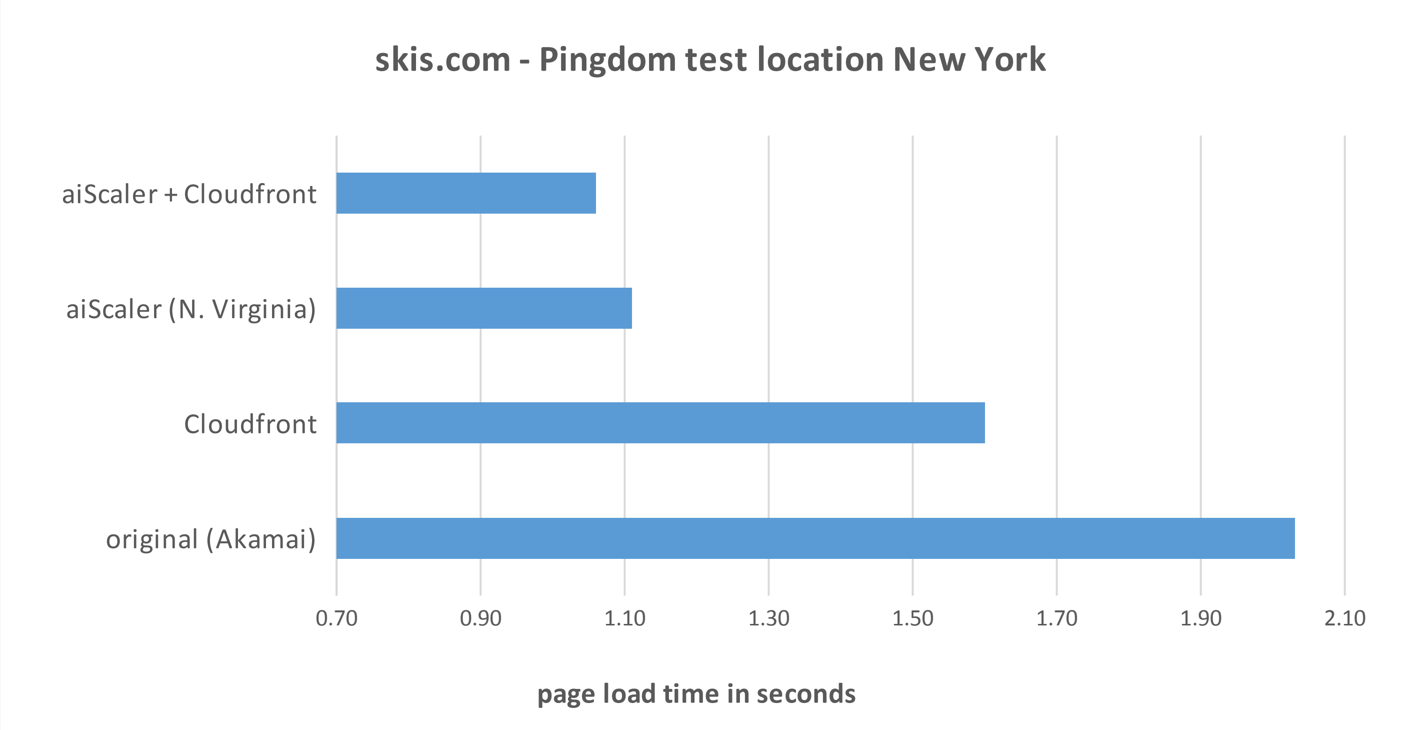
In this report we will compare Cloudfront and Akamai and see how you can use aiScaler to improve performance from your CDN. Akamai is one of the world's biggest CDN's and Cloudfront is Amazon's cloud-based CDN. aiScaler is an Application Delivery Controller (ADC), **which is used for high traffic website to accelerate their content delivery.**

Application Delivery Controllers can be used to enhance or replace CDN's. Or to quote the sysadmin from CNBC.com**:** ***"It doesn't necessarily compete with CDNs, it is rather complimentary instead (..) But it does allow you to dramatically reduce the hosting footprint - I expect we shall slash ours by 50%+, we have already started. "*** **CNBC actually uses aiScaler to improve their CDN.**

Test 1

First we found a site that is using Akamai as it's CDN. Skis.com is a nice choice. It's a typical ecommerce website: heavy, dynamic and with thousands of different articles. It's important for a webshop that it's loading fast, because modern internet users don't have much patience. For example, Amazon found that a 100 millisecond delay caused a 1% drop in revenue. As a webshop owner you want speed.



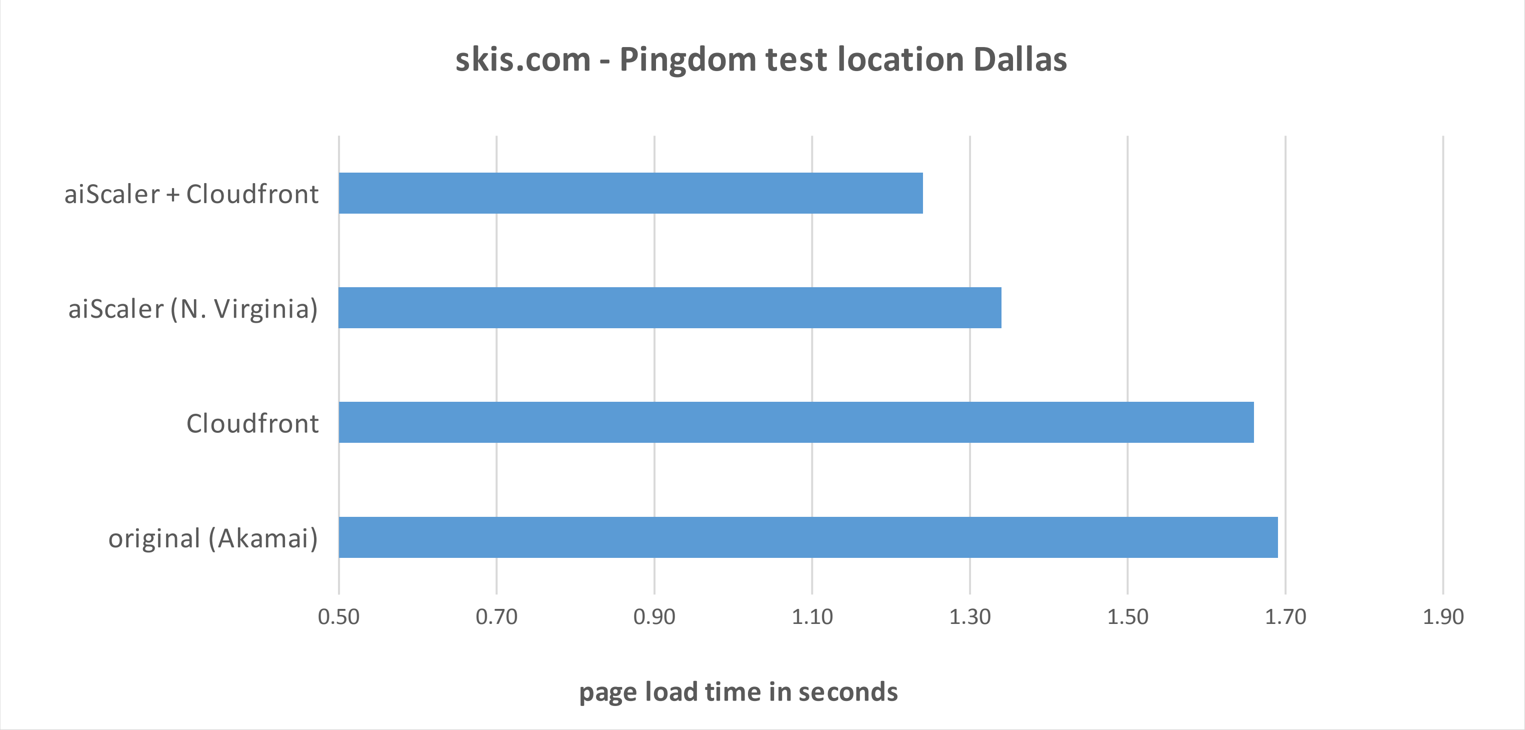
Testing details:

- First we tested the original site, which is served through Akamai.
- We then saved the site as a complete .htm copy, checking the source to make sure that all static files are served from a local folder and uploaded it to our testing EC2 instance (N. Virginia, m1.large). We then created a version of the .htm file, and accelerated it through CloudFront, by replacing the local paths with the CloudFront ones (eg. site.com/image.jpg becomes xyz.cloudfront.net/ image.jpg). We had to save the site as a local copy to test CloudFront, because one must use their subdomain for assets.
- aiScaler was functioning as a reverse proxy, using full page caching, running on an m1.medium EC2 instance in N. Virginia.
- aiScaler + CloudFront – is similar to simply aiScaler, but with static files hosted on

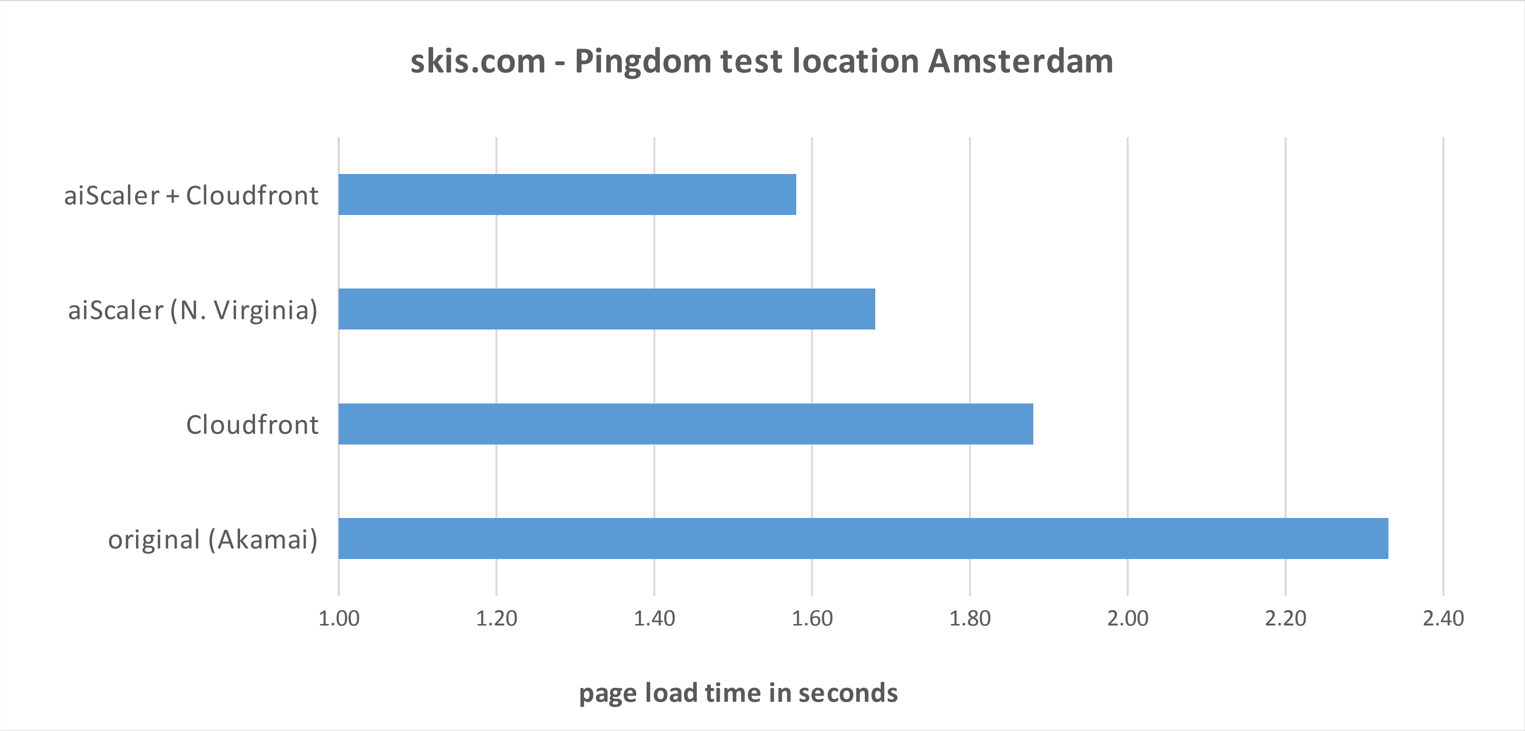
CloudFront.

- Tests were done using a third party tool from "Pingdom". Everybody can use it and verify the test-results on http://tools.pingdom.com/fpt/. Each test was made 3 times and the best result was recorded.
- We had to make a local copy to test Cloudfront, because we didn't have access to the live site. The original initial skis.com request took 500ms, while a the local copy on Cloudfront took just about 100ms, because it is a static html copy. We added those 0.4 seconds to the obtained results to simulate a real-world comparison between Cloudfront and Akamai. As you can see, Cloudfront is still beating Akamai.

Since we are comparing delivery networks, we did page loading tests from other locations too: Dallas and Amsterdam.



In Dallas, Akamai must have a data center nearby, because it's almost as fast as Cloudfront. aiScaler (with Cloudfront) is still the fastest, but the difference not being as big as in the NYC test. This makes sense, since aiScaler has only one end-point location in North Virginia, which is fairly close to NYC. (In test3 we will compare aiScaler with multiple endpoints around the world). Next is Amsterdam:



Cloudfront and Akamai both have endpoints in Europe, which explains why difference between aiScaler is smaller than in the US-based tests. It's surprising to see aiScaler still being the fastest, given that all data must cross the ocean. In test 3 we will add an aiScaler instance in Ireland, to test the effect of multiple end-point locations. Akamai Is lagging far behind again.

Conclusion:

1. Cloudfront was faster in our tests, than Akamai.
2. Both CloudFront and Akamai users can benefit significantly from adding aiScaler to their setup
3. aiScaler can also replace your load balancer and features DDoS protection, something for which Akamai charges extra, while Cloudfront doesn't offer any kind of DDoS protection at all.
4. aiScaler works out of the box and setup of a site like skis.com would take no more than a single hour. No code changes are required.