Azure Load Testing

- **Advantages:**
  - Fully managed service, so you don't have to worry about managing infrastructure.
  - Easy to use, with a graphical user interface and pre-built templates.
  - Supports a wide range of protocols and applications.
  - Scales to support large loads.
  - Simplified, cloud-based load-testing service with high-fidelity support for Apache JMeter.
  - Comprehensive view of curated client and server metrics with actionable insights into app performance.
  - Integration with CI/CD workflows for automated, collaborative load testing.
  - Streamlined billing and test management that builds on existing Azure conventions.

Azure Load Testing flow:
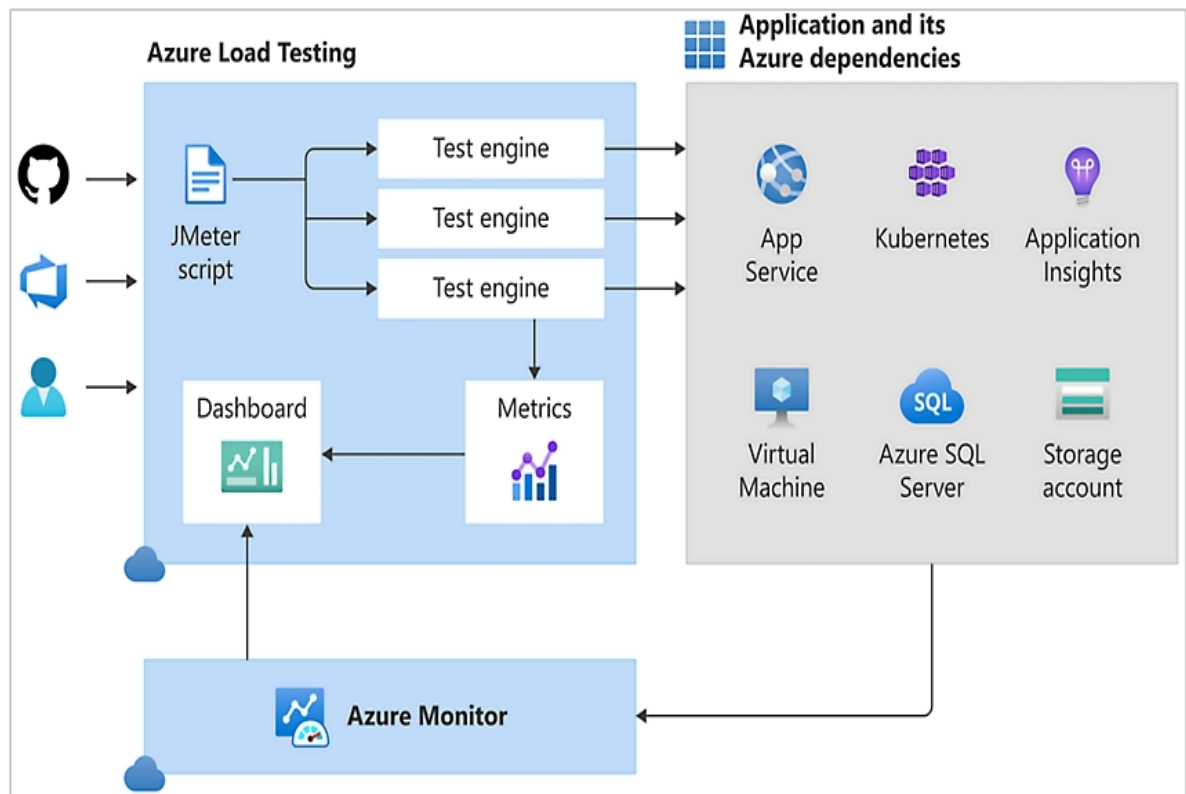
The following scenarios were covered using the azure framework with jmx scripts

Thread Group Name: Scenario 1 - Licenses Mem One to One
Number of Threads (Users): 300
Ramp-Up Period (seconds): 120
Loop Count: 1
Scheduler: None

Thread Group Name: Scenario 2 - Licenses Mem One to One 1
Number of Threads (Users): 200
Ramp-Up Period (seconds): 120
Loop Count: 1
Scheduler: None

Thread Group Name: Scenario 3 - Licenses Mem One to One 2
Number of Threads (Users): 200
Ramp-Up Period (seconds): 120
Loop Count: 1
Scheduler: None

Thread Group Name: Scenario 4 - Licenses Mem One to Two
Number of Threads (Users): 40
Ramp-Up Period (seconds): 120
Loop Count: 1
Scheduler: None

Thread Group Name: Scenario 5 - Licenses Mem One to Five
Number of Threads (Users): 20
Ramp-Up Period (seconds): 120
Loop Count: 1
Scheduler: None

Scenario 6 - getLicensesMemOneToTenScenario

Number of Threads (Users): 20

Ramp-Up Period (seconds): 120

Loop Count: 1

Scheduler: None

Scenario 7- getLicensesMemOneToTwentyFiveScenario

Number of Threads (Users): 20

Ramp-Up Period (seconds): 120

Loop Count: 1

Scheduler: None

Scenario 8 - getLicensesMemOneToFiftyScenario

Number of Threads (Users): 20

Ramp-Up Period (seconds): 120

Loop Count: 1

Scheduler: None

Scenario 9 - getLicensesMemOneToHundredScenario

Number of Threads (Users): 20

Ramp-Up Period (seconds): 120

Loop Count: 1

Scheduler: None

Test results from azure

TestRun_10/9/2023_6:45:22 PM ...

Last Updated by : MDhayal@eu.trimblecorp.net | Initiated on : 10/9/2023, 6:45:23 PM

⊕ View all test runs   ☐ Stop   ↻ Refresh   ↻ Rerun   ⇄ Compare   ⊞ App components   ⚙ Configure metrics   ↓ Download ⌄   ⟨ Share | 🗑 Delete test run   📊 Mark as baseline   🕐 Auto refresh off

∧ Test run details

Start time	End time	Engine instances	Test result	Status
10/9/2023, 6:46:24 PM	10/9/2023, 6:58:28 PM	1	Not Applicable	◉ Stopped

Load test results   Engine health

Additional insights

✓ Get more detailed insights for the App service resource getLicenses by clicking here. Please note it may take up to 45 mins after the test ends for data to be available.

Statistics

Load	Duration	Response time	Error percentage	Throughput
488	**12 mins, 4 secs**	**921.00 ms**	**0 %**	**0.67 /s**
Total requests		90th percentile response time	Aggregate requests which failed	Request rate

⌄ Sampler Statistics

Response time and Thread count:

Test criteria

Metric	Aggregate function	Condition	Threshold	Request name	Actual value	Result
Response time	Maximum	Greater than	1200		-1	❓ Undetermined

Client-side metrics

Requests : All   Percentile : 90   Error type : 0   Time range : 10/9/2023, 6:46:24 PM - 10/9/2023, 6:58:28 PM   Group by : 1m

Virtual Users (Max)

Authentication Request	licensesBytID	Aggregate
1	**1**	**1**

Waiting for management.azure.com

Response time (successful responses)

Authentication Request P...	licensesBytID Pct 90	Aggregate Pct 90
582 ms	**1.27** s	**1.27** s

Server Metrics

Server-side metrics

Resource : **getLicenses**   Time range : **10/9/2023, 6:46:24 PM - 10/9/2023, 6:58:28 PM**

Http5xx

100
80
60
40
20
0
        6:50 pm   6:55 pm   UTC+05:30

Http Server Errors (Sum)
getlicenses
0

Requests

100
80
60
40
20
0
        6:50 pm   6:55 pm   UTC+05:30

Requests (Sum)
getlicenses
0

HttpResponseTime

1.67min
1.33min
1min
40sec
20sec
0sec
        6:50 pm   6:55 pm   UTC+05:30

Response Time (Avg)

Http4xx

100
80
60
40
20
0
        6:50 pm   6:55 pm   UTC+05:30

Http 4xx (Sum)
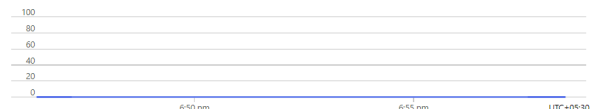
Scaling your load test:
1. Set the number of threads in the JMX file. This represents the number of threads (or virtual users) executed by 1 engine instance. The maximum number of threads per engine instance varies based on the complexity of your test script. We recommend 250 threads per engine instance. You can monitor the engine health metrics to determine the maximum for your test scenario.
2. Set engine instances accordingly to reach the desired number of threads. For example, set engine instances = 4 to reach a total of 1,000 threads.
JMX Scripts and files link:

https://drive.google.com/drive/folders/1jGrfqisTHG-N7jC9K49KO9CQPI2GIIm6?usp=sharing