

Device Detection for Content Delivery Networks

Mobile Usage Drives Next Phase of CDN Growth

The increased demand for real-time content and high-performance web services had driven growth across the CDN industry. Content Delivery Networks (CDN) now support over [2.5 million web sites](#). However, the shift to mobile browsing in recent years has placed very different demand on CDNs. Mobile commerce is expected to triple, growing to over US \$31 billion by 2016. CDNs are challenged to meet the needs and expectations of these mobile users.

The Mobile Challenge for CDNs

Online users expect sites to load quickly. 57% of consumers will abandon a site after just 3 seconds of waiting. Mobile users have adjusted their expectations, but only slightly; 74% of mobile devices users will abandon if they have to wait 5 seconds. Unfortunately, the average m-commerce site takes over 9 seconds to load!

Many factors contribute to this poor mobile experience. One issue is the mismatch between web design, the content file size offered by servers, and the capabilities of mobile devices. Desktops, tablets, smartphones, and feature phones all have different screen dimensions, browser, media and navigation capabilities.

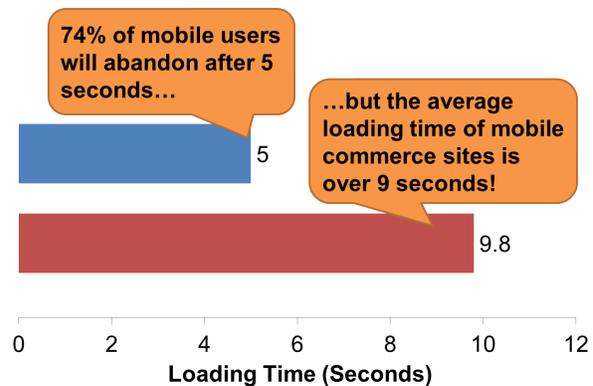
CDN Requirements for Device Detection

CDNs are strategically positioned to help web sites and their end users by detecting mobile devices and optimizing web services. By adding device intelligence to edge servers, CDNs can address many issues that impact the mobile experience.

A core function of CDNs is caching appropriate web content as close to the edge of the network as possible. This avoids unnecessary trips back to the origin server for content and reduces round trip time (RTT). However, mobile devices frequently need lighter content in different dimensions. Device detection injected into caching strategies at the edge server, paired with mobile-optimized Responsive Web Design ([RESS](#)), can drive improved caching and reduce RTT for mobile devices.

The solution must quickly detect mobile devices and

Expectations vs. Performance



<http://blog.cdn77.com/what-are-the-benefits-of-cdn/>

“[Device Detection] moves the intelligence of adapting site behavior for specific devices to the edge of the network, closer to the end user. By integrating advanced device detection, intelligent caching, application acceleration and advanced front-end optimization capabilities directly on edge servers, [CDN] is optimizing experiences on every screen while reducing traffic and latency. This gives content publishers the ability to quickly customize the user experience, optimize the content being served, add intelligence to applications, and enhance performance for every type of device — all without waiting for a distant originating server.”

— A Top 10 CDN

pass capabilities to the caching platform and web services with negligible impact on RTT. CDNs will offer device detection as a value-added service, and its processing must have virtually no negative impact on end users' load time.

Likewise, the device detection solution will need to reside on many edge servers. So the solution needs to integrate at the network level and be able to pass device intelligence on to many customers' web services.

The WURFL® InFuze Solution

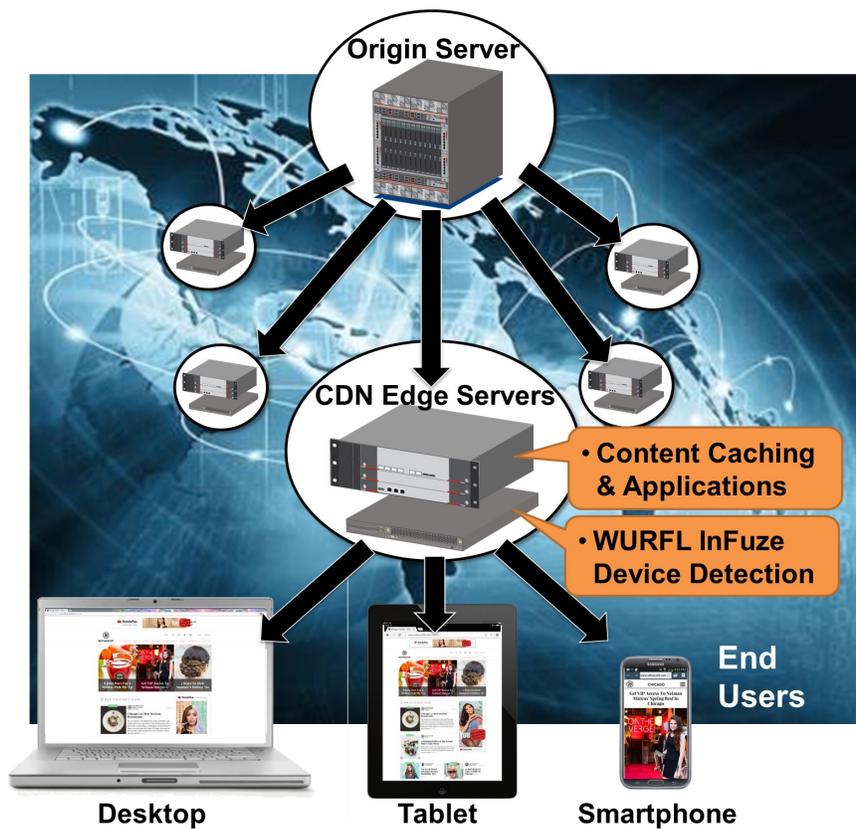
ScientiaMobile designed [WURFL InFuze](#) with CDNs' requirements in mind. For over 10 years, WURFL has been the standard of excellence in device detection. ScientiaMobile's WURFL C++ API meets the performance requirements of CDNs. This means that CDNs can bundle device detection with a suite of caching and application acceleration services with limited hit to performance.

WURFL InFuze comes with several modules that address the needs of caching and web servers. WURFL InFuze has modules for a number of servers, load balancers, and caching platforms, including: Apache, NGINX, Microsoft® IIS, Node.js, Varnish Cache, HAProxy, and Lighttpd. This means edge servers can easily access device information and use it to offer new premium, mobile optimization services.

Results

A growing number of leading CDNs have installed WURFL InFuze, and their customers have benefited. For example, Refinery 29, the largest independent women's style website in the U.S. has used CDN-based device detection to improve the user experience for millions of its mobile users. The result is a mobile strategy that has dramatically improved response times and helped increase mobile views.

To learn more about WURFL Solutions for CDNs, please visit us at www.scientiamobile.com.



“Our mobile audience continues to grow rapidly, so providing visitors with the very best experience has quickly become our core competency. [Our CDN] got us there faster than we ever thought possible.”

— Refinery 29

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