Application Modernization

Future-proofing your business by building resilient, scalable, and secure applications

The Need for Application Modernization

Application modernization has become a foundational element for business growth. It provides a way to increase the efficiency and efficacy of your existing infrastructure while augmenting new business strategies needed to address changes in customer behavior and expectations.

Today's users expect applications to accomplish tasks quickly and securely, with **most users making a lasting opinion about an online experience in 0.05 seconds**.

Modernizing your applications enables you to reduce complexities while maximize the agility, innovation, and operational efficiency required for the growth and success of your business. However, these initiatives can also face many challenges of their own.

79%
of application modernization initiatives fail

There are many reasons why most modernization projects fail, however some common factors include:

- **Complex architectures**
  Integrating new services with existing applications, the technical debt of maintaining legacy applications, and slow development leads to complex deployments and bottlenecks.

- **Launch fails**
  Security hurdles, poor performance testing, and the inability to handle traffic surges and attacks deflate many launches.

- **Cost overruns**
  Miscalculations, overages, hidden charges, and investments in the wrong solutions can stop modernization projects before taking off.

What Drives Businesses to Modernize their Applications?

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Complexity and Costs

Vendor sprawl leading to disparate solutions, complex deployments as well as hidden costs such as hardware refreshes and cloud egress fees

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Performance and Security

Distributed users and patchwork of multiple vendors and solutions introducing security loopholes, latency, and misconfigurations

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**Rapid Deployment and Time to Value**

Lack of DevOps pipelines slowing developers down, causing delays in deployment, and increasing the overall time to value

The Different Paths to Modernization

Applications and infrastructure modernization can take different paths. The route to application modernization depends on whether existing applications are modernized or new applications are built from scratch.

You can initiate your application modernization journey at one of the three starting points, including:

Rehost - Mostly applicable to on-premises legacy deployments, this requires applications to be migrated "as-is" to the cloud. This is often referred to as a "lift-and-shift" migration.

Replatform - Primarily applicable to multi-cloud and hybrid-cloud deployments, only select elements of an application are upgraded instead of a complete migration. Better speed, security and scalability is achieved with minimal changes in this process, but missteps can introduce complexities and overages.

Refactor - This requires new applications to be created, as close to the user as possible, to take advantage of new technologies or frameworks like AI. This is the most labor intensive modernization path as it requires re-architecting existing applications, however it also induces the biggest technological leap.
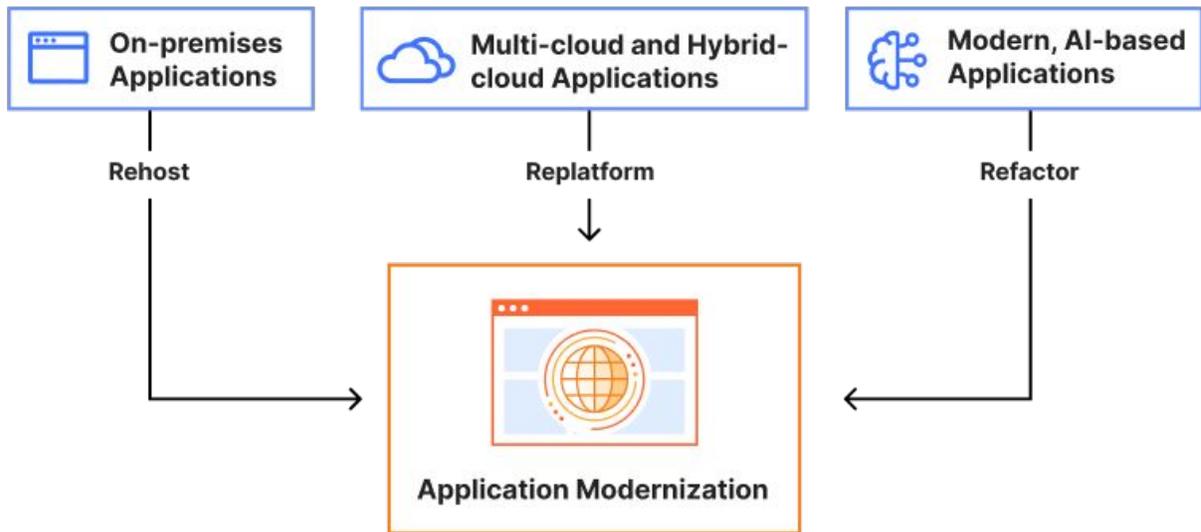
Migrating legacy applications to the cloud
Traditional application delivery and security methods can cause latency, a poor user experience, and security issues. Modernizing applications helps deliver services from the edge, closer to the user, to improve response times and security.

Building highly performant, scalable, secure, and distributed full-stack applications
Developing infinitely scalable and distributed applications reduces infrastructure and cloud costs. Application modernization ensures seamless integration, security by default, and better performance for improved customer satisfaction, revenue, productivity, and developer experiences.

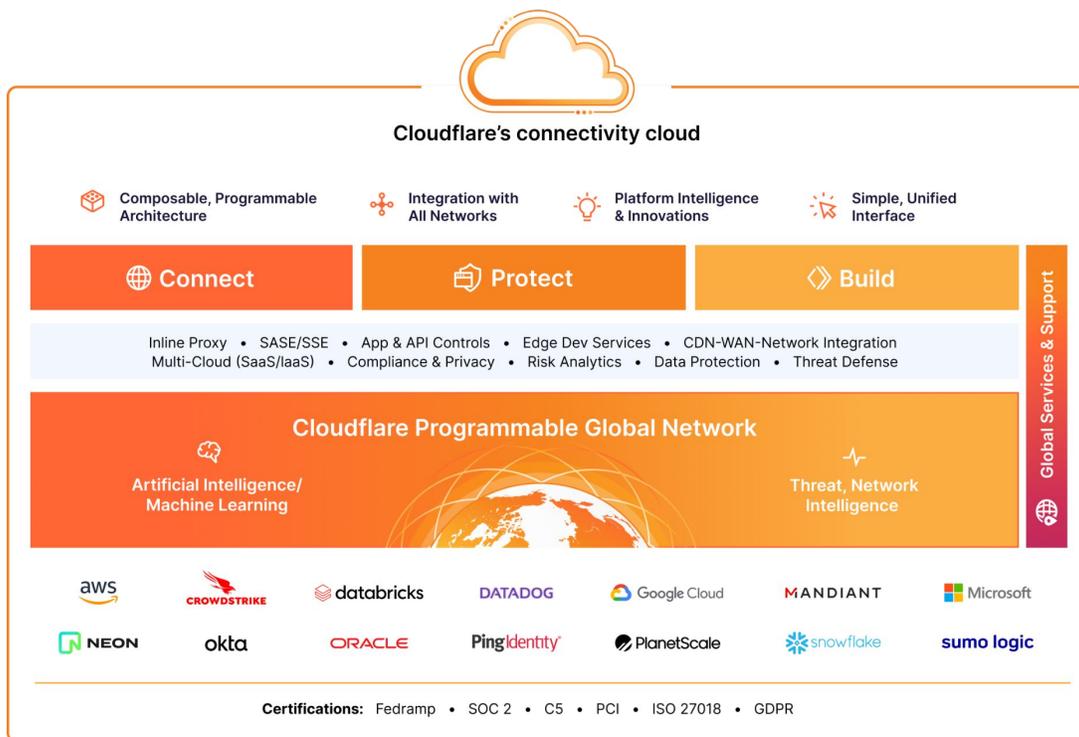**Developing AI-powered applications and elements**
Developers have to string together complex point solutions for their AI infrastructure and architecture to give them increased security and compliance. Modernizing applications ensures AI-driven insights are leveraged with ease. This eliminates the need to manage VMs or GPU deployments, increases performance of inference at the edge and reduces time to market.

Cloudflare Connectivity Cloud and Application Modernization

Regardless of the path taken to modernize applications, Cloudflare's connectivity cloud enables you to undergo the modernization and migration process with ease and without any interruptions.

Cloudflare is committed to being a strategic partner that can help you connect, protect or build applications. Unlike other vendors, Cloudflare not only facilitates you with your application migration journey, from on-premises deployments to multi-cloud environments, it also ensures that connectivity, performance and security are not compromised throughout the process.

The connectivity cloud also provides solutions that make the development of modern, AI-based applications easy and frustration free. Developers can streamline workflows across compute, storage, media, security, and developer services, resolve bugs faster, and leverage opinionated configurations based on framework best practices.

Cloudflare's connectivity cloud

Composable, Programmable Architecture · Integration with All Networks · Platform Intelligence & Innovations · Simple, Unified Interface

Connect · **Protect** · **Build**

Inline Proxy · SASE/SSE · App & API Controls · Edge Dev Services · CDN-WAN-Network Integration
Multi-Cloud (SaaS/IaaS) · Compliance & Privacy · Risk Analytics · Data Protection · Threat Defense

Cloudflare Programmable Global Network

Artificial Intelligence/ Machine Learning · Threat, Network Intelligence

Global Services & Support

aws · CROWDSTRIKE · databricks · DATADOG · Google Cloud · MANDIANT · Microsoft

NEON · okta · ORACLE · PingIdentity · PlanetScale · snowflake · sumo logic

Certifications: Fedramp · SOC 2 · C5 · PCI · ISO 27018 · GDPR

Application Performance
Ensure better reliability and performance, even during unexpected traffic surges while minimizing egress costs with solutions like CDN, DNS, load balancing, Waiting Room, and Cache Reserve.

Application Security
Protect against known and zero-day attacks while paving the way for consolidation of point products on a unified, easy-to-use platform with Cloudflare's WAF, API Gateway, Bot Management DDos Protection, and Page Shield.

Developer Platform
Develop serverless, full-stack and AI applications on Cloudflare's infinitely scalable global network with Workers, Pages, R2, and D1.

Simplify and Accelerate Application Modernization with Cloudflare

With Cloudflare connectivity cloud, you can embark on your application modernization journey at your own pace: be it in smaller chunks or all at once; hosted natively, in the cloud, or a hybrid deployment.

Cloudflare connectivity cloud helps you:

- **Reduce complexity** with a unified, simplified interface across an integrated product platform of cloud-native services.

- **Optimize connectivity and performance** of applications, whether they are deployed on-premises, in a hybrid-cloud or multi-cloud environment.

- **Improve security posture** with state-of-the-art built-in security, privacy, and compliance.

- **Enable developers** to deploy modern, AI-based applications as close to the users as possible.

- **Reduce TCO** by eliminating vendor sprawl, unnecessary complexity, and hidden fees.

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Here's what customers are saying:

Reduced costs, improved performance and availability

"Cloudflare Cache Reserve has eliminated roughly two-thirds of our S3 egress activity. The reduction in egress charges is almost an order of magnitude larger than the price we paid for Cache Reserve."

— Brett Inman, Senior Manager of Engineering, <u>Docker</u>
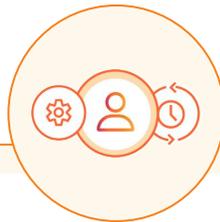
Avoided compromise — balancing security, scalability, and user experience

"Cloudflare offered everything we needed. We didn't have to make concessions. It was a holistic solution with optimized tools that met all of our needs..."

— Lior Gross, Dir. of Software Development, <u>Caliente.mx</u>

Get in touch with us today to discuss how you can modernize your applications.

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