Optimizing the user experience
at the edge

Customers and employees can benefit from the performance and security boost provided by edge computing

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PERFORMANCE IS PARAMOUNT. When a user has a bad experience with a government website, resolving those issues via phone calls or other means is costly. But the hidden costs are even larger. There's a direct correlation between user experience and trust: Bad performance chips away at user/citizen trust. Retailers have known this for a long time, hence their obsession with streamlining the customer experience.

The 21st Century Integrated Digital Experience Act (IDEA) seeks to do the same thing, in part by promoting the use of mobile apps. According to the Pew Research Center, about 20% of Americans are smartphone-dependent, meaning their only connection to the internet is via a smartphone. Those people are often in the lowest income groups and particularly in need of access to government programs, especially during the pandemic.

When agencies make government resources available on mobile devices, they enable citizens to service their own needs in an on-demand format, without calling a contact center or visiting a local government office. The results are increased efficiency and enhanced customer satisfaction.

Modernization and security go hand in hand

Modernization efforts lead to improved security. Legacy systems are becoming increasingly harder to secure, particularly if they're on physical infrastructure. The 21st Century IDEA advocates using a flexible cloud infrastructure to make it easier to improve the user experience on any device while enhancing security.

As agencies seek to offer better digital services, many of them turn to responsive design engines to send websites to mobile devices. However, the time it takes for those engines to analyze and assemble a unique response to specific devices slows down the user experience, leaving citizens frustrated and unable to complete necessary tasks. What if the distance between the user and the data could be lessened? Enter the Akamai Edge.

Akamai executes business logic and security policies at the edge to improve performance without compromising security. We can also put capacity rules in place at the edge to distribute the load and keep a distributed denial-of-service attack or sudden rise in traffic from affecting a website's performance.

For example, Akamai is helping state and local agencies push optimization and security out to the edge for vaccine registration websites. We are also incorporating dynamic waiting rooms so users don't lose their session if the application is at capacity. As soon as a concurrent connection to the application is available, the user is allowed in.

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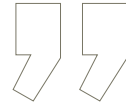
Better protection and performance for remote workers

Edge computing also has implications for telework. Many of the government's concerns about security, infrastructure and productivity have been alleviated by the success of work-from-home programs during the pandemic. However, the reliance on virtual private networks is not scalable and presents significant risk. If successful, hackers could compromise government-furnished equipment and have access to the entire network.

Secure access service edge (SASE) technology allows agencies to use device profiling to verify that users are logging on from a government-approved device, blocking hackers from using stolen credentials and flagging any anomalies in behavior. A SASE-based "verify then trust" approach also improves performance for remote workers.

There are many ways to provide an excellent digital experience for users, whether they are citizens or employees. Agencies need to determine the right approach for their particular needs and find the right partner to help them achieve their goals. ■

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