Optimizing Application Performance with Content Switching

Content switching allows content for specific applications to be sent to the correct backend servers or group of servers. This has the benefit of matching content or applications to specific servers and eradicates the need to have all content for a specific site mirrored across all servers. Security can be better managed on a per-service or per-application basis rather than a per-server basis.

In addition to looking at the Layer 4 information, content switching allows for more granular inspection at Layer 7. All XPoint AppScaler products offer comprehensive and high performance content switching capabilities.

With content switching, XPoint AppScaler can act as content traffic distributor to specific applications or backend servers by inspecting HTTP headers and payload.

XPoint AppScaler supports content switch policy chain and regular expressions for maximum flexibility to inspect request content.

Regular Expressions and Policy Chain Support

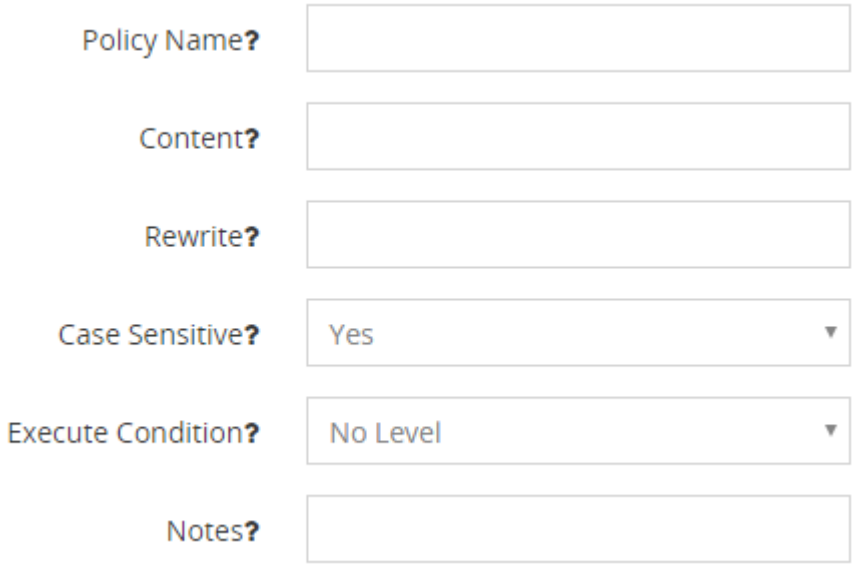
The regular expression and policy chain can be used to match the content. For instance, if incoming request header contains custom header "*newvia*", the request header will be rewritten to "changedvia".

Policy Priority

The priority can be optionally set to content switching policies. If you assign priorities, the policies are evaluated in the order that you set.

Response Rewriting

The HTTP Response content can be replaced with the pattern you specify.



Header Rewriting

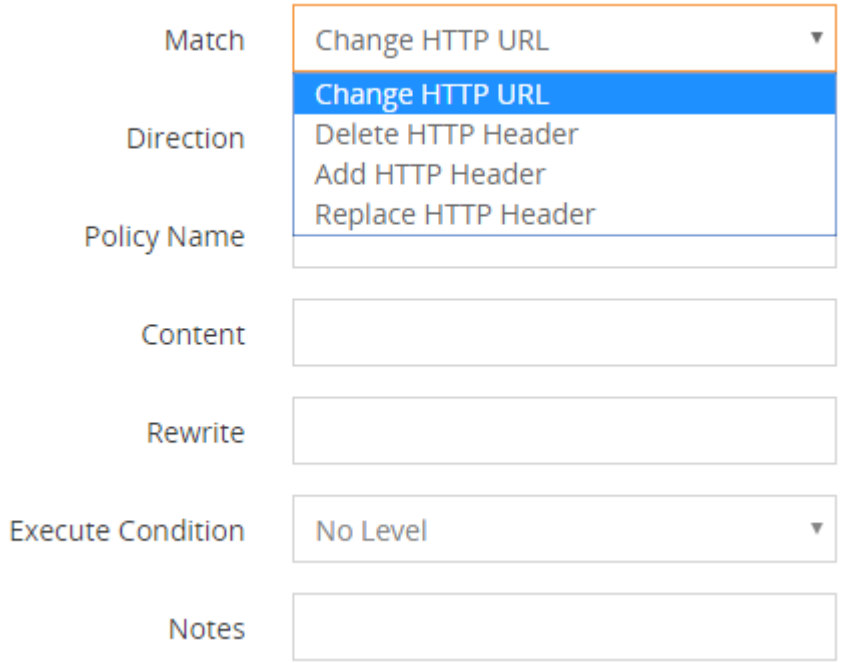
Both inbound and outbound http header can be modified including:

Change HTTP URL

Delete HTTP Header

Add HTTP Header

Replace HTTP Header



Content Rule

Content rule can either be global or server specific based on various attributes including:

HTTP URL

HTTP Request Header

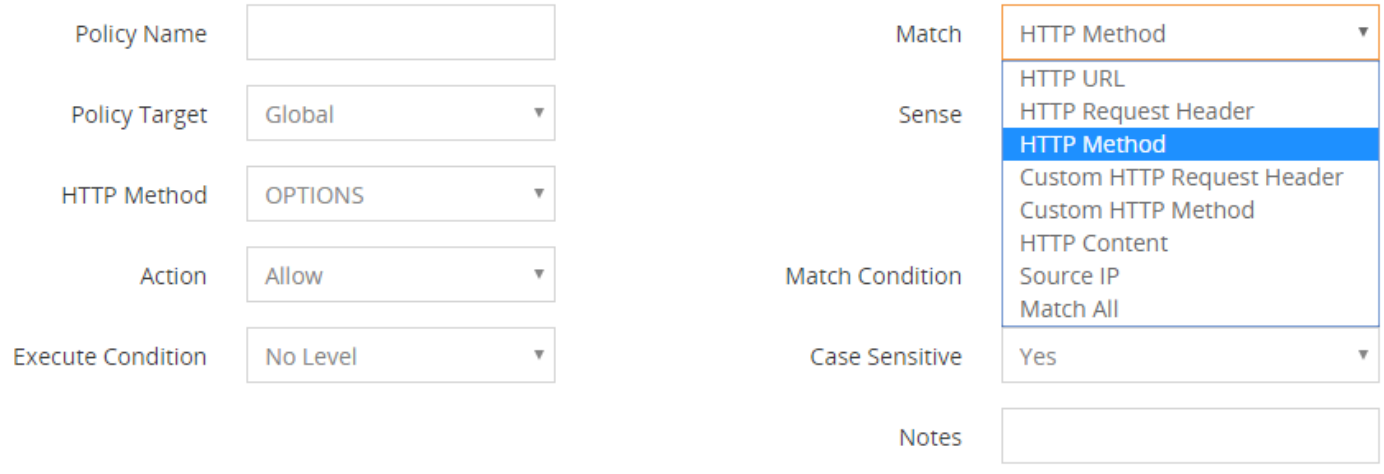
HTTP Method

Custom HTTP Request Header

Custom HTTP Method

HTTP Content

Source IP



Some Content Switching Use Cases

1. Direct customer device type to specific web server. For instance, if the request came from a cell phone, the request is directed to a server that is capable of serving content that the user can view on cell phone. A request from a computer is directed to a different server that is capable of serving content designed for a computer screen.

2. Direct request based on language. The HTTP Header Accept-Language will be inspected to determine the language used by customer's browser.

3. Route the traffic to specific backend servers based on URL pattern matching, for instance, any URL containing images will be routed to static content server while other URL redirected to dynamic content backend servers.

4. Route the traffic based on customer's source IP to different backend servers.

Summary

The built-in content switching feature on XPoint AppScaler adds advanced layer 4 to layer 7 content switching capabilities to application delivery. It offers flexibility and benefits to reduce application response times, optimize service delivery and increase application uptime and service scalability for servers.