## Azure Web Application Firewall Modification required for the WSM PWA

Attempting to access the WSM progressive web app (PWA) was unsuccessful when accessed via the Azure application gateway with the standard, out of the box, OWASP\_CRS 3.0 Web Application Firewall (WAF) enabled in Prevention mode (the default). When the WAF was switched to Detection mode, the below log (see *Snippet of Azure WAF Log* and *Azure WAF Log* below) was generated. But the connection was still unsuccessful.

Reviewing the logs indicated the following:

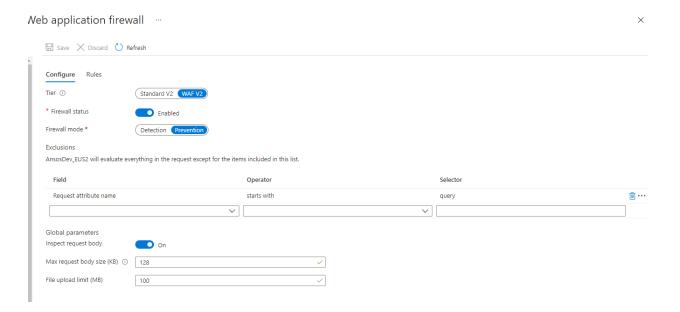
- The rules in question are mandatory, and exclusion rules are needed to successfully connect with the Web PWA.
- If you do a Google search on OWASP\_3.0 with the different ruleID (such as 932100), you'll get more information. Basically, the PWA, when querying the database, is causing the WAF to determine there is malicious activity (such as "# of special characters exceeded (12)") occurring and is shutting down the connection from the log

After discussion with one of Microsoft's Azure Support Engineers, the presence of "ARGS:" indicates that there is an Attribute causing the errors in question, with the text following the "ARGS" indicating the contents of the attribute (for example, special characters).

With this information from the Azure Engineer, the rule in the below screenshot was implemented. Once implemented, the WAF was switched back to Prevention mode. With the below rule (see WAF Rule below), the PWA was able to successfully access WSM in Prevention mode.

Note about the rule below. When the Field "Request attribute name" is found and it starts with the selector "Query", then the WAF does not prevent the connection. When Hank and Chris discussed this further, we believe there might be a better rule to put in place that is more restrictive, but since we hope that this type of rule won't be needed in the future, we are not investigating this further.

## **WAF Rule:**



## **Snippet of Azure WAF Log:**

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## **Azure WAF Log:**

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