



Adobe

# AEM Gems- Dispatcher Caching New Features and Optimizations

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## New Dispatcher Features (since Dispatcher 4.0.9 through 4.1.9)

- New format in `/filter` rules

- New format for `DispatcherPassError`

- Using environment variables in `dispatcher.any`

- ELB and `/always-resolve`

- Automatic insertion of vanity URLs



In the old style, rules are matched against the complete request URL, e.g.

```
GET /index.html HTTP/1.1
```

It was easy to forget that the protocol is part of the request URL, e.g

```
/filter {  
  /0001 {  
    /glob "GET /index.html"  
    /type "allow"  
  }  
}
```

would not match the request above. Instead, one would need to specify:

```
/glob "GET /index.html *"
```



New rule style is structured:

```
/filter {  
  { /type "deny" /url "/crx/de/*" }  
  { /type "allow" /method "GET" /url "*.css" }  
}
```

This is the correct approach to deny every access to CRXDE but still allow GET requests to CSS files.

Other items allowed in new rules:

/query

/protocol

Configuration samples in the distribution packages are all converted to new style

DispatcherPassError is an Apache-specific configuration

When set to “1”, it allowed error documents set with ErrorDocument directives to be processed.

This proved to be too generic, so we changed it to allow status code ranges:

```
DispatcherPassError 400,402-404,500
```

String-valued entries in dispatcher.any can contain environment variables

Assume our Apache is setup in some directory like this:

```
$ ls -l
total 40
drwxr-xr-x   8 dpfister  staff    272 Oct 29 13:54 cache
lrwxr-xr-x   1 dpfister  staff     26 Oct 28 16:24 dispatcher.any
-rwxr-xr-x   1 dpfister  staff     57 Apr 19 2013 apachectl
-rw-r--r--   1 dpfister  staff  20755 Nov 26 15:27 httpd.conf
```

We start Apache using the script `apachectl` from this directory. This allows us to set the cache root in `dispatcher.any` as follows:

```
/cache {
  /docroot "${PWD}/cache"
}
}
```



Elastic load balancers have a permanent DNS name but can switch IP addresses

The dispatcher initially resolved DNS name to IP addresses once, on startup

In an ELB situation, it is therefore advisable to use:

```
/always-resolve "1"
```

Moreover, for an ELB, a host name maps to multiple IP addresses

The modern `getaddrinfo(3)` system call will always return the same sequence of IP addresses, while the old `gethostbyname(3)` will return them in random order

To load balance better through the list of IP addresses, it is therefore advisable to use:

```
/ipv4 "1"
```

More info: <http://daniel.haxx.se/blog/2012/01/03/getaddrinfo-with-round-robin-dns-and-happy-eyeballs/>

With a (simplified) setup of filter rules as follows:

```
/filter {  
  { /type "deny" /url "/*" }  
  { /type "allow" /url "/content" }  
}
```

builtin vanity URLs, e.g. redirecting /geohome to /content/geometrix/en.html - will not work, but return a 404 (Not found).

To this date, only workaround was to manually add exceptions for vanity URLs to the filter list:

```
{ /type "allow" /url "/geohome" }
```

which is cumbersome.



