# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Call Participants</td>
<td>3</td>
</tr>
<tr>
<td>Presentation</td>
<td>4</td>
</tr>
<tr>
<td>Question and Answer</td>
<td>9</td>
</tr>
</tbody>
</table>
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Operator

Good day, and thank you for standing by. Welcome to the Fourth Quarter Datadog Earnings Conference Call. [Operator Instructions] Please be advised that today's conference is being recorded.

I would now like to hand the conference over to your speaker today, Yuka Broderick, Vice President of Investor Relations. Please go ahead.

Yuka Broderick
Investor Relations

Thank you, Katherine. Good morning, and thank you for joining us to review Datadog’s fourth quarter and fiscal year 2022 financial results, which we announced in our press release issued this morning. Joining me on the call today are Olivier Pomel, Datadog's Co-Founder and CEO; and David Obstler, Datadog's CFO.

During this call, we will make forward-looking statements, including statements related to our future financial performance, our outlook for the first quarter and fiscal year 2023 and related notes and assumptions, our gross margins and operating margins, our strategy, our product capabilities and our ability to capitalize on market opportunities. The words anticipate, believe, continue, estimate, expect, intend, will and similar expressions are intended to identify forward-looking statements or similar indications of future expectations. These statements reflect our views only as of today and are subject to a variety of risks and uncertainties that could cause actual results to differ materially.

For a discussion of the material risks and other important factors that could affect our actual results, please refer to our Form 10-Q for the quarter ended September 30, 2022. Additional information will be made available in our upcoming Form 10-K for the fiscal year ended December 31, 2022, and other filings with the SEC. This information is also available on the Investor Relations section of our website, along with a replay of this call. We will also discuss non-GAAP financial measures, which are reconciled to their most directly comparable GAAP financial measures in the tables in our earnings release, which is available at investors.datadoghq.com.

With that, I’d like to turn the call over to Olivier.

Olivier Pomel
Co-Founder, CEO & Director

Thanks, Yuka, and thank you all for joining us this morning. We had a solid Q4 to end a strong fiscal year 2022. We delivered significant new innovations for our customers, we saw increasing adoption of our products and we attracted thousands of new customers to our platform. Meanwhile, we delivered strong revenue growth, margins, non-GAAP operating profit, and we generated more than $350 million in free cash flow.

Let me start with a review of our Q4 financial performance. In Q4, revenue was $469 million, an increase of 44% year-over-year, 8% quarter-over-quarter and above the high end of our guidance range. We had about 23,200 customers, up from about 18,800 last year. We ended the quarter with about 2,780 customers with ARR of $100,000 or more, up from about 2,010 last year. These customers generated about 85% of our ARR. And we had 317 customers with ARR of $1 million or more compared to the 216 we had at the end of last year. We generated free cash flow of $96 million with a free cash flow margin of 21%. And our dollar-based net retention rate continued to be over 130% as customers increased their usage and adopted more products.

Our platform strategy continues to resonate in the market. As of the end of Q4, 81% of customers were using 2 or more products, up from 78% a year ago; 42% of customers were using 4 or more products, up from 33% a year ago; and 18% of our customers were using 6 or more products, up from 10% last year.

Now moving on to this quarter's business drivers. Overall, we observed slower usage growth with existing customers while continuing to scale our new logo acquisition and new product cross-sells. Starting with usage. Usage growth of existing customers in Q4 was overall slightly lower than what we observed in Q2 and Q3, which we attribute, first, to a continuation of cloud cost optimization by our larger spending customers; and second, to a seasonal annual slowdown in the second half of December that was more pronounced than in previous years. As in Q2 and Q3, we continue to see more optimization from customers as a larger cloud footprint, while our smaller spending customers are exhibiting higher growth.
From a product perspective, we didn't see meaningful differences among our major products as they all experienced solid growth, albeit decelerating on a year-over-year basis. In contrast to this deceleration in usage growth for existing customers, we continue to execute on new logo lands and multiproduct adoption, and we also continue to see stable, very strong growth retention trends.

First, we had our strongest new logo quarter to date, with a record level of new logo ARR bookings. Second, our sales pipeline remains healthy as our pattern of new logo and cross-sell is scaling above the levels of the past years, and we see demand growing along with our investments in go-to-market.

I'd also like to point out that although we have made steady progress, we still see significant opportunities to grow our penetration in total spend amounts with larger customers. As a data point, as of January 2023, 37% of the Fortune 500 are Datadog customers, up from 30% last year. For these customers, the median Datadog ARR is in the hundreds of thousands of dollars. This leaves a very large opportunity for us to go with these customers as they continue to move towards the cloud and more of them develop.

We are also pleased with the initial take-up of some of our newest products, including Cloud Cost Management, for which we already added a mid-6-figure commitment last month from a global fast food chain. And finally, churn has remained low, with gross revenue retention steady in the mid- to high 90s. We believe this high retention number is indicative of the business criticality of Datadog for our customers.

Now let's move on to R&D. During the quarter, we released our latest product to general availability, Universal Service Monitoring, which detects all micro services across an organization's environment and provides instant visibility into their health and dependencies, all without any code changes. Universal Service Monitoring bridges our existing monitoring and application performance monitoring capabilities and it involves end-to-end observability with minimal deployment friction.

Now let's take a moment to review the R&D team's accomplishments in 2022. We ended the year with 17 generally available products, up from 13 at the end of 2021, and we greatly expanded the capabilities of our existing products. Overall, in 2022, we have meaningfully broadened our observability capabilities and pushed forward in making each product best of breed. Meanwhile, we have made meaningful progress but remain in early days in the new areas of cloud security and developer experience.

In observability, we continue to expand our end-to-end unified platform. We now have more than 600 integrations, including all the latest products on AWS, GCP and Azure. We launched new AI capabilities, such as Watchdog Log Anomaly Detection to help customers separate signal from noise in data and Watchdog Root Cause Analysis to identify the root cause of issues and quantify their impact in customers.

We launched Cloud Cost Management to help customers take control of their infrastructure costs. We announced Service Catalog to manage service ownership at scale. We made Observability Pipelines generally available, enabling customers to collect and transform data from any source to any destination, all at petabyte scale. We launched Audit Trail to help customers achieve their compliance and governance goals. We extended Sensitive Data Scanner beyond logs to inspect APM and REM data flows. And we now collect data from SNMP Traps to provide greater visibility into physical network equipment.

In cloud security, we kept building out our platform. We launched Cloud Security Management, our rich context-aware CNAPP platform. We launched Application Security Management, building on our acquisition of Sqreen in 2021, and we announced the beta of Native Protection to block malicious factors directly within the data platform.

In developer experience, we are expanding on our CI Visibility product. We introduced continuous testing to bring efficient and reliable testing within CI/CD pipelines, and we launched the beta of Intelligence Test Runners, which significantly reduces the time and cost of running tests.

And last but not least, we delivered a number of platform-wide initiatives. We achieved FedRAMP moderate authorization and have since landed a number of government agencies as customers. Our customers today can also use CoScreen for collaboration, incident response, preprogramming and debugging less than a year after the acquisition, and we continue to expand on the HIPAA and PCI compliance of our products. As you can tell, we've been busy, and I want to thank the R&D team for a very productive year.

Looking ahead to 2023, our teams are continuing to push forward as beta products from 2022 include data streams monitoring, workflow automation, event correlation, heat maps, dynamic instrumentation, workload security profiling, resource catalog and native protection, among others. We also continue to integrate our 2022 acquisitions, CoScreen, Hdiv, Seekret and Cloudcraft into the Datadog platform, and we are excited for their potential. In summary, we're looking forward to delivering many more capabilities to help our customers in 2023.
Now let's move on to sales and marketing. Our go-to-market teams continue to execute very well into the end of 2022, in particular on new logo lands. So let's go over a few of our wins this quarter. First, we signed a 7-figure land with a Fortune 500 industrial group. This company was using multiple open-source and built-in cloud monitoring tools, which led to release delays and consumer-facing outages. In addition to our metrics, traces and logs, this company will rely on our ability to integrate open telemetry data sources to deliver immediate value. This customer's initial deal includes 13 products across our observability, security and developer experience categories.

Next, we signed a 7-figure land with a Fortune 500 financial services company. This customer is moving hundreds of applications from on-prem to the cloud and multiple legacy tools were creating gaps in visibility and post-PCI compliance problems. This customer today is looking at savings of roughly $1 million in the first year of using Datadog and a meaningful reduction in mean time to resolution. This deal will start with infrastructure monitoring and replace 3 different tools with plans to expand to other Datadog products in the future.

Next, we signed a 7-figure land deal with a major federal government agency. This agency was looking to reduce tool sprawl and aimed at a rapid rollout to hundreds of different programs while saving money on engineering and issue resolution. This agency is among a number of new government customers in 2022, following our FedRAMP moderate authorization. And this deal is expected to displace at least 8 commercial legacy monitoring tools.

Next, we signed a 7-figure land deal with a leading Japanese system integrator. This company has been a very successful hardware system integrator and is looking to grow its digital and cloud transformation business. This customer plans to add up 15 Datadog products in order to support its ambitious growth plan.

And last for today, we signed a multimillion dollar expansion with one of the world's leading insurance companies. Prior to using Datadog, this company was using more than 30 tools across 9 business units. By consolidating onto Datadog, the customer estimates it's achieved roughly 115% ROI all within a year while reducing average mean time to resolution from 1.5 hours to 15 minutes. With this renewal, this company is adding database monitoring, cloud security management and application security management and is now using 12 Datadog products.

That's it for this quarter's customer highlights. And again, I'd like to thank our go-to-market teams for their great execution in Q4 and throughout 2022.

Now let me speak to our longer-term outlook and my thoughts on 2023. Although we are seeing customers be more cautious with their cloud usage expansion in the near term, we see no change to the long-term trends towards digital transformation and cloud migration. We think it's healthy for customers to optimize, and we believe that the ability to correct course and continually align the nature and scale of their applications with their business needs is one of the key benefits of cloud transformation.

At Datadog, we have always organized our products and our business around helping customers gain agility and reduce costs, and we do it by enabling stronger business performance and efficient use of their engineering and infrastructure spend. Regardless of near-term macro pressure, we believe it is still early days, and we expect that companies worldwide will continue to grow their next-gen IT footprint to deliver value to their customers.

Given the large opportunities we see in front of us, we plan to keep building and innovating. We have already made progress in observability, but we still have much to do to deliver more value and solve more problems for our customers. And we are excited about our opportunities in cloud security, developer experience as well as our early efforts in areas around ITSM and real-time business intelligence.

As we have since we founded Datadog, we are also balancing long-term investments against maintaining the discipline to ensure our continual financial performance. We recognize that the macro environment remains uncertain. So while we continue to focus on scaling and investing, we are growing those investments in a disciplined fashion in 2023, and David will discuss this in more detail. We remain confident in our long-term opportunities, and we are continuing to invest in our strategic priorities to catch up them.

With that, I will turn the call over to our CFO for a review of our financial performance and guidance. David?

David M. Obstler
Chief Financial Officer

Thanks, Olivier. In Q4, we continued to execute well and delivered value to our customers. Revenue was $469 million, up 44% year-over-year and up 8% quarter-over-quarter. To dive into some of the drivers of our Q4 performance, first, we saw existing customer usage growth in October and November at a similar level to what we saw in Q2 and Q3. In the month of December, we saw a slower
growth dynamic as the typical slowdown we see at the end of December was more pronounced than in previous years. As a result, the growth rate in usage by existing customers was lower in Q4 than in Q2 and Q3.

Next, similar to Q2 and Q3, we saw larger-spending customers grow slower than smaller-spending customers. As with Q2 and Q3, we saw relatively more deceleration in the consumer discretionary vertical, particularly in e-commerce and food delivery. Geographically, we saw solid and relatively similar growth across all regions.

As Olivier discussed, we experienced strong new logo ARR growth and low churn again in this quarter. We had a record level of new logo bookings in the quarter across customer sizes. Our dollar net base net retention remained at strong levels, above 130% for the 22nd consecutive quarter. And gross revenue retention has remained unchanged over the last several quarters and remained steady in the mid- to high 90s. We believe this high and steady gross retention points to the mission-critical nature of the Datadog platform for our customers.

Now moving on to our financial results. Billings in the quarter were $536 million, up 31% year-over-year. Billings duration was slightly lower year-over-year. Remaining performance obligations, or RPO, was $1.06 billion, up 30% year-over-year, and RPO duration declined on a year-over-year basis. And we note that current RPO growth was in the high 30s year-over-year. We continue to believe revenue is a better indication of our business trends than billings and RPO as those can fluctuate relative to revenue based on the timing of invoicing and the duration of customer contracts.

Now let's review some of the key income statement results. Unless otherwise noted, all metrics are non-GAAP. We have provided a reconciliation of GAAP to non-GAAP financials in our earnings release. Gross profit in the quarter was $378 million, representing a gross margin of 81%. This compares to a gross margin of 80% last quarter and also 80% in the year-ago quarter. We continue to experience efficiencies in cloud costs, reflected in our cost of goods sold in this quarter. In the mid- to long term, we continue to expect gross margin to be in the high 70s range.

Our Q4 non-GAAP OpEx grew 54% year-over-year as we continue to grow our headcount in R&D and go-to-market. Q4 operating income was $83 million or an 18% operating margin compared to an operating income of $71 million or a 22% operating margin in the year ago quarter. As a reminder, the year ago operating margin benefited from lack of in-person office, travel and event costs due to our COVID policies during the pandemic.

Turning to the balance sheet and cash flow statements. We ended the quarter with $1.9 billion in cash, cash equivalents, restricted cash and marketable securities. Cash flow from operations was $114 million in the quarter. And after taking into consideration capital expenditures and capitalized software, free cash flow was $96 million for a free cash flow margin of 21%.

Now for our outlook for the first quarter and the fiscal year 2023. In forming our guidance, we continue to use conservative assumptions as to the organic growth of our customers compared to historical periods. And as usual, we are basing our near-term guidance on recent activity we see with our customers. We are incorporating an expectation for seasonally weaker growth in the first quarter due to the subdued growth in the month of December that creates a lower growth trajectory to start the first quarter. While our customers are continuing to expand with us, we are assuming in our guidance that cloud optimization continues to affect our expansion rate in 2023.

For the first quarter, we expect revenue to be in the range of $466 million to $470 million, which represents a 28% to 29% year-over-year growth. Non-GAAP operating income is expected to be in the range of $68 million to $72 million or an operating margin of 15%. Non-GAAP net income per share is expected to be in the range of $0.22 to $0.24 per share based on approximately 348 million weighted average diluted shares outstanding.

For the full fiscal year 2023, we expect revenue to be in the range of $2.07 billion to $2.09 billion, which represents a 24% to 25% year-over-year growth. Non-GAAP operating income is expected to be in the range of $300 million to $320 million for a margin of 15% at the midpoint. Non-GAAP net income per share is expected to be in the range of $1.02 to $1.09 per share based on approximately 351 million weighted average diluted shares outstanding.

Now some additional notes on the guidance. First, regarding our fiscal year 2023 investments, we continue to balance near-term financial strength with investment in our large long-term opportunities. Our non-GAAP operating income guidance reflects this discipline.

We will continue to grow our R&D and go-to-market teams as we broaden our platform in service of our customer needs, albeit at a slower pace than in previous years. As a result, we are planning to grow our operating expenses, including COGS, in the fiscal year 2023 in the low 30s percent range year-over-year. We plan to grow our headcount in fiscal year 2023 in the mid-20s percent range year-over-year. This compares to fiscal 2022 headcount growth of approximately 50% year-over-year.
Next, as interest rates have risen, our interest income has increased and become more meaningful. We expect net interest and other income for the fiscal year 2023 to be approximately $75 million. We expect tax expense in fiscal year 2023 to be $11 million to $13 million. And finally, we expect capital expenditures and capitalized software together to be in the range of 4% to 5% of revenues in fiscal year 2023.

To reiterate Olivier's comments, we see no change to our long-term opportunities as our customers embark and expand on their cloud migration and digital transformation plans. We remain strongly positioned to help our existing and prospective customers with these journeys. I want to thank Datadogs worldwide for their efforts in 2022, and I'm excited about our plans for the next year. With that, we will open the call for questions. Operator, let's begin the Q&A.
Question and Answer

Operator

[Operator Instructions] Our first question comes from Mark Murphy with JPMorgan.

Mark Ronald Murphy
JPMorgan Chase & Co, Research Division

Olivier, I was wondering if you can comment on the AWS infrastructure monitoring portion of the business specifically. Do you see that trending above or below the 25% rate of the total business this year? And I'm wondering if you perhaps see some of the other hyperscalers, Azure, Google, et cetera, gaining any share of that mix during this year? And then I have a quick follow-up.

Olivier Pomel
Co-Founder, CEO & Director

Yes. So look, we -- obviously, we see -- we get data from our customers using those cloud providers. We also listen to the commentary that cloud providers provide on their -- in terms of their own growth. There's not a one-to-one mapping between what happens on the revenue side for the cloud providers and what we see on the infrastructure side on our end. But we are seeing some of the same trends where their growth slowed down throughout Q4. And we've been listening to their comments when they give guidance for what that growth might look like in the near future, which also informed our own guidance.

In terms of the mix shift, we don't see anything that differs from the trends we saw throughout the last year. I think the story there is they're also seeing optimization from some of the customers, that means the largest customers. And on our end, we expect that optimization to continue throughout the year. That's what we built into our guidance.

Mark Ronald Murphy
JPMorgan Chase & Co, Research Division

Okay. Understood. And then, David, I believe you mentioned record new logo ARR bookings in the quarter. Great to hear. I think we're wondering what you attribute that to just given the environment is so challenging. And there was mention of several of these companies landing like 8 or 10 or 15 Datadog products and replacing legacy tools or replacing open source. Do you see an increase in those kinds of consolidation opportunities and maybe just a broadening where this landscape is viewing Datadog as the converged observability leader in wanting to consolidate in that direction?

David M. Obstler
Chief Financial Officer

Yes. In Q4, and I think going forward, we continue to see greenfield and new projects, new workloads being the majority of the driver, but have seen over the quarters, and we talked about some of them in our prepared remarks, consolidation opportunities. When a client is already in their cloud journey and has workloads and is looking to get a platform, create efficiencies, et cetera, they have increasingly been consolidating on Datadog and we see continued opportunities for that.

Olivier Pomel
Co-Founder, CEO & Director

Yes. And I'll add to that. We see demand scaling basically. Like we're still early in cloud migration and digital transformation, and we see no slowdown from companies going from legacy IT to this new world. That's why we get more and more new logos and more and more volume there.

The part of the business we see going slower is the larger customers that are further along in this cloud transformation that have large workloads trying to optimize because that's where they can meaningfully save cost.

Operator

We have a question from Sanjit Singh from Morgan Stanley.

Sanjit Kumar Singh
Morgan Stanley, Research Division
I really wanted to ask about product innovation. And in some sense, you guys have had a pretty impeccable track record of leading a lot of product that sort of benefited your customers over the last couple of years.

But given sort of the environment that exists today, do you feel that in some sense, Datadog gets viewed by customers as sort of a Lamborghini-type observability solution, meaning that are you -- in terms of customers may not need all of the bells and whistles that a 17-product portfolio can provide? Any thoughts there on whether Datadog may be potentially overengineered for in terms of customers' willingness to spend in the current environment?

**Olivier Pomel**  
*Co-Founder, CEO & Director*

Yes. So I definitely don't think we position ourselves as the Lamborghini. We are not -- the Lamborghini doesn't have a glove box and needs to go to the shop every 2 weeks. That's definitely not us. What we have been investing heavily in, in product innovation. We have a lot of products today that, thanks to this acceleration of product and innovation over the past few years, are early in their life cycle.

What we see in the current environment is that it is actually helping us get to these consolidation deals that were mentioned a little bit earlier, because we can cover more of what our customers need to do and drive more efficiencies. Again, it's still early in that because many of those products are early in their life cycle, so they might not be applicable to every single type of customer and every single type of situation. But I think this is validating our destination there. And it shows we need to do more of that, not less.

At a time where larger customers are very, very careful about their spend, it might be more difficult for some of those products to gain a lot of adoption with any particular customer at a very high level of spend. So we're focusing today on getting a maximum number of those customers to adopt those products and plant the seeds of future growth as they further consolidate and move to the cloud.

**Sanjit Kumar Singh**  
*Morgan Stanley, Research Division*

Understood. And just a follow-up on those larger customers who are seeing their usage trends slow more than smaller customers. Relative to the commitment, how are you guys sort of handling that? Are you in a situation where you're rolling over credits? Or are you sort of enforcing sort of the take-or-pay aspect of the contract? Any color there on how you're working with those larger customers in terms of where they stand relative to their commitment?

**Olivier Pomel**  
*Co-Founder, CEO & Director*

Yes. We are -- so we always want to partner with customers and build a long-term relationship with them. We've had some customers that have run into very significant business headwinds, where their own businesses have contract quite a bit. And in those situations, we always work with them to structure the contracts and make sure we get to a better outcome. We've done that with one of our major customers over the past quarter. And we've had similar conditions with some other customers as well. So that's part of who we -- with customers also part of the guidance we're giving for the year.

**David M. Obstler**  
*Chief Financial Officer*

And I just want to add that because we tend, as you know, to go land and expand and our customers tend to undercommit relative to what they eventually get to, we haven't seen across the customer base, a very meaningful increase of sort of unused commitments. And so that's something about our go-to-market that creates flexibility with clients to commit as they see usage.
Yes. I think -- again, I think it is really driven by the ARR and linearity of that. So I don't think we plan for billings, et cetera. We essentially have had billings, as you know, go above and below the revenue based on the billings in that period. And so we don't see really any change in that type of pattern. But again bring everyone back to ARR and revenues as the major economic driver.

That's great. And then, Oli, real quickly, if you look back at your business historically, there's been a fairly tight linkage between your growth rate and the hyperscalers with a multiple on it. As we sort of look forward, what types of things need to happen to expand that multiplier?

Well, I mean, look, we're covering more and more of the -- we're solving a bigger and bigger problem for our customers, which means we're expanding our TAM, and so we can have a larger and larger multiplier over time. That's why we're investing in new categories, that's why we keep building up observability and that's why we're doing all these investments. So that's where we're going.

I think you're right, though, that the underlying wave that is -- has been a tailwind throughout the history of the company was cloud migration and digital transformation. I think that wave might be a bit more of a headwind over the next few quarters, but we strongly believe that it will become a tailwind again in the future. We just can't tell you when exactly.

We've listened to the calls of the hyperscalers, they can't tell you when either. We're in the same boat there. So what we're doing today is we're focusing on the drivers of future success, which are covering more of the customer landscape, sort of getting into more new logos, more geographies, more segments and also developing our products and getting those products adopted by more of these customers, which is how we're going to have accelerating growth in the future.

I'm curious about product expansion and what will help Datadog gain share as a percent of hyperscaler spend, a little bit related to Brad's question, his second question a minute ago. I was wondering if we could get an update on which products you're gaining the most traction and have the greatest potential in 2023.

Well, so we have a lot of products that are early in their life cycle. Some of them are large categories where we are seeing larger and larger revenue and we have very ambitious plans such as security. Some others are newer but might be a bit more topical in 2023, such as Cloud Cost Management. So I think it's really going to be a mix.

We see some interesting early signs of Cloud Cost Management, which is still only billed to a handful of customers at this point but already seeing very large commitments from some of these customers. We called that out on the call. So we think it might be -- if you think of anything that might have more of an impact in the short to midterm, that might be one of those. But really, the way we think about all those products is how do we turn them all into major products 2, 3, 4 years out, how do we win these additional categories, and how do we be -- and how they become the platform of choice for consolidation in the long term, that's what we're driving towards.

And just a quick follow-up on the security portion. So with regard to the uptake of your security solutions, how would that compare? How does that compare to the adoption patterns of infra and APM?
Well, it's a bit difficult to compare to infra because it was the very first thing we did in the company. We -- it's actually pretty comparable to what we've seen with APM, where it's a domain with a lot of investment required. We also have a very ambitious and very differentiated approach to it, which requires quite a bit of a build-out and quite a few things to figure out with customers. But we're also seeing continuous adoption and growth, thousands of customers using the platform.

We see it being adopted at a very large scale by very large customers, which -- some of which we also mentioned on the call today. So we're not completely there yet. There's still a lot of work to do, but we think it's tracking well to -- with respect to what we can expect in our plan.

Operator

Our next question comes from Andrew Nowinski with Wells Fargo.

Andrew James Nowinski
Wells Fargo Securities, LLC, Research Division

I wanted to ask about the usage patterns of large customers versus small customers. I know you said you're -- the smaller customers were not seeing as much of a slowdown in usage. But what gives you confidence that those smaller customers just haven't reached or reacted to the slowing macro yet, and we may see maybe a slowdown in that segment going forward?

Olivier Pomel
Co-Founder, CEO & Director

Well, it's hard to tell what's going to happen in the future, right? So we don't really have a crystal ball there. What we see, though, is that customers save money where it matters, which tends to be the very large line items, which for customers that are fairly far along into the cloud, is going to be, first, their cloud provider deals that are, again, 1 or 2 orders of magnitude larger than their observability bills. And then we're going to be affected by that and maybe with some optimization more specific to observability as well. So that's what we see there. That's why we see most of the large customers do that.

On the smaller side, I'll point out that many of our smaller customers are actually very large companies that just are fairly new into the cloud and are still growing into the cloud. So they are seeing exactly the same thing as their peers who are spending a lot more on us, it's just the part of their business that is where the spend is growing as opposed to where the spend is today and needs to be controlled.

The last thing I will say is on the very low end of our customer base, we do see impact of the macro environment. We have a little bit more churn at the very, very low end, which is what you see -- why you see our customer count not going up as much despite us having very strong notable quarters. That's more focused at the very, very low end of the customer base, and it's not moving the numbers at all in terms of gross retention, which remains very high.

Andrew James Nowinski
Wells Fargo Securities, LLC, Research Division

Okay. That's great. I was also wondering, your gross margin was surprisingly strong in the quarter. And I'm wondering if there's anything you can do on pricing given these large customers focus on cost optimization.

Olivier Pomel
Co-Founder, CEO & Director

Well, we work with the large customers, obviously, to make sure that they get what they need. We're optimizing gross margin, obviously. We're doing quite a bit on our end to -- on the engineering side to do that. At all levels, 1% of gross margin is making a very large difference for their business, and we can reinvest that in future growth.

Changing prices by 1% based on that doesn't make a big difference for customers. I think when they -- the real way to address their concerns as they keep scaling and generating much more data and sending more observability data to us is to give them more options to process that data so that they can align with what they pay to us with the value they get. And we've been also building that on the product side. So it's not really a pricing question, it's more of a product and structure question.

David M. Obstler
Chief Financial Officer

And I just want to -- now that we're on cost, I just want to add a little clarification. I think we talked about the trends of gross margin and what we expect for the future. And we gave some guidance as to operating expenses in 2023. I believe I might have misspoken.
The operating expense guidance in 2023 in the low 30s range excludes COGS. We gave the COGS guide separately as far as our comments on that, just to clarify.

Operator

Our next question comes from Koji Ikeda with Bank of America.

Koji Ikeda
BofA Securities, Research Division

I wanted to ask you a question on the guidance and maybe a compare and contrast here. So I was wondering if you could talk about maybe how to think about the levels of conservatism embedded in the full year 2023 ready guide today versus when you first gave guidance last year for 2022.

David M. Obstler
Chief Financial Officer

Yes. I think we've continued to use the same approach, which is to look at the history and discount the major assumptions, which are the organic growth or the expansion of existing customers and new logos. I think the difference in the actual results were in the periods of times where we saw more than pro rata or more than historical adoption and growth of existing customers, the ratio between that discount and where it ended up in actuals ended up larger. But the intent and the strategy of providing this guidance on conservative assumptions relative to that has not changed.

Koji Ikeda
BofA Securities, Research Division

Got it. And just one quick follow-up there...

Olivier Pomel
Co-Founder, CEO & Director

Yes. And to be clear, we -- to be clear, our guidance doesn't assume that the optimization stops. What we've seen over the past few quarters, basically in the second half of 2022, we assume it's going to continue. We know it's going to end at some point but we don't know when exactly, so we're not building that into our guidance.

Koji Ikeda
BofA Securities, Research Division

Got it, got it. That's helpful. And just one follow-up here, a question on sales capacity. Just thinking about hiring plans there. You mentioned in the prepared remarks, overall headcount to grow in the mid-20s, but continuing to grow go-to-market teams at a slower pace. So just is that mid-20s is the right way to think about sales capacity hiring this year, too?

David M. Obstler
Chief Financial Officer

Yes, yes. I think that's right. We are growing our investments in go-to-market and sales capacity approximately plus or minus at the guidance we gave in headcount growth.

Olivier Pomel
Co-Founder, CEO & Director

In the end, the reason for that is we still have ground to cover. We still have segments and geographies to cover. And also, as we mentioned earlier, we're having actually great success when it comes to landing new logos and new products with customers. So our sales interactions are productive. Our return on investment is there, so we need to keep doing that. Again, these are the seeds of future success we are planting, and we don't intend to stop.

David M. Obstler
Chief Financial Officer

I would clarify that because of the ramping nature of salespeople, the growth rate that we had, which was in excess of that 25% in 2022 means that the coming online of that ramp capacity is at a rate higher than that in 2023 as we begin to harvest the investment from that.
Operator

Our next question comes from Matt Hedberg with RBC.

Matthew George Hedberg
RBC Capital Markets, Research Division

Oli, for you. Any data points around product splits? I know in the past, you’ve talked about APM and logs. I think it’s been a couple of quarters since we had an update on the size of those businesses. But any sort of like rough magnitude of those? And are they still in hyper growth?

Olivier Pomel
Co-Founder, CEO & Director

No. I mean we see a fairly -- like when you think of the products that are at major scale today, which are APM, logs and infrastructure monitoring, those are seeing about the same trends in terms of growth in Q4. And I think that's partly because some of the optimization we see from customers happens across the stack because it happens upstream from us at the cloud provider level. And that's why we'll see slightly slower growth of hosts monitored on the cap providers or APM and also a little bit less log.

Some of it happens more directly at the observability level, logs in particular or some aspects of APM that are transaction-based where we see customers optimizing there and making sure they get the best value and cut the noise.

But as a result, we see fairly similar trends across the products. So that's why we didn't call out anything specific in there. We -- in the future, I'm sure we'll share more about their relative sizes. But again, the growth rates are not that different in Q4. So it’s -- there was nothing to call out.

Matthew George Hedberg
RBC Capital Markets, Research Division

Okay. And then maybe just, David, on the guide, obviously with kind of a mid-20s revenue guide. You talked in the prepared remarks about having an NRR above 130 for almost 2 years. Presumably that dips below 130. Any sort of commentary on how that might progress through the year?

David M. Obstler
Chief Financial Officer

Yes. I think you're right. Implicit in that guide is below 130. We'll report to everybody as we have that. We've seen it relate to a decel, I would say, on that, given the change in the organic growth rate that we've been talking about starting in the middle of Q2 last year, it would be -- it's getting past that to the extent that it changes -- that changes that net retention plus or minus, given the net retention is comparison against the year-on-year customers. So you do have headwinds in the compare through the time that we had the change of the organic, which we had said was in the middle of Q2 of last year.

Operator

Our next question comes from Fred Havemeyer with Macquarie.

Frederick Christian Havemeyer
Macquarie Research

I wanted to ask, with respect to the slowdowns and that you've been seeing within certain customers, have you seen anything to suggest that these could be related to layoffs in tech, either because, say, DevOps seats have been directly impacted or just because of general disruption to DevOps and engineering teams?

Olivier Pomel
Co-Founder, CEO & Director

No. We say it's mostly because they can save money on their cloud bills. The -- again, one of the great things about the cloud is that the -- it's an ongoing expense. You can adjust it over time, you can restructure the way you're running applications. So there are just some knobs you can use to optimize, which you can't if you're running everything on-prem as all the costs are sunk already and confined to the future.
So we mostly see that -- I mean, there's a little bit more noise and predictability with some customers because they're having checkups, and so you need to talk to different people and they need to reorganize a little bit. So it can add a little bit of noise in some of the conversations. But really, the dominant motion is they're optimizing their cloud infrastructure, their cloud bill and their -- that's especially the case if they're spending a lot there. The vast majority of our products are charge payer -- infrastructure usage or data volumes, not per seat. So we're not directly impacted by layoffs.

Frederick Christian Havemeyer  
Macquarie Research

And then just a quick follow-up would be actually in the prepared remarks, thank you for the context on Cloud Cost Management. Can you perhaps more generally talk about your customers' interest in FinOps and how Datadog is positioned to be able to just help customers better understand both where they're spending, how they're spending and what sort of ROI they're seeing?

Olivier Pomel  
Co-Founder, CEO & Director

Yes. Our customers are definitely interested in FinOps. The larger they are, the more they are interested, and that directly relates to the work they do in cloud optimization. It's a very nascent category today. It's a nascent practice for most of our customers. And we also have a lot of experience internally running ourselves a very large cloud operation across all of the large cost cloud providers. So that's why we believe we can build something that is fairly differentiated there.

Our product there is having a great reception from customers, even though it's still early. I mentioned earlier, we signed a 6-year deal, annual deal with a large restaurant chain. And we see more of that coming our way. So we think it's one way in which we can also help our customers as they need to optimize and be more efficient in the short and midterm.

Operator

Our next question comes from Kamil with William Blair.

Kamil Mielczarek  
William Blair & Company L.L.C., Research Division

I want to clarify one of David comments that you're incorporating seasonally weaker growth in the first quarter due to subdued growth in the month of December. Can you expand on how demand and customer conversations have trended in the first few weeks of '23 and whether that's changed since '22 year-end?

David M. Obstler  
Chief Financial Officer

Yes. I think you have 2 different avenues. I think we said in new logos, we had a strong quarter. We continue, as we mentioned, to have a strong pipeline, meaning that for new projects, new workloads, we continue to see a solid demand environment.

In terms of the organic, when you have -- and this happens in most years, when you have people going on vacation and sort of reducing the amount of logs or work they're doing, you tend to see a rebound of that in January. We did see a bit of that. But given the volatility in the market, we want to be cautious in reading too much into that. And we'll let everybody know how that plays out.

Olivier Pomel  
Co-Founder, CEO & Director

Mathematically, we -- the Q4 was more front loaded than back loaded in terms of our recognized revenue, so we entered Q1 at a lower level than -- so that's why we also have -- the sequential is a little bit lower there.

In terms of the trends, I'll just second what David said, we -- when that seasonality was higher than we had seen in previous years, and we can explain that in different ways. And basically, if customers are trying to save money, they're a lot more careful about turning off the lights when they leave for vacation basically. But what we see in early 2023 so far is consistent with what we see in Q4 or in the second half of 2022 -- '23 in general.

So it's too early really to pass judgment, but it really factors into our guidance, which is that we don't believe that the optimization has stopped. We assume it's going to continue. We don't know yet when it's going to stop. We know it's going to happen at some point, but we're not planning it for this year in our guidance.

Kamil Mielczarek

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William Blair & Company L.L.C., Research Division

Yes, that's helpful. And just as a quick follow-up. It's nice to see the large wins on the federal side. I realize it's still early, but can you update us on how big of a contribution that could be in '23? And how important are additional authorizations for expanding into that market? Or does FedRAMP moderate to address most of the TAM?

Olivier Pomel
Co-Founder, CEO & Director

So I mean, I can't give you specific numbers there. I know we're seeing wins, we're seeing engagements from the government agencies and the committees that serve them. So all that is very good. We still have some building to do on the go-to-market teams for that. And we also still have some things to build on the product side. Like there's more levels of certification we want to get to reach more of those customers. So we still build. What I'd say is we're getting the proof points that were a fit and that customers can use us in those environments and that there is a real market for us there.

Operator

Our next question comes from Sterling Auty with SVB.

Sterling Auty

Oli, I'm curious if you have any sense working and talking with customers as to when they started an optimization project, how long it actually takes them to get to that new level. Obviously, it can change if the economy gets worse, but is this something where they started and it takes them a month, a quarter, 2 quarters? Any sense would be helpful.

Olivier Pomel
Co-Founder, CEO & Director

Yes. So it's a little bit hard to give an answer that fits all types of customers because they're also all going through -- they organize a little bit differently. There are different scales in there and they're going through different phases with their businesses in the economy. We've seen customers having multiple rounds of layoffs, for example, or having to adjust multiple times what they're doing with their business.

But what we see in general is that the fastest thing they can do to have an impact on their bills is to adjust some of the data they send in logs or in APM. And after that, you'll see them do a little bit more at the cloud provider level, which is higher impact in terms of their own savings, but also takes a little bit more time because they need to reorganize some of their workloads and invest more engineering time in doing that.

So we've seen that happen with some of our customers. For a number of our customers, we saw it happen. We think they've done, and that's -- and we see them start growing again. But it's too early to call it for the rest of the customer base as, again, they're all going through fairly different things and different scale.

Operator

And we have a question from Alex Zukin with Wolfe Research.

Aleksandr J. Zukin
Wolfe Research, LLC

I guess, Oli, if you think about the trends that you saw in the second half of last year and what you're seeing year-to-date when you think about optimizations versus time line to spin up new workloads and the effect that, that has on the NRR as it progresses, when you look at the time line that you think that takes and the anniversarying of these headwinds particularly with the larger customers, how does that look from a linearity perspective over the course of the year?

Olivier Pomel
Co-Founder, CEO & Director

So right now in our guidance, we're assuming that we're seeing the same trends of growth of [ rising ] customer throughout the year. Like we're not estimating any inflection. We're assuming a continuation of that with some level of contribution compared to the actual we saw last year. That's what we are building in.
The -- again, we believe that there's going to be some reacceleration at some point as the optimization has on its course. But given the level of macro uncertainty, I think it's too difficult to -- we can't actually tell you when. Again, we've listened to the call of the cloud providers, they also can't tell you when. And so we're being prudent with the guidance there.

Aleksandr J. Zukin  
*Wolfe Research, LLC*

Perfect. And then, David, maybe just one for you around cash and cash conversion, free cash flow. As we look at the year, just curious if there's any kind of different flexibility in payment terms or even just the assumption for the cash conversion from operating income to cash flow for the full guidance for fiscal '23.

David M. Obstler  
*Chief Financial Officer*

We've always said that our free cash flow has been around slightly higher than our EBIT margin. If you look back, you'll see that it's, in some quarters a little above, in some quarters a little below. We have not seen any changes of -- material changes in payment terms or the flows of cash. So there's nothing we've seen so far that would cause us to change our views about cash flow conversion for the company.

Operator  
Thank you. That's all the time we have for questions. I'd like to turn the call back over to Olivier Pomel for closing remarks.

Olivier Pomel  
*Co-Founder, CEO & Director*

Thank you all. So I just want to take a minute to first thank our customers for trusting us with their business and partnering with us. I know some of them are going through difficult times last year and also early this year. And so we're working with them. Potentially, we all come out of it stronger.

I also want to thank our employees, Datadogs everywhere around the world, for actually delivering a fantastic year in 2022 from all of the metrics we control ourselves. We saw some slowdown in consumption with some customers, but we also delivered a lot of value for customers. We scaled our go-to-market teams. We did great in terms of landing new logos, attaching new products, shaping products that solve more problems for our customers. And we think that this bodes very well for the future. So I'm very optimistic. I'm looking forward to a fantastic year in 2023 with everyone. And on this, I'll close the call.

Operator  
This concludes today's conference call. Thank you for participating. You may now disconnect.