Iteration 2

Review Test Environment Records

1. Iteration1 Test Error Review

1.1 Troubleshooting:

Dynamic test:
- Cause: Incorrect test file path
- In test plan .tmx file:
  `<stringProp name="HTTPSampler.path">/test/index.php</stringProp>`

  The correct path should be:
  `<stringProp name="HTTPSampler.path">/api.php</stringProp>`

Size of data test:
- Cause: misconfiguration in the configuration file
  i. The path should be:
  `<stringProp name="HTTPSampler.path">/small_file.txt</stringProp>`
  (Previously, it was set to /test.)
  ii. The request should be a GET request, as *curl* is using GET. However, the test file was originally set to POST, so the following three changes are needed:
  1. Update the request method:
  `<stringProp name="HTTPSampler.method">GET</stringProp>`
  (Previously, it was POST.)
  2. Remove the following line:
  `<boolProp name="HTTPSampler.postBodyRaw">true</boolProp>`
  3. Modify this element:
  `<elementProp name="payload" elementType="HTTPArgument">`
  (Previously, name="".)

1.2 Feasible Configurations

- **Dynamic request:**

root@ip-172-31-15-56:~/test-0310# cat test-dynamic.jmx
<?xml version="1.0" encoding="UTF-8"?>

```xml
<jmeterTestPlan version="1.2" properties="5.0" jmeter="5.5">
  <hashTree>
    <TestPlan guiclass="TestPlanGui" testclass="TestPlan" testname="Dynamic Test Plan" enabled="true">
      <stringProp name="TestPlan.comments"></stringProp>
      <boolProp name="TestPlan.functional_mode">false</boolProp>
      <boolProp name="TestPlan.serialize_threadgroups">false</boolProp>
      <elementProp name="TestPlan.user_defined_variables" elementType="Arguments" guiclass="ArgumentsPanel" testclass="Arguments" testname="User Defined Variables" enabled="true"/>
      <stringProp name="TestPlan.user_define_classpath"></stringProp>
    </TestPlan>
    <hashTree>
    <ThreadGroup guiclass="ThreadGroupGui" testclass="ThreadGroup" testname="Thread Group" enabled="true">
      <stringProp name="ThreadGroup.on_sample_error">continue</stringProp>
      <elementProp name="ThreadGroup.main_controller" elementType="LoopController" guiclass="LoopControlPanel" testclass="LoopController" testname="Loop Controller" enabled="true">
        <boolProp name="LoopController.continue_forever">false</boolProp>
        <stringProp name="LoopController.loops">1</stringProp>
      </elementProp>
      <stringProp name="ThreadGroup.num_threads">100</stringProp>
      <stringProp name="ThreadGroup.ramp_time">1</stringProp>
      <longProp name="ThreadGroup.start_time">1659101628000</longProp>
      <longProp name="ThreadGroup.end_time">1659101628000</longProp>
      <boolProp name="ThreadGroup.scheduler">false</boolProp>
      <stringProp name="ThreadGroup.duration"></stringProp>
      <stringProp name="ThreadGroup.delay"></stringProp>
    </ThreadGroup>
    <hashTree>
    <HTTPSamplerProxy guiclass="HttpTestSampleGui" testclass="HTTPSamplerProxy" testname="PHP Request" enabled="true">
      <stringProp name="HTTPSampler.domain">172.31.1.46</stringProp>
      <stringProp name="HTTPSampler.port">80</stringProp>
      <stringProp name="HTTPSampler.protocol">http</stringProp>
      <stringProp name="HTTPSampler.path">/api.php</stringProp>
      <stringProp name="HTTPSampler.method">GET</stringProp>
    </HTTPSamplerProxy>
    <hashTree/>
```

</hashTree>
          </hashTree>
    </hashTree>
</jmeterTestPlan>

- **Small payload request:**
root@ip-172-31-15-56:~/test-0310# cat test-size.jmx
<?xml version="1.0" encoding="UTF-8"?>
<jmeterTestPlan version="1.2" properties="5.0" jmeter="5.5">
  <hashTree>
        <TestPlan guiclass="TestPlanGui" testclass="TestPlan" testname="Size Test
Plan" enabled="true">
        <stringProp name="TestPlan.comments"></stringProp>
        <boolProp name="TestPlan.functional_mode">false</boolProp>
        <boolProp name="TestPlan.serialize_threadgroups">false</boolProp>
        <elementProp name="TestPlan.user_defined_variables"
elementType="Arguments" guiclass="ArgumentsPanel" testclass="Arguments"
testname="User Defined Variables" enabled="true"/>
        <stringProp name="TestPlan.user_define_classpath"></stringProp>
        </TestPlan>
        <hashTree>
        <ThreadGroup guiclass="ThreadGroupGui" testclass="ThreadGroup"
testname="Size Test Group" enabled="true">
        <stringProp name="ThreadGroup.on_sample_error">continue</stringProp>
        <elementProp name="ThreadGroup.main_controller"
elementType="LoopController" guiclass="LoopControlPanel" testclass="LoopController"
testname="Loop Controller" enabled="true">
        <boolProp name="LoopController.continue_forever">false</boolProp>
        <stringProp name="LoopController.loops">1</stringProp>
        </elementProp>
        <stringProp name="ThreadGroup.num_threads">10</stringProp> <!-- Reduced
users to prevent overload -->
        <stringProp name="ThreadGroup.ramp_time">2</stringProp>
        <boolProp name="ThreadGroup.scheduler">false</boolProp>
        <stringProp name="ThreadGroup.duration"></stringProp>
        <stringProp name="ThreadGroup.delay"></stringProp>
        </ThreadGroup>
        <hashTree>
        <HTTPSamplerProxy guiclass="HttpTestSampleGui"
testclass="HTTPSamplerProxy" testname="Small Payload Request" enabled="true">

```xml
<stringProp name="HTTPSampler.domain">172.31.1.46</stringProp>
<stringProp name="HTTPSampler.port">80</stringProp>
<stringProp name="HTTPSampler.protocol">http</stringProp>
<stringProp name="HTTPSampler.path">/small_file.txt</stringProp>
<stringProp name="HTTPSampler.method">GET</stringProp>
<elementProp name="HTTPsampler.Arguments" elementType="Arguments">
<collectionProp name="Arguments.arguments">
<elementProp name="payload" elementType="HTTPArgument">
        <boolProp name="HTTPArgument.always_encode">false</boolProp>
        <stringProp
name="Argument.value">{"test":"small_payload"}</stringProp> <!-- Small JSON
Payload -->
        <boolProp name="HTTPArgument.use_equals">true</boolProp>
</elementProp>
</collectionProp>
</elementProp>
</HTTPSamplerProxy>
<hashTree/>
</hashTree>
</hashTree>
</hashTree>
</jmeterTestPlan>
```

2. Explore Alternative Resource

- Since a cloud environment is beneficial for teamwork, we wish to continue using AWS resources and explore options for free credits to increase resource availability.
- After searching on AWS and contacting AWS Educate via email, we received the following response:

  "Thank you for contacting AWS Educate.

  There were changes to the AWS Educate program. Credits for Educate Starter Accounts (ESA) and AWS accounts are no longer available.

  AWS Educate features have been migrated to our AWS Academy program.

New labs were launched that provide access to the AWS Management Console. This allows for practical application of concepts without the need for credits.

More information can be found here:

- https://aws.amazon.com/training/awsacademy/

- https://aws.amazon.com/training/awsacademy/faq/

If your course requires the use of these services, then contact your educator/school to request that they join the AWS Academy program.

I hope this information helps. For additional inquiries, please submit a new case at https://support.aws.amazon.com/#/contacts/aws-educate"

Ultimately, we are not eligible for free credits for this project.

- Decisions:
    a. Since the test errors in Iteration 1 were not caused by operating system limitations, we will continue using the current testing environment.
    b. If the environment becomes a limiting factor in the future, we will consider extending our resource allocation, potentially at a cost.