eBook

Stay Competitive with Cloud Optimization for AdTech

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The adTech industry is changing—and it goes way beyond the death of cookies. There is more fragmentation than ever before, into a myriad of channels, markets, and ecosystems, plus complex OTT and contextual advertising demands, topped off with a rise in ad fraud... No wonder it's harder than ever to stay afloat, and even harder to watch your margins and stay competitive.

If you had to choose one word to sum up all of today's adTech trends, that word would probably have to be RESPONSIVE. Your business's survival depends on your ability to pivot at all costs.

To rise above the competition and gain attention and market share, you need the ability to process and obtain quality first-party data, the lifeblood of modern adTech platforms and campaigns. But the compute power required by data analytics adds costs that are hard to predict and control.

This ebook will explore recent regulatory changes and other growing demands of the adTech industry that are driving up costs and cutting into your margins. Then, it will look at a number of solutions for streamlining and optimization, with the goal of helping you make the most of your cloud resources to maximize revenue while incurring minimum disruption.

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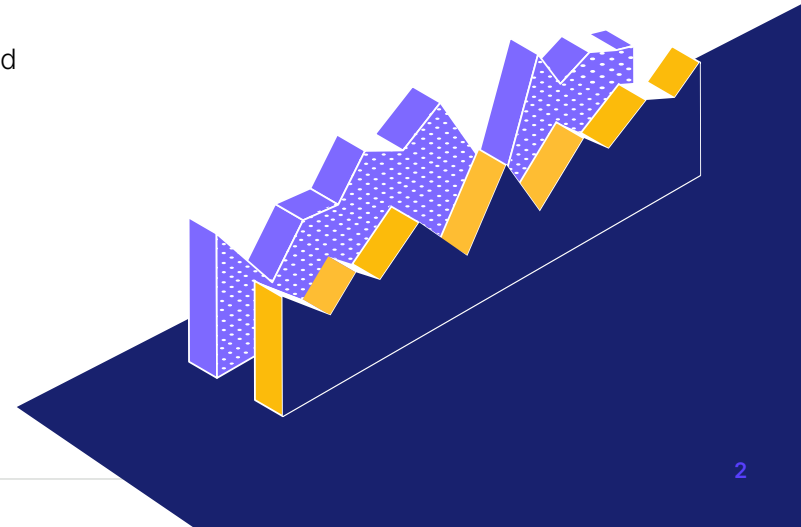
Keeping Up in a Changing Regulatory Climate
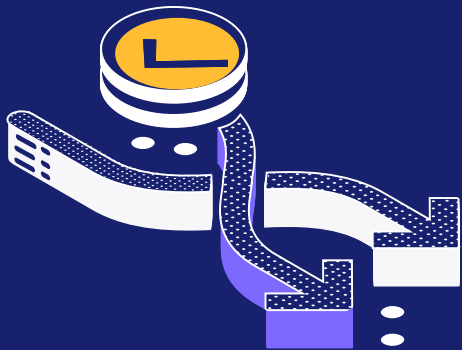
While industry changes go far beyond Apple's recent iOS privacy tweaks, which did away with valuable IDFA data and introduced AppTracking Transparency, this development can not be ignored—because it's already driving up costs.

Despite optimistic advance predictions, it seems as if well over 90% of users are opting out of allowing apps to track their activity. And Apple didn't make this move in a vacuum; it's part of a sea change across the industry, with similar measures coming from other vendors, such as GAID opt-out in Android 12.

Keeping your revenue up is possible while addressing new data demands and methods: Contextual targeting, alternatives to cookie-type tracking, and updating SDKs to include Apple's SKAdNetwork are all viable alternatives but often demand major R&D effort and even more data to achieve comparable results.

These privacy changes have thinned margins for adTech companies and made it even more crucial to get an edge when you're processing the massive volumes of anonymous aggregate data now available to track campaigns.

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AdTech Cloud: A Solution... and a Problem

So you need to stay responsive—not only to handle the demands of today's tech but also to keep up in today's privacy climate. What's the best way to do that? Data.

AdTech firms have access to an ever-increasing volume of data and data sources, and there's an incredible array of tools out there to help them gain insights, identify trends, and improve campaign performance. When a business's future relies heavily on these cloud tools, it's harder to embrace the reality of infrastructure being heavily taxed by spiky compute demand.

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The cloud and its elasticity help adTech remain responsive, but cloud solutions for adTech and martech need to meet some very specific demands that are unique to the adTech industry:

- **Heavily compute-intensive algorithms.** As seen above, recent developments such as OTT and media streaming services, an increased number and types of channels, and new privacy restrictions have only increased this demand.
- **Latency-sensitive.** Adweek magazine calls latency adTech's "biggest enemy." Lower-bid timeout settings mean that if you miss a bid due to latency, you've lost an opportunity that won't come again. Since your revenue depends on customer success, low performance carries a steep financial penalty. Your customers are also aware of their bottom line and are constantly demanding better results.

- **Cost of analytics.** <u>Leveraging real-time analytics on massive quantities of user and campaign data in real time</u> while struggling to meet the challenges of latency makes it hard to save money on less expensive data storage. On top of that, this industry is also characterized by seasonality, with massive load changes and unpredictable demand—meaning that if you can't scale down, you'll be overpaying.

- **Big data compute workloads.** Many adTech companies are moving to AI, ML, and deep learning to automate complex tasks, compensate for privacy restrictions, analyze data sources to predict user behavior probabilistically, <u>create look-alike campaigns, and more</u>. This requires training your AI/ML with big data compute workloads, which can <u>add significantly to the cost of cloud-based tools</u>.

- **Meeting SLAs under spiky volume.** Cloud costs will inevitably spike as you need to ramp up nodes/clusters to meet growth demands and SLAs. To handle this, adTech companies are turning to microservices and containerized architectures with orchestration tools like Kubernetes. But that increases reliance on elastic, always-on compute infrastructure such as EC2 and EKS, making cloud tools expensive in the long term or for ongoing heavy loads.

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If you want to gain ground on your diminishing margins, you need to maximize two factors: cost and performance. But with the unique demands seen here, many companies are struggling with both, with a heavy cloud bill eating up their margins, while performance latency continues to impact bid time, negatively impacting their SLAs. Many companies simply let their cloud environments scale up as needed, and as a result, may find themselves losing control of costs. Essentially, this means that meeting the same service level becomes more and more expensive for you.

Cloud solutions may not be sustainable in the long term; however, you can still gain an advantage through cloud optimization initiatives.

Cloud Cost Reduction Strategies

Optimizing your cloud environment to deliver better results, faster and cheaper, is the common goal of every adTech company, period. Realistically, there are only a few ways to do this:

Transition to less expensive storage and delivery models

Finding less expensive cloud-storage alternatives is an obvious first choice. But cost-saving alternatives like reserved instances usually work best for consistent, predictable workloads—not the spiky, variable demand seen in adTech. Moreover, other more affordable alternatives usually come with a latency trade-off. That means that at some point, your algorithms will start to break and you won't have the data you need or the ability to take action in time to bid.

Assess cost-effectiveness of multiple vendors' options

If the tools you are using aren't well-optimized, they could add to your cloud costs. But switching to new tools isn't simple. Although you may run trials or pilots with new vendor platforms, these can't give you a true sense of the actual cost until it's too late. Plus, if you're adopting optimization solutions from multiple vendors, they may not work well together out of the box.

Optimize hardware architecture

If you don't want to just keep scaling up or out—and shoulder the associated cost—you can try to refactor code to optimize the use of existing hardware. Indeed, AWS recommends basic refactoring of your code before transitioning to the cloud to take full advantage of its expanded capabilities.

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This can include OS, framework, and security updates, as well as migrating to a more cloud-friendly database. Another approach involves configuration tuning to predict and adapt to cloud needs. In either case, it will require months and tons of R&D investment and will almost certainly involve potential downtime. Workload orchestration solutions promise to help achieve cost savings on existing hardware with less R&D effort, but results may be less effective.

In reality, any one of these changes, let alone all three, can be a nightmare: months of custom code and/or hardware changes, downtime, bugs, rollbacks. Plus, since these processes are all quite labor-intensive, you will have to take team members away from their normal business tasks just to get your tech working.

The complexity and expense of implementing these cost-saving measures explain why so many companies find themselves paying too much for cloud solutions that fail to live up to what was promised. And if you do finally get everything working, and achieve the promised gains, your reputation and customer base could have already taken a huge hit.

It's easy to think there must be a better way. And there is—without needing to invest R&D time or code changes.

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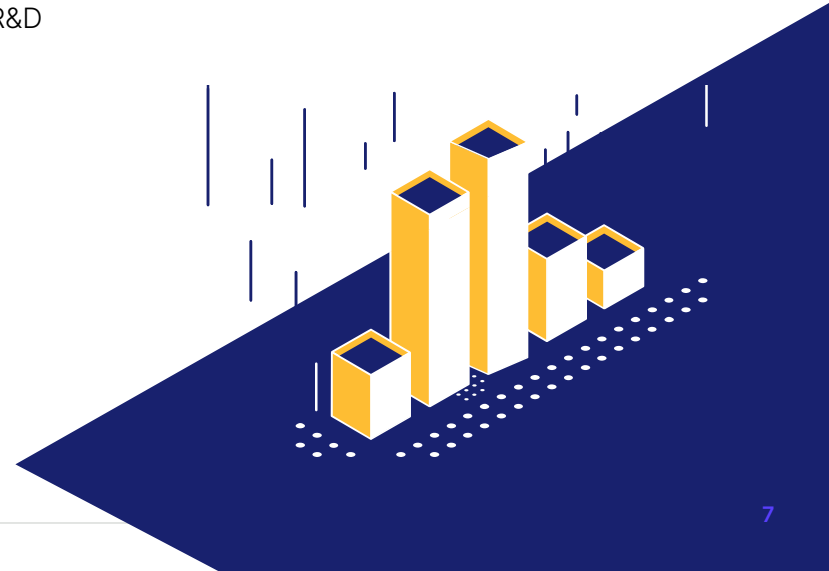
Granulate:
Built for AdTech

Granulate is a real-time continuous optimization solution – the first of its kind – and an AI-powered platform created to help you boost service performance, cut cloud costs and meet the data analytics needs of 21st-century enterprises.

Because let's face it: End users don't care whether you're processing 50 data points per day or 3 trillion; it just needs to be easy and seamless. And in adTech, they're going to judge that based on whether you're meeting your SLAs.

Granulate can make that happen.

Out of the box, Granulate supports your entire infrastructure stack: AWS, Amazon EKS, Kubernetes, Amazon EMR, and all relevant runtimes. Due to its unique model of continuous real-time resource management optimization at the runtime and kernel level, it will deliver results on top of any other cloud-cost solution you already have in place.

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Case Study:

Granulate for AdTech

For example, this leading online advertiser came to Granulate hoping to cut costs and increase performance. Within their Kubernetes-based environment (Amazon EKS), Granulate helped them achieve...

- **60%** reduced service pod CPU utilization
- **10%** reduced response time
- **52%** reduced Kubernetes scale-out cluster size

And with continuous optimization, they'll keep on seeing improvements over time. That's because Granulate has a unique learning phase that studies how resources are scheduled on the client's infrastructure to identify usage patterns. It then continually customizes resource utilization to be more app-aware and better fit these patterns.

Real-time continuous optimization not only lets you be responsive but also adapt proactively as the adTech world inevitably shifts again, and again. For instance, in the wake of Apple IDFA changes, without the immediacy and granularity of opted-in user data, Granulate's real-time continuous optimization facilitates the compute you need for prediction and cohort analysis techniques—so you can keep on delivering results.

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Granulate:
Pay Less, Get More from Your Cloud

> " near-instant performance and cost improvements— without the headaches

In adTech today, you're facing big challenges, and improving margins will always be at the top of the list. You've also never had so many tools and resources at your fingertips, if only you could afford the compute power to put them to use. Granulate puts you back in control, giving you near-instant performance and cost improvements—without the headaches.

If you're struggling to make the most of cloud, or paying too much for performance you know could be better, get in touch.

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