



EBOOK

# Increase developer velocity with a connectivity cloud

Why the right platform makes all the difference



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# Application development spending is on the rise

In 2024, enterprise spending on application development is projected to rise by nearly 5%<sup>1</sup> as executives expand their focus on AI technologies.





Blazing this trail also comes with several critical considerations, like reducing vendor sprawl, cutting costs, and continuing the shift toward more adaptive, flexible, and scalable cloud environments.

As with any conversation that involves building (or enhancing) modern applications, developers are key decision-makers here.

Not only are they intimately familiar with the systems and services necessary to create robust, scalable apps, but they also know which tools are most likely to save them valuable time and manual effort.

But pinpointing the right platform — without slowing application development or pulling focus away from key business objectives — presents a few hurdles.

## What do developers want when modernizing applications?

-  **Flexibility** — so they can choose the technology that's best for the job, not the best technology in their vendor's ecosystem
-  **Adaptability** — so they can migrate applications to another provider as their needs change
-  **Better use of resources** — so more time is spent coding, not fine-tuning systems and settings
-  **Ease of use** — including an intuitive onboarding experience



# 3 roadblocks to modern application development



## Too much time spent on non-coding tasks

Many cloud vendors require developers to spend a disproportionate amount of time on non-coding tasks, pulling focus from innovation efforts and new feature development



The interlacing of multiple tools complicated coordination and control of the architecture and required specific skills spread across different departments.”

— Guillaume Cécile, [Carrefour](#)



## Trouble streamlining code deployment

Vendors may not have the technologies developers need or want — and migrating to another cloud vendor comes with excessive costs



Because of our massive content volume and huge number of requests, the egress costs were substantial.”

— Brett Inman, [Docker](#)



## Rising AI costs and complexity hamper growth

Although AI is an increasing priority for businesses and cloud vendors alike, the high cost and scarcity of GPUs makes it increasingly difficult to implement at scale



Without AI Gateway, it’s difficult to see which applications are driving the majority of the costs with the OpenAI API.”

— [RightBlogger](#)

# Roadblock #1: Too much time spent on non-coding tasks

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## Developers need a production-ready environment

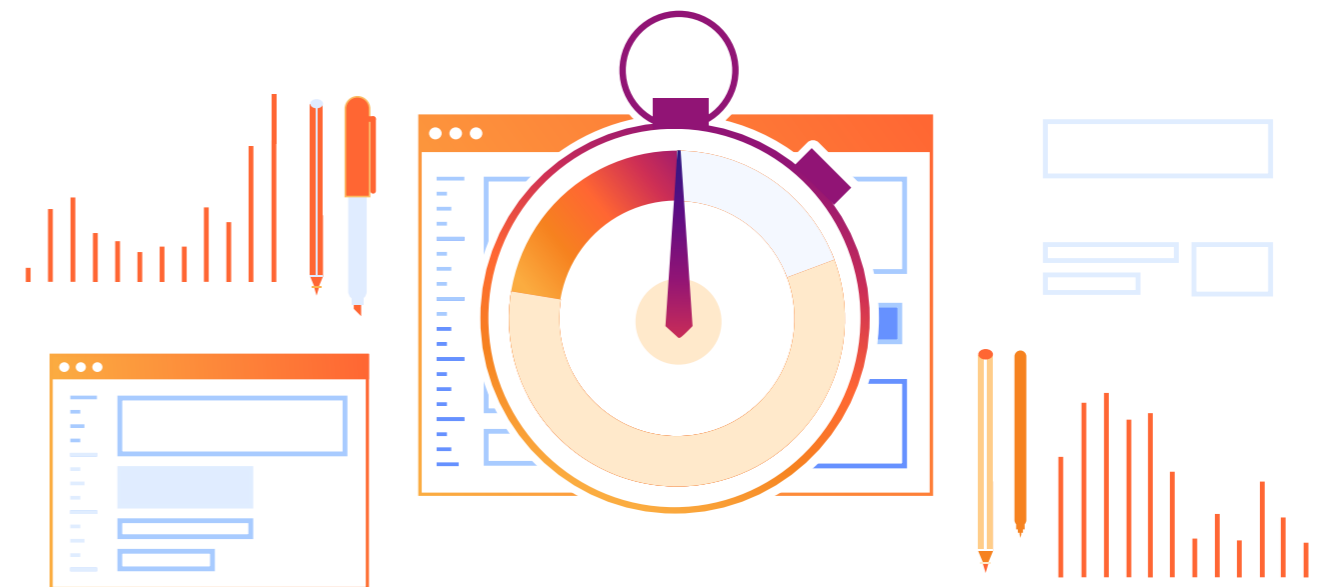
While businesses are ready to put more funding and focus into application development, complex architectures and a critical lack of automation can hamper, rather than accelerate, this process.

A recent study found that 96% of large enterprises outsource application development, implementation, deployment, and quality assurance services to external providers.<sup>1</sup>

But the burden of managing those services falls on internal developers' shoulders.

Often, developers are tasked with managing legacy architectures, rewriting applications to make them scale, deciding the best region for applications to run, configuring and tuning instances, and building in-house development pipelines from scratch — all of which reduces the time they are able to spend coding new features and drastically slows the innovation process.

**96% of large enterprises use third-party application services — but developers still have to manage them.**



# Roadblock #2: Trouble streamlining code deployment



## Limited vendor ecosystems stall development

Legacy systems and traditional cloud providers are not fully equipped to keep up with expanding business initiatives and developer needs:

- Supplying applications with additional compute power takes time, manual effort, and high costs, both to spin up new instances and choose the region in which to deploy them
- Most distributed development platforms deploy functions to a single location, resulting in additional latency and an inconsistent end-user experience
- Legacy environments are cumbersome to maintain and difficult to scale — and can also create bottlenecks in the deployment pipeline
- Lack of integrated security leaves applications vulnerable to attacks
- Multi-vendor solutions are often required to build a complete development architecture, which can increase complexity and complicate maintenance requirements



## ...but moving away from these ecosystems comes with a hefty price tag

When businesses look to shift their infrastructure to more agile cloud platforms, they are typically forced to choose between their existing vendor's limited ecosystem or the exorbitant egress fees that come with moving their data and applications.

Hidden fees, application growth, and multi-vendor solutions can further exacerbate this 'technical debt' — the cost of prior development or technical decisions that may not serve a growing business in the long run.



# Roadblock #3: Rising AI costs and complexity hamper growth

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## Existing architectures aren't built to keep up with AI expansion

AI technologies continue to be one of the top priorities for businesses, with **55% of surveyed decision-makers naming "AI capabilities" as their primary initiative for 2024.**<sup>1</sup>

However, constructing a competitive, compliant, and simplified AI architecture is no easy task — even for the 44% of developers already using it.<sup>2</sup>

Given the relative newness of AI development, getting AI-powered applications up and running is both costly and complex, and may invite significant security and compliance risks due to user abuse, malicious behavior, and the mishandling of sensitive information.

The alternative — evaluating, selecting, and piecing together disparate solutions from multiple vendors — is similarly time-consuming and risky, preventing developers from innovating quickly in the AI space or meeting more urgent business goals.



# Maximize developer productivity — while minimizing complexity and costs

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## Production-ready application architecture

Modern, distributed development platforms and automated tooling can help speed up the pace of innovation — without draining developers' time and resources



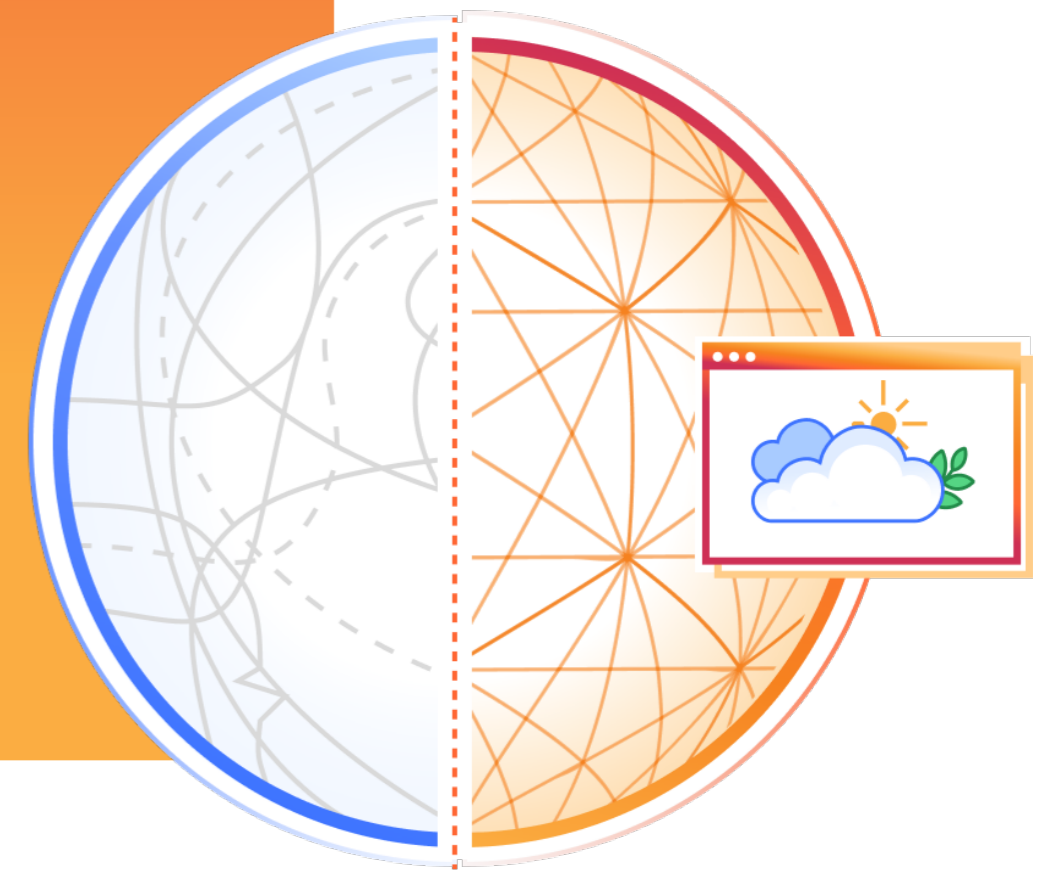
## Cost-effective consolidation

Consolidating cloud vendors can significantly reduce cloud spend, while giving developers more flexibility to pursue solutions that accelerate business growth



## Simple, scalable AI

Experimenting with AI technologies requires infrastructure that is built to support and secure AI, not one that introduces complexity or risk





# The connectivity cloud: a new way to simplify the developer ecosystem

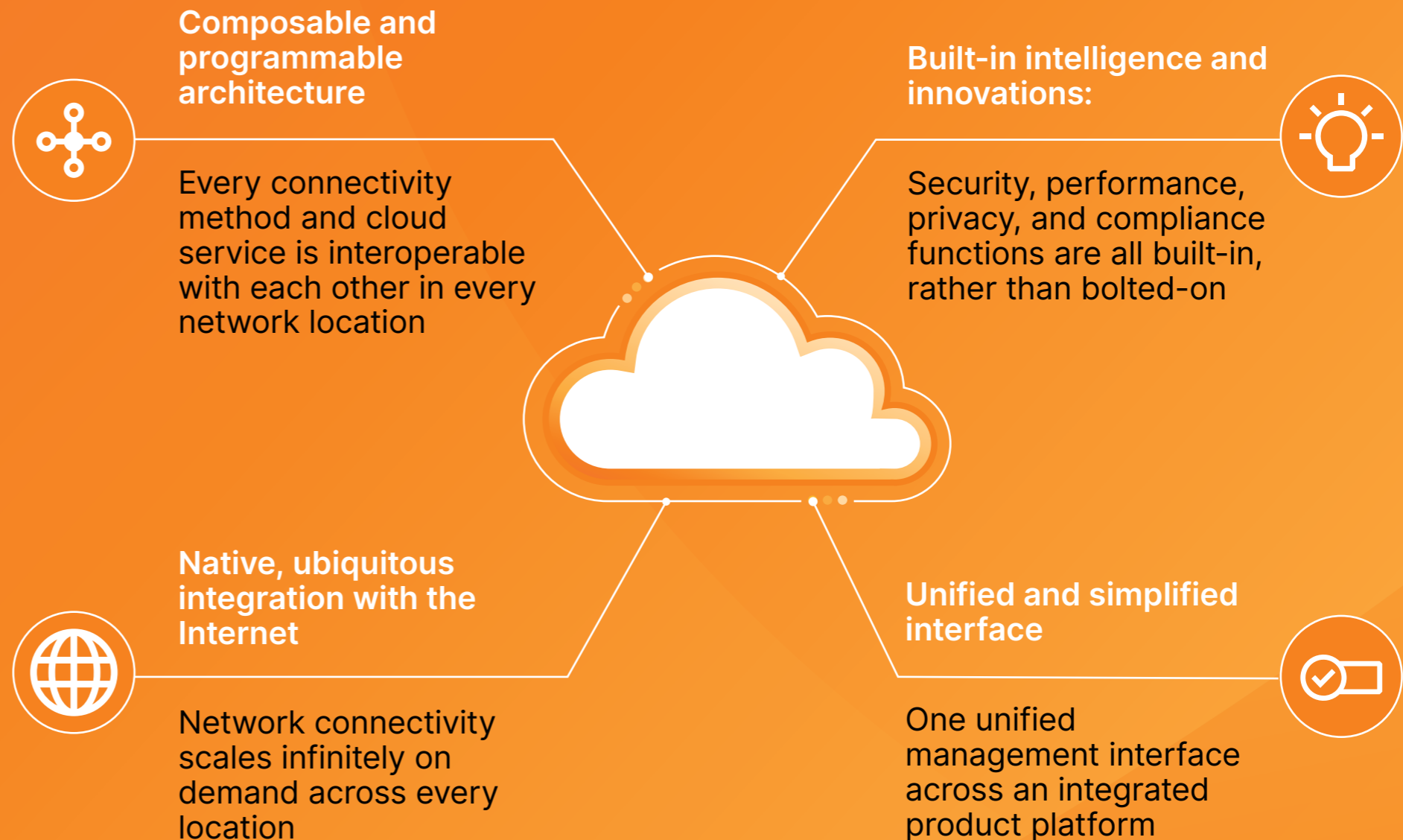
Modern application development can be a costly and complex process, resulting in tool sprawl, developer headaches, and rising costs.

But it doesn't have to be.

A **connectivity cloud** is a unified, intelligent platform that connects and consolidates critical cloud-native services — including the infrastructure developers need to create scalable, lightning-fast applications.

With a well-architected connectivity cloud, developers can modernize existing applications and implement AI technologies while simplifying platform configuration and management.

## The anatomy of a connectivity cloud



# Supercharge and streamline app development with Cloudflare

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Cloudflare's connectivity cloud helps developers regain control of their application modernization initiatives, from enhancing existing applications to building new, cloud-native apps with the latest technologies.



## Build modern, full-stack applications that automatically scale — without driving up costs

With a full suite of compute, storage, media, and AI services, developers can build, optimize, and deploy applications to any region on Earth, while reducing infrastructure and cloud-related costs.



## Create more agile AI applications while simplifying app development

Consolidated AI services for training, inference, security, and optimization enable developers to make use of cutting-edge technologies, without adding complexity or incurring high object storage fees.



## Increase organizational velocity

Cloudflare gives developers a straight line from writing code to production deployment, driving faster feature and application development and automating key optimizations and configurations.



## Migrate application services for a better, more secure user experience

Ensure low latency and uninterrupted application availability with Cloudflare's extensive security and performance suite — including DDoS protection, bot detection, CDN, load balancing, and more.

# How developers use Cloudflare



Using Cloudflare, we have been able to clean up our code and streamline the way we configure, deploy, and modify our applications.”

— Lior Gross, Caliente.mx



The 2% cache hit ratio improvement enabled by Cache Reserve has eliminated roughly two-thirds of our S3 egress.”

— Brett Inman, Docker



Thanks to Cloudflare’s reliable and speedy infrastructure, we can focus on what we do best — building innovative SaaS and enterprise apps.”

— SticAI



## Reduce developer headaches

Cloudflare enables Caliente.mx to store their data at the edge without vendor lock-in or the expense of accessing it. With Cloudflare, they:

- Rapidly deployed and scaled serverless applications to a global network
- Simplified administration and implementation overhead

[Read their story](#) >



## Reduce egress fees

After switching to Cloudflare, Docker improved their cache hit ratio from 97% to 99%, resulting in massive savings. With Cloudflare, they:

- Saved 66% in egress costs
- Secured and optimized their development platform — for a customer base of 2+ million users

[Read their story](#) >



## Power AI applications

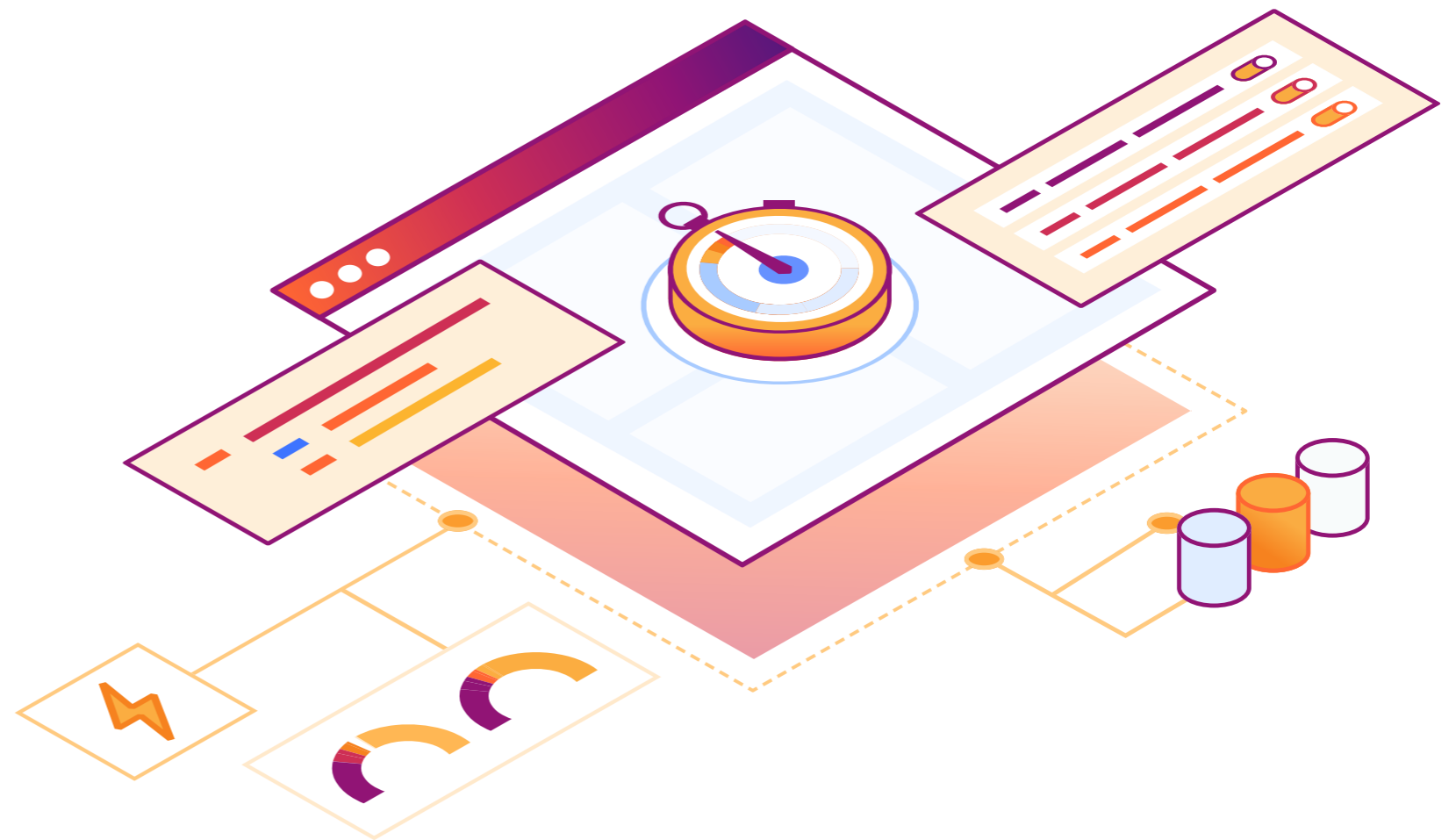
SticAI uses Cloudflare’s infrastructure to host their website and power an AI database of 2,000+ prompts. With Cloudflare, they:

- Automate web optimizations to free up developer time and resources
- Provide lightning-fast cache response times

[Read their story](#) >

# References

1. [ISG Application Development and Maintenance Study](#)
2. [StackOverflow survey, 2023](#)





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