segment of the business. And the good news, we know what to do and we have put in place the changes that are needed.

Shannon Cross

Okay, thank you. And then, Tarek, can you talk a bit about the gross margin improvement, more on the operational side? I'm curious as to how much you think is sustainable? How much more you think you can do? And again, some of the specific things you're doing maybe within the supply chain to take costs out? Thank you.

Tarek Robbiati

Yes, certainly. So expanding gross margins is very important. And I'm glad that you're focusing on it, it demonstrates that we're not a commoditizing business and there's a lot of richness in the portfolio of software defined offerings we provide to our customers. The trends are very positive, and we expanded gross margins now for five quarters in a row, we are up to 32.2% in Q2, and this is up 200 basis points year-over-year and up 110 basis points sequentially, if I'm not mistaken. If you look at what has driven up the improvement, it is primarily, pivoting the portfolio mix to higher revenue, rich...margin-rich revenue. That was two-thirds of the improvement in gross margin. And the remaining one-third came from supply chain efficiencies, the work we're doing with HPE Next, addressing manufacturing overhead and of course, lower commodity costs.

So specifically to your point, when you're asking about sustainability of that gross margin improvement, it is not prone entirely to commodity costs rising because the revenue mix is shifting to higher differentiated revenue streams that command a gross margin premium, and therefore, we feel very good about the upside we have in gross margin overall as we continue to accelerate the pivot of our portfolio towards revenues that are higher gross margin.

Shannon Cross

Thank you.

Andrew Simanek

Perfect, thanks, Shannon. Can we go to the next question, please?

Operator

Our next question comes from to Toni Sacconaghi from Bernstein. Please go ahead with your question.

Toni Sacconaghi

Yes, thank you. I think on your last earnings call, you had talked about an expectation that revenue growth would accelerate throughout the remainder of the year, and that Aruba's growth would also accelerate throughout the year. And I hear you that things have changed. I'm just trying to maybe dimension the magnitude.

So based on your Aruba statement, it feels like you may be missed Aruba by \$60 million. You may be missed your top line relative to that statement by \$200 million or more. And so, I'm trying to understand of that other \$140, how much of that was something that you think got pushed out because deals didn't close and you'll get them back next quarter? Or how much of that is the reflection of weakening demand? And given that trade really only started to rear its head like on after the quarter closed in early May, is that a potential incremental concern or headwind for Q3? So maybe you can help me dimension what the magnitude of the levers that you expressed were in terms of the disappointment relative to your expectations? And then, why don't some of them carry over their weaker demand and if we haven't really maybe seen the impact of trade hesitancy in full yet?

Antonio Neri

Yes, Toni, thanks for the question. So, the market dynamics at the beginning of the quarter were certain that we felt we could accelerate. And at the end of the quarter, we saw a different story, because obviously, the uncertainty continued to be in the market. And as I said, that had an impact on elongated sales cycles, which translated in some deals shifting from Q2 to Q3, and those deals will come as we go along. Definitely, we continue to drive solid growth against our strategic initiatives. And obviously, you saw some of the numbers we quoted with Aruba services and we quoted HCI and composable cloud and even GreenLake which had the largest quarter, ever.

But no question, we could have executed better in some aspects of this particularly on the...as we said just a minute ago on the Aruba product in North America. But the reality...I cannot put a specific number associated with each of them, it was a combination of the market dynamics changing from the beginning of the quarter, some deals slipping from Q2 to Q3, and then obviously, some execution aspects that we could have done better. And...We believe, we have the handle on the execution challenges, because that are in our control, and we know exactly which segments of the market and we have made or continue to make the changes. But the demand for ever growing amount of data, and the pipeline that we have out there continue to reflect the fact that we actually will continue to deliver on our commitment at SAM, which is to grow the company and obviously grow the Intelligent Edge, which is, as I said in my opening remark, is a big opportunity for the company. So, overall, I think that's how I characterize this quarter. And there are things we have in our control and things we have not in our control. But the pipeline, the fact that data continue to explode, and the fact that we have these deals shifting from one quarter to the other give us the understanding and the confidence that we will execute as we go along.

Toni Sacconaghi

Okay, thank you for that. Just to follow up, I was wondering if you could tell us what Operational Services revenue growth was in the quarter. And what the Operational Services order growth rate was, if we exclude Nimble, because that's not part of how you define Operational Services as you report it. And you said last quarter that, this good book-to-bill would help growth rate in Operational Services. When do you expect Operational Services to show positive growth?

Tarek Robbiati

Okay, Toni. So overall, we feel good about the long-term opportunity and profitability of Pointnext. Revenue in Q2 was down 3% year-over-year, mainly due to the continued exits of low margin countries in the Advisory and Professional Services business. This will become less dilutive as the year progresses. Our book-to-bill ratio was 1.12 which is an indicator of future revenue growth. And in my script, I've indicated that as GreenLake continues to grow there is an elongation of the cycle that we could see for recognizing the revenues pertaining to Pointnext OS. And we need several quarters of a book-to-bill ratio at current levels to be seeing the Pointnext OS, Operational Services revenue growing. So when you look at this, what's important and what we do is we drive the book-to-bill ratio to be at or above current levels, we also drive Operational Services orders in Nimble. And when you take the combination of Operational Services orders plus the Nimble services orders the combination grew 1% in constant currency as we have the tailwinds of new attached offerings across our portfolio.

GreenLake is really the only on-prem consumption-driven offering in the market and it was up 39% year-over-year plus, we also announced the strategic partnership with Google cloud and Nutanix and this is to expand the GreenLake ecosystems for several quarters ahead of us. So we feel good about this, it will take us a bit of time, maybe Antonio wanted to add.

Antonio Neri

Yes, now just a couple of comments, Toni. So our book-to-bill ratio is what I've really measured going forward in each aspects of the portfolio because obviously when you're at these levels over time depending on the mix of what gets booked, it will drive revenue growth. And if you look at our book-to-bill ratio in Q1, it was lower than Q2 even though it was above the revenue. So that means we have seen an acceleration of the book-to-bill ratio quarter-over-quarter and year-over-year and as that matures becomes in the balance sheet over time you are going to see that balance sheet translated into revenue.

And the other thing let's remind ourselves that GreenLake while it has potentially a longer elongated cycle because of the way the revenue gets recognized, let's remind ourselves, it has a 100% attach rate of Operational Services. Every time you sell GreenLake, it comes with hardware and 100% attach of Operational Services. So, as GreenLake grows, so grows our attach rate and attach rate gets recognized in the traditional way we recognize our deferred revenue for Operational Services. So, that's why I'm very encouraged and very pleased with the performance of Operational Services where the book-to-bill ratio and GreenLake because that drives 100% attach rate.

Andrew Simanek

Great. Thank you, Toni. Can we get to the next question, please?

Operator

Our next question comes from Aaron Rakers from Wells Fargo. Please go ahead with your question.

Aaron Rakers

Yes, thanks for taking the question, one question and one quick follow-up, as well. First on the server side of the market, I'm just curious of how you are currently seeing component pricing, particularly DRAM pricing flow through the model, whether or not you actively reduced your pricing or if you plan to do so going forward? And underneath to that, how do we think about unit growth within the server category is that...when do we expect that to maybe trend to the positive?

Antonio Neri

Yes, thanks for the question. So the overall commodity environment continue to be favorable and there is an oversupply now compared to last year as you recall, there was shortages and costs going up. The DRAM prices are down, but let's remind ourselves that that does not translate into lower AUP because at the same time, we said our AUPs are two-third structural, because more and more options in the form of memory and flash get attached to these units.

And so we have talked about this before, the fact that units get sold with more and more options even though the AUP of the components go down it does not translate into lower AUPs at the system level and that's why this quarter, we again grew our compute revenue by 4% excluding Tier 1, obviously which we're intentionally declining. And despite the decline on commodity cost and that commodity cost takes time to find its way in the system, and I always make this analogy is when the cost goes up is like when you take off with the plane it goes up fast, when you land the plane it takes longer and this is exactly the same way. And because our unique portfolio in the Compute, because we have probably one of the richest portfolio in term of what I call volume and value and in value we have probably the most complete in term of mission critical, in term of in memory solutions HPC, obviously, and things like blade and composable. We have a unique mix that drives higher value AUPs and higher attach. So it will take long time to get these numbers, the lower costs in the system AUP, but at the same time more and more options will get attached.

The second part of the question was about the units. And now we are in the very low single-digit declines. And as we said before, by the end of the year, we believe this is going to be a non-event and from there on obviously as we continue to drive this pivot to the higher value products and services, particularly in the product side we are going to see growth in that and we start to see the momentum in some of these areas like I quoted, so composable cloud 78%, high performance compute continue to be very strong, another 25% growth. And obviously, as we close the Cray transaction that will add more to it at the larger, larger amount of scale of units because these are big amount of systems, and then obviously, the hyperconverged infrastructure as well, which are the core is a Compute platform with a bunch of storage attached to it.

Aaron Rakers

That's perfect. And I have a quick follow-up, you mentioned in the call that you obviously have this put option for the H3C asset, I think at 15 times trailing 12 months net income that actually equates to a relatively large number. So I'm curious of how you think about evaluating that put option relative to the strategic nature of that relationship or how you just think about that with that now being on the table?

Tarek Robbiati

Yeah, look, it's important to realize that China is a very critical market for us, it is the largest and fastest growing IT market in the world. And we have a unique structure there with a fully operational business that makes money. And it's a structure that not many Western companies can actually claim they have. Starting May '19, we can exercise that put option to sell part or all of our 49% stake. And if you take the minimum of the put value at 15 times trailing 12 months and earnings you get to the figures that you have in mind. But it's important to understand the contribution of H3C to the overall profit pools that UNIS, which is a listed company in China, is actually generating and what is that contribution of UNIS underneath H3C on a niche unit, alongside the other entities that UNIS has. And I invite you to just take a look at this and you will form your own view as to the value of our put and what it represents for us.

Antonio Neri

So let me add a commentary on this. Obviously there is a financial aspect of this and then there is the strategic aspect of this. We are incredibly pleased with this relationship and the setup in China. And it has proven to be very important and critical in the times we are living today, because we can participate in the second largest market growing faster than any other market. And so, we are actually collecting the benefits of that growth in a unique setup that shows up in our EPS growth as we talked earlier. And obviously we have to assess a couple of things right, how the market evolves and how we participate in the market. Ultimately, what is the source of a potential use of that cash to continue to drive the growth in the company? Right now, as we said in the opening remarks, we have no intent to sell the put option. But as always, we will continue to evaluate what is the best for the company for our shareholders, understanding what's going on in that market and understanding how we continue to participate.

Aaron Rakers

Thank you.

Andrew Simanek

Perfect. Thanks, Aaron. So we're coming up on the bottom of the hour. So I think we have time for just one more question, please.

Operator

And our final question today comes from Jim Suva from Citi Investment Research. Please go ahead with your question.

Jim Suva

Thank you very much. I have one question and it's probably the CEO and CFO both want to chime in on it. But it appears that on this conference call you were a lot more vocal about the H3C operations, put options especially the put options have been in the past. And maybe I'm just hearing that a little different, but it seems like you are a lot more vocal about that. Why is that, is that because of the China-U.S. friction or is that because of perhaps a lot of the guide and beat was due to this other income line or how should we think about it, appears to be a change in the verbalization around this line item on your income statement? Thank you.

Antonio Neri

Thanks for the question. I think, we felt that there was a need to provide more clarity and education on our setup. Honestly, as I go back and listen to the type of questions and so forth we felt we probably haven't done a good job explaining this setup and the value of this unique relationship. That's why we decided to show it to you, it has nothing to do with the U.S.-China relationship. It had to do to how we drive value for shareholders. And we believe this is driving significant value for shareholders, but we didn't explain it to the extent that Tarek did today because we felt, we didn't do a good job before. So that's why we are bringing it up.

And it just happened at the same time with everything going on in China. Now, probably people will think, well, maybe the setup is unique and it's more valuable in the context of what we see. But really, it was all about educating you in understanding this setup in the context of the valuation and the value we drive for our shareholders. And I thought Tarek did a very good job explaining that, because it's very unique we don't see anything out there like this.

Tarek, I don't know if you want to add anything else.

Tarek Robbiati

Well, absolutely, I will simply add that this is...at the beginning of this month this is the first time where we can exercise the put option. And that's the reason why we talked to you about it today.

Jim Suva

Thank you so much for the details that make sense, I appreciate it.

Antonio Neri

Thank you.

CONCLUSION**Andrew Simanek**

Great. Thank you, Jim. I think with that we can close up the call. I know there is a heavy earnings scheduled today. So appreciate everybody join us and we'll look forward to talking to you next time. Thank you.

Operator

Ladies and gentlemen, this concludes our call for today. Thank you.