# Azure Application Insights Alert Configuration

This document outlines the steps to configure alerts in Azure Application Insights using a specific query to monitor the performance of operations.

## Query Explanation

The following query is used to monitor the performance of requests for specific operations in Azure Application Insights:

requests  
 | summarize   
 RequestsCount = sum(itemCount),   
 AverageDuration = avg(duration),   
 P50Duration = percentile(duration, 50),   
 P95Duration = percentile(duration, 95),   
 P99Duration = percentile(duration, 99)  
 by operation\_Name  
 | order by RequestsCount desc

## Metrics Explained

1. \*\*RequestsCount\*\*: Total number of requests executed.

2. \*\*AverageDuration\*\*: The average response time of the requests.

3. \*\*Percentiles\*\*: Specific response time percentiles to understand the distribution of response times.

- \*\*P50Duration (Median)\*\*: 50% of requests have a response time less than or equal to this value.

- \*\*P95Duration\*\*: 95% of requests have a response time less than or equal to this value.

- \*\*P99Duration\*\*: 99% of requests have a response time less than or equal to this value.

## Steps to Create an Alert

1. \*\*Run the Query and Save\*\*: Execute the KQL query in Log Analytics and save the results.

2. \*\*Create New Alert Rule\*\*: Click on '+ New alert rule' after running the query.

3. \*\*Configure Resource\*\*: Select the resource you want to monitor.

4. \*\*Set Up Condition\*\*: Add a condition using 'Custom log search'.

- \*\*Search Query\*\*: Paste the KQL query.

- \*\*Configure Signal Logic\*\*:

- \*\*Measurement\*\*: Select the value to monitor (e.g., AverageDuration, P95Duration, or P99Duration).

- \*\*Threshold\*\*: Set the threshold for the alert (e.g., greater than 800ms for P95Duration).

- \*\*Aggregation Type\*\*: Choose the appropriate aggregation type (e.g., Average).

- \*\*Evaluation Granularity\*\*: Set the frequency of evaluation (e.g., every 5 minutes).

5. \*\*Set Up Action Group\*\*: Select or create an action group to define actions when the alert is triggered (e.g., sending an email or SMS).

6. \*\*Name and Describe the Alert\*\*:

- \*\*Alert Rule Name\*\*: Provide a name for the alert (e.g., High Average Duration Alert).

- \*\*Description\*\*: Provide a short description of the alert.

- \*\*Severity\*\*: Choose the severity level of the alert (e.g., Sev 3 - Informational).

- \*\*Enable Rule Upon Creation\*\*: Enable this option to activate the alert immediately after creation.

## Example of Alert Logic

For instance, to create an alert when P95Duration exceeds 800ms:

- \*\*Measurement\*\*: P95Duration  
 - \*\*Alert Logic\*\*:  
 - Operator: Greater than  
 - Threshold Value: 800  
 - Aggregation Granularity (Period): 5 minutes  
 - Frequency of Evaluation: 5 minutes

## Conclusion

By following these steps, Azure will monitor the operations according to the query and trigger alerts when the specified conditions are met, helping you effectively manage and maintain application performance.