

aiScaler solutions summary

Increase capacity

aiScaler implements session management, superior caching performance and offloads tasks from backend servers, like SSL termination and data compression. By putting aiScaler in your stack, you can handle 10-15 times as many RPS¹, without any code changes to the backend.

Non-cacheable content can benefit from aiScaler, as it offloads the task of dealing with the client network connection, away from the origins. Normally, each client connection requires a dedicated process that lives on the origin for the duration of the connection. When clients have a slow connection, this occupies part of the origin server, because the process has to stay alive, while waiting for a complete request. With aiScaler front-ending the traffic, the situation is different. aiScaler waits to obtain a complete and valid request from the client, before sending this virtually instantaneously to the origin, using a much faster connection between aiScaler and the origin. Do not underestimate this benefit – it can offload your servers significantly! Non-cacheable requests are always forwarded verbatim, allowing acceleration for all types of HTTP(S) traffic.

Decrease page loading times

aiScaler reduces the time from click to content, especially for dynamic web applications, by using a combination of:

- Full Page caching
- HTTPS caching
- Pre-fetching responses from your own origins or third party domains.
- Preloading responses of rarely requested URL's, by warming up the cache.
- Session driven cache control, that serves different cached responses, based on the presence/lack of certain cookies. This is especially useful for sites with a registration/login policy.
- Response driven cache invalidation. This ensures cache freshness for all visitors, when one visitor changes a dynamic website, for example by posting in a message board.
- Content driven cache control. When a dynamic object is present on a page -like a survey or poll- it disables full page caching, until that dynamic object stops changing.

Mobile content management

aiScaler can detect, group and redirect mobile devices, based on their user agent, and serve the appropriate content to each device. aiScaler can group devices, by searching for *patterns* in their UA and then adding a header to the request (for example: tablet, mobile and desktop). This means that -even currently unknown- mobile devices of the future, will still be redirected to the proper content, without the need for updating the database of user agents.

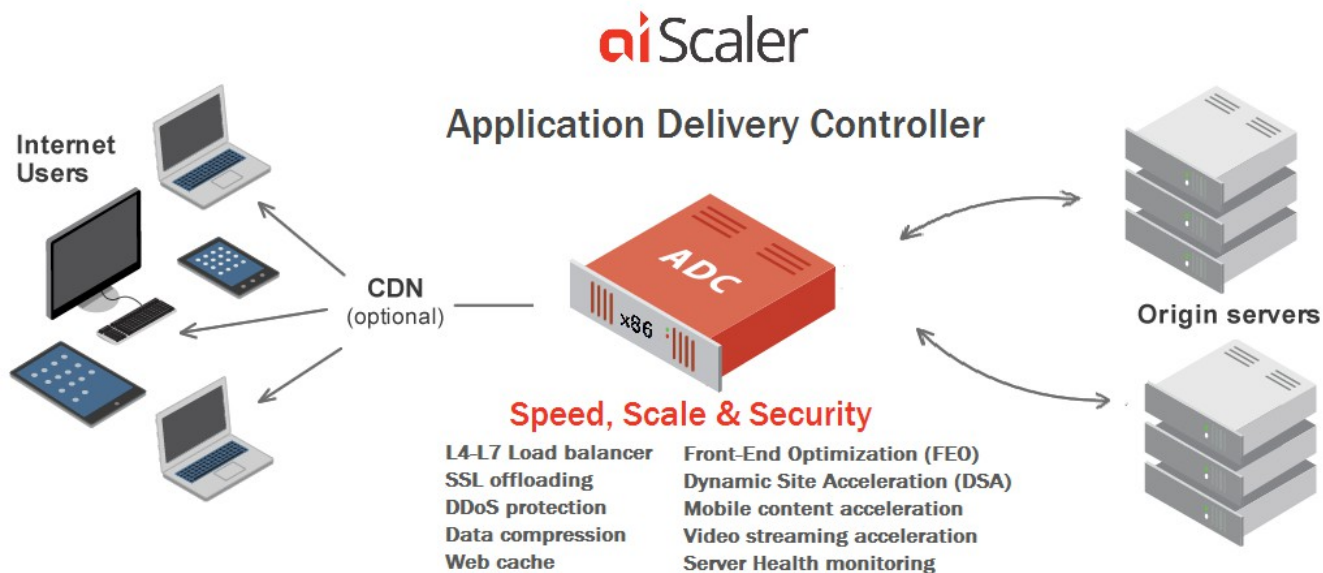
aiScaler can support different domains (m.abc.com vs abc.com), different origin servers and even entirely different URL structures. Websites with responsive design, can benefit from the extra UA-header, which allows origin servers to easily serve the right content (ads etc) to the right group of users.

aiScaler unifies the URL structure for mobile and desktop sites, for users, searchbots and social media connections. This allows you to maintain separate mobile and desktop sites on the backend, while the internet can access your website through just one URL. Search engines like Google reward a unified URL structure with higher page rankings, similar to sites with a responsive design. This also allows mobile users, to share links on social applications, while still allowing desktop users to open those links, get directed to the proper content and vice-versa.

¹ <http://aiscaler.com/performance-reports>

Prevent downtime and improve security (DDoS Protection)

Prevent downtime and improve security by detection and mitigation of DDoS attacks and enforcing sanity checks against SQL injections. When detecting a DDoS or SYN flood attack, aiScaler sends an email alert to the system administrator and starts throttling suspicious traffic automatically. It follows by sending an optional warning to offending IP addresses, before blocking offending IP addresses from reaching your origin servers. All offending IP addresses are logged in a text file, that you can download through any normal browser.



For DDoS protection, aiScaler has to be configured like a reverse proxy, placed in between the internet and your origin servers. When facing very large attacks, the only remedy is providing more bandwidth than the attacker. aiScaler can solve this too. If your data-center cannot provide enough bandwidth, you can temporarily launch aiScaler on public clouds like AWS and the HP Cloud, creating a hybrid cloud. The public cloud instances are peer-aware of your private environment and can use the same configuration file. This allows you to expand capacity within minutes, offering virtually unlimited public cloud resources for maximum protection.

Advanced rewriting and redirecting of URL's

Rewrite and redirect URL's before they reach the origin, for example http to https and vice-versa. It is also possible to redirect a specified percentage of visitors, or conditionally redirect URL's, when server-load reaches a certain threshold.

Serving geocontent,

aiScaler can serve different content to different users based on the visitor's ip address. It allows for serving of -or blocking of- content to different geographical regions.

Video streaming acceleration for HTTP based streaming software

aiScaler accelerates HTTP based video streaming software, like Adobe Media Server, HLS and Wowza. This is especially helpful when broadcasting streams with a large number of simultaneous visitors, like sport events.