**Task 8**

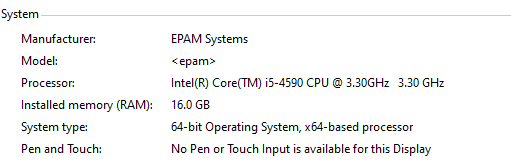
**Date:** 20 Nov 2020

**Author:** Shelley Zhao

**Application:** BlogEngine.NET version 3.2

**Environment:** Test Environment

**Test Environment configuration:**



1. **Goals:**

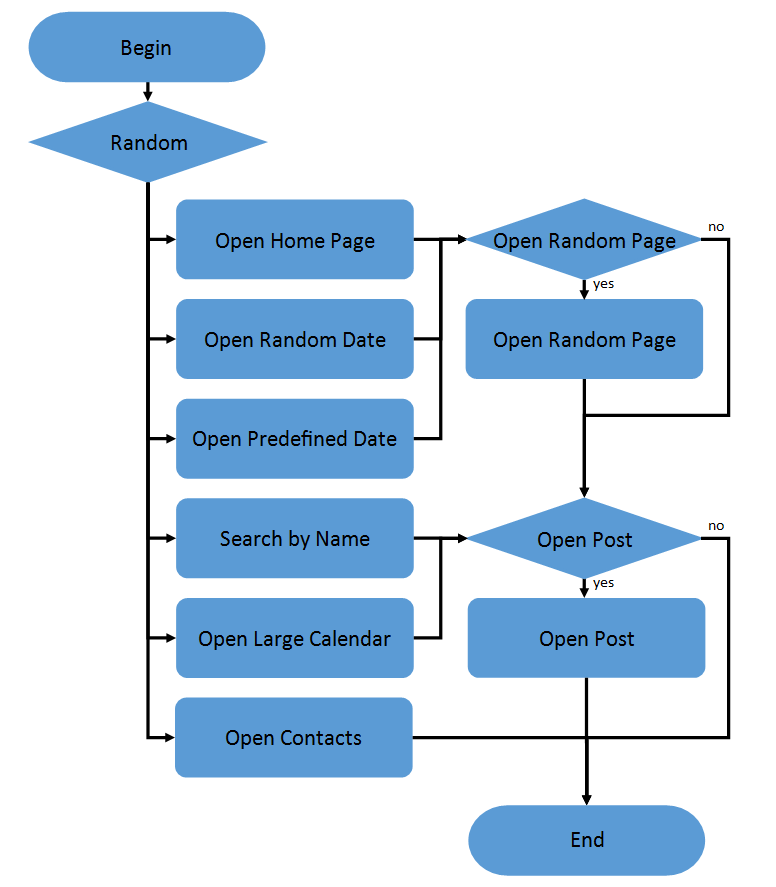
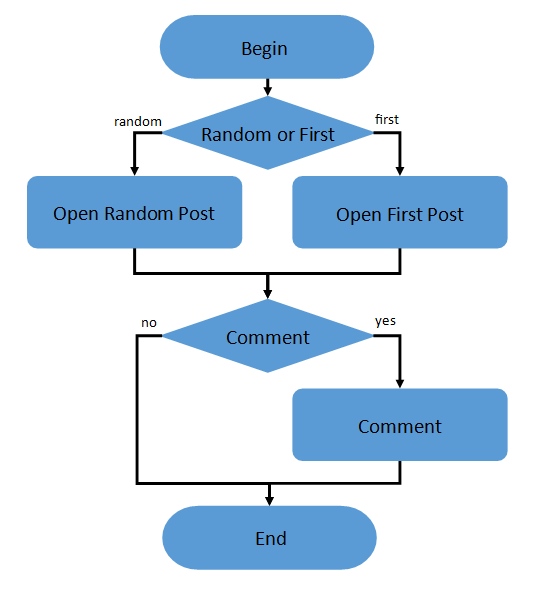
* Get an experience on regular load definition.
* Get an experience on KPI definition and calculation.
* Get an experience of scalability testing.

1. **Prerequisites:**

* Generated 1000 posts
* Results of Capacity testing from Task 7.

1. **Test script description**

**Anonymous**

1. Home Page: 15%

2. Open Random Date: 10%

3. Open Predefined Date: 30%

4. Search by Name: 30%

5. Open Large Calendar: 10%

6. Open Contacts: 5%

Open Random page (yes/no):

50% / 50%

Open post (yes/no):

80% / 20%

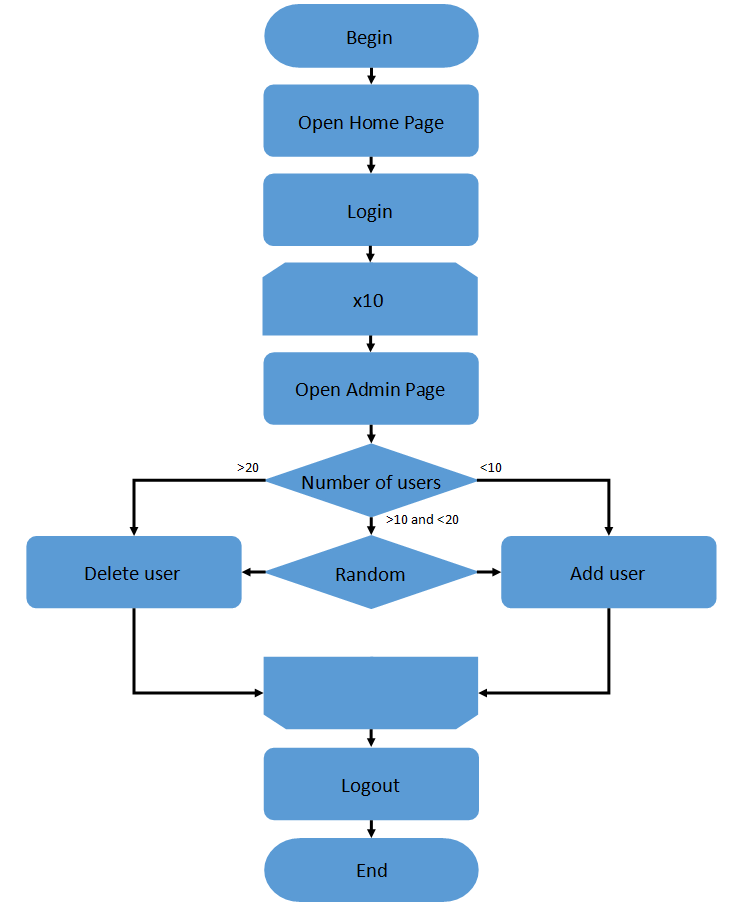
Random or First (yes/no):

65% / 35%

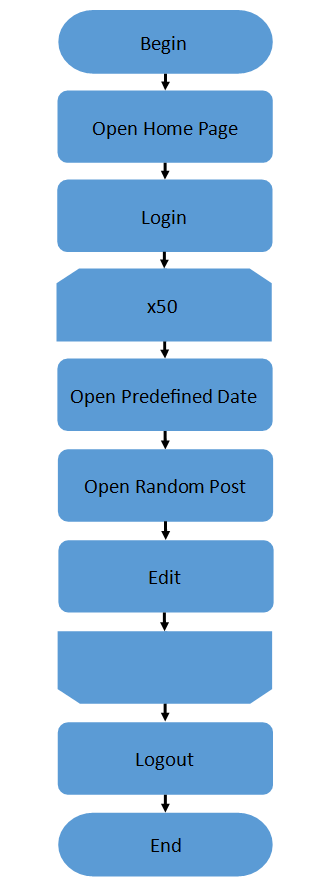
Comment (yes/no):

20% / 80%

**Admin**



**Editor**

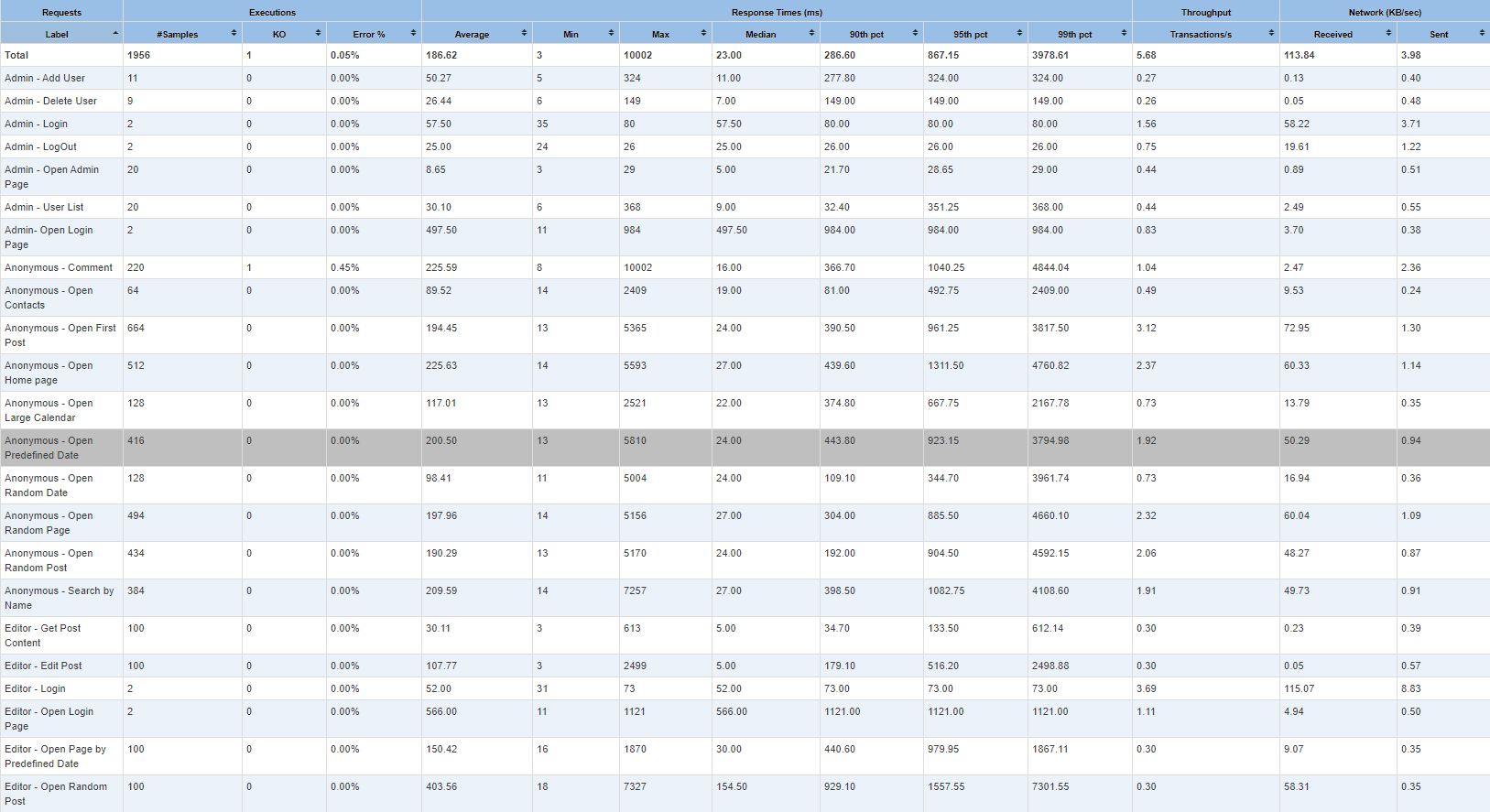


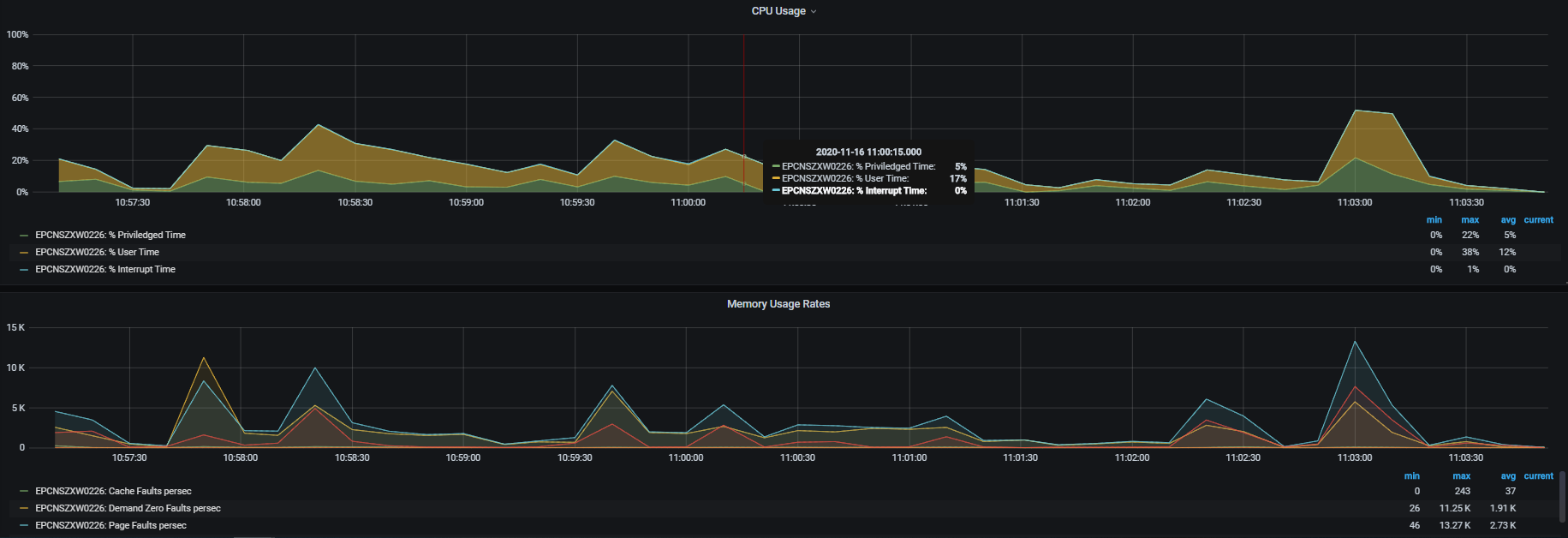
1. **Tests** 
   1. **Scalability Testing**

**Settings:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Role** | **Ramp-up period(s)** | **Number of Threads** | **Loop Count** |
| Anonymous | 30 | 32 | 50 |
| Admin | 5 | 2 | 10 |
| Editor | 5 | 2 | 50 |

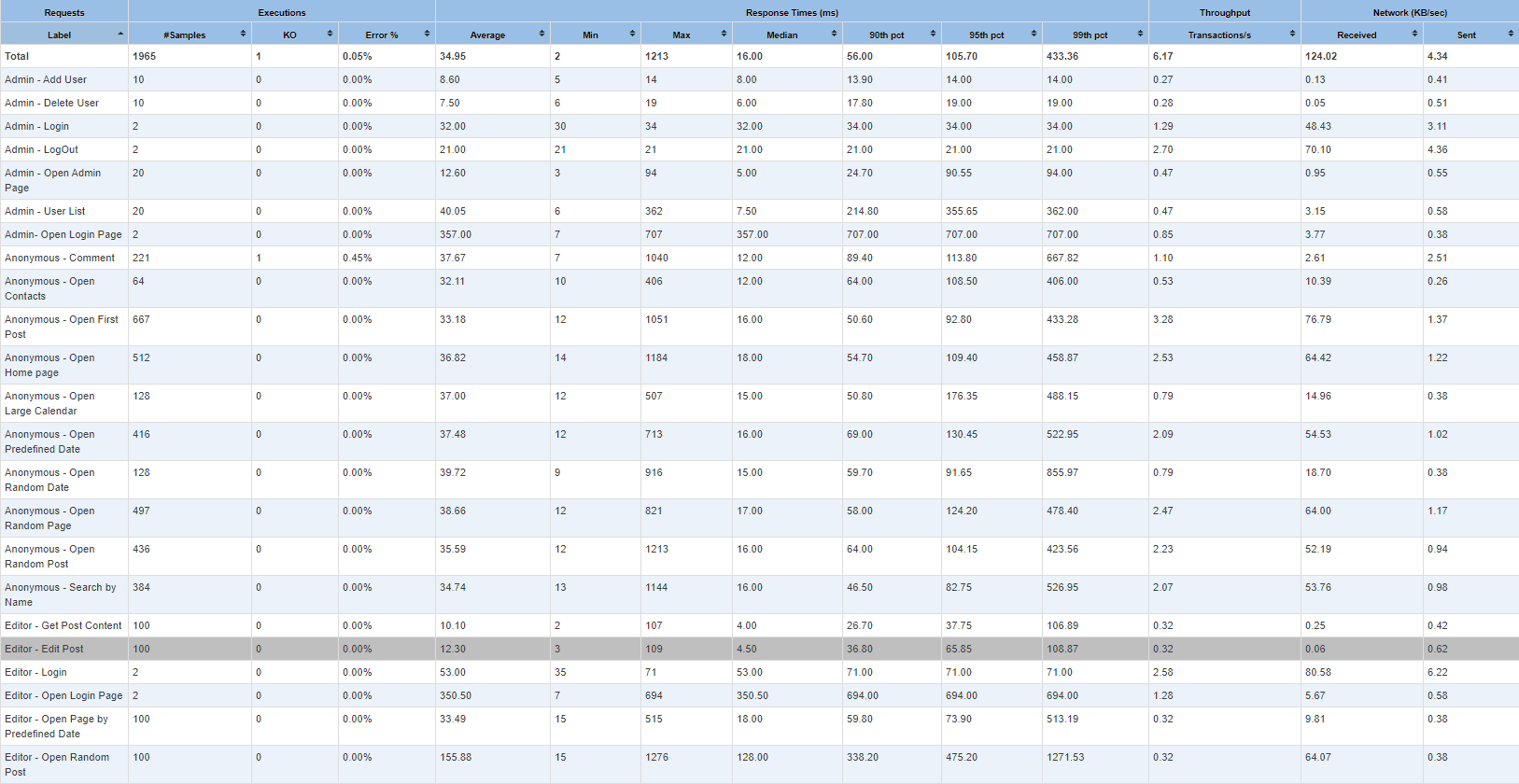
**Scaling CPU – 1 Result**

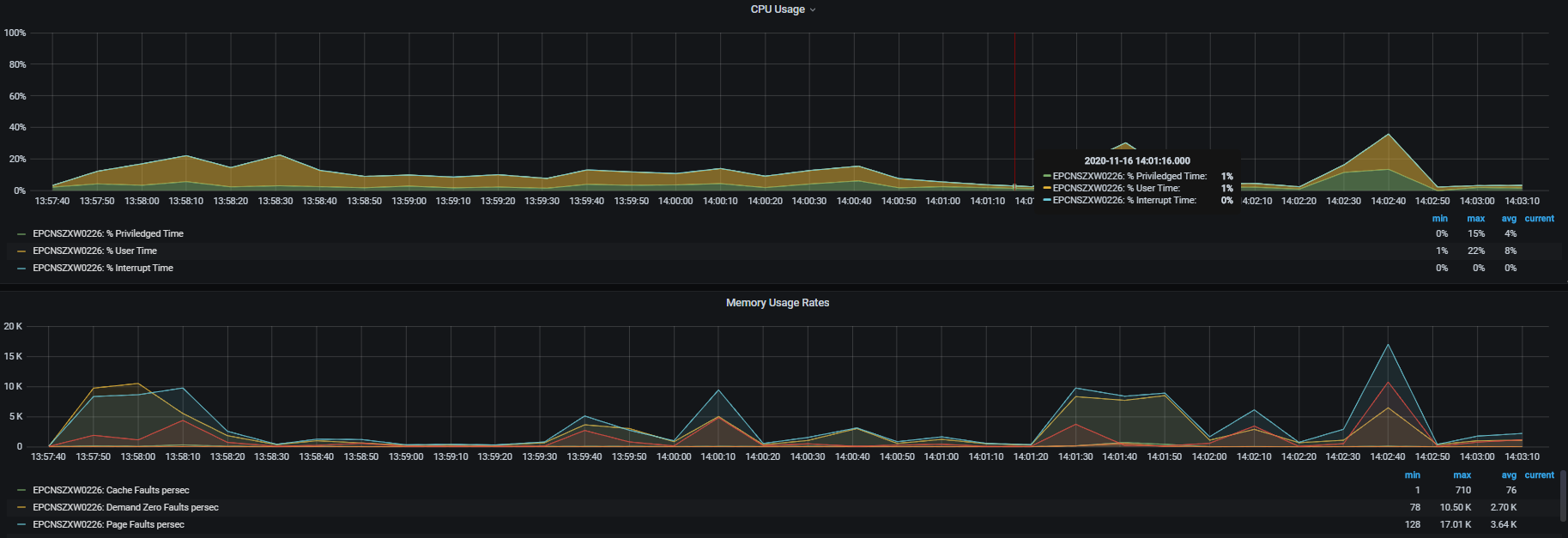
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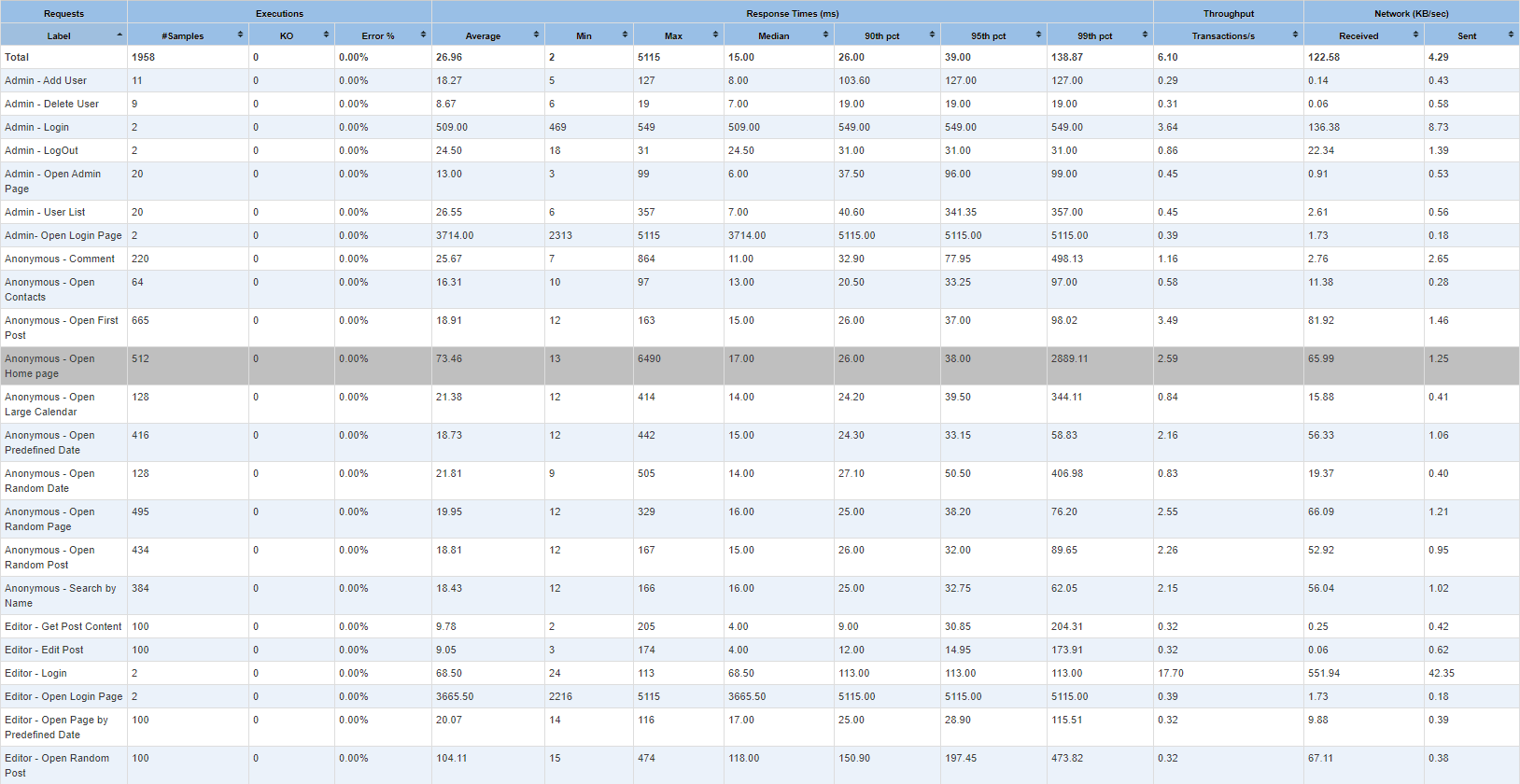
**Scaling CPU – 2 Result**

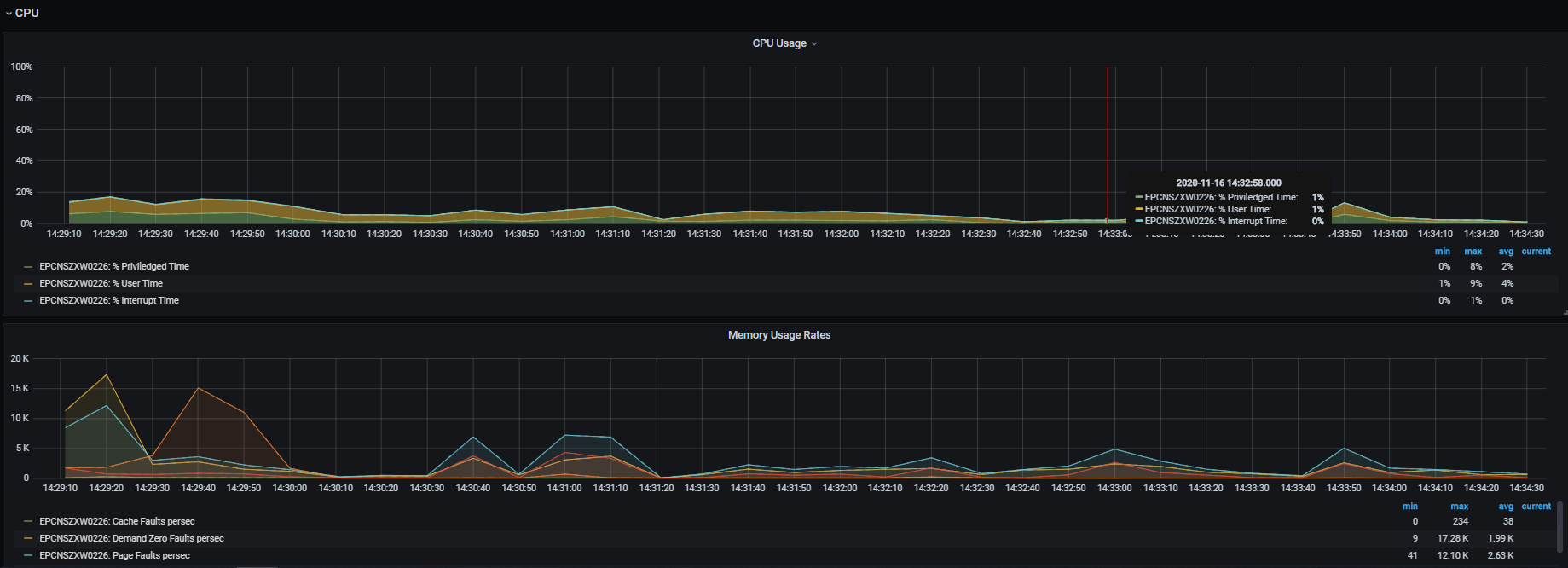
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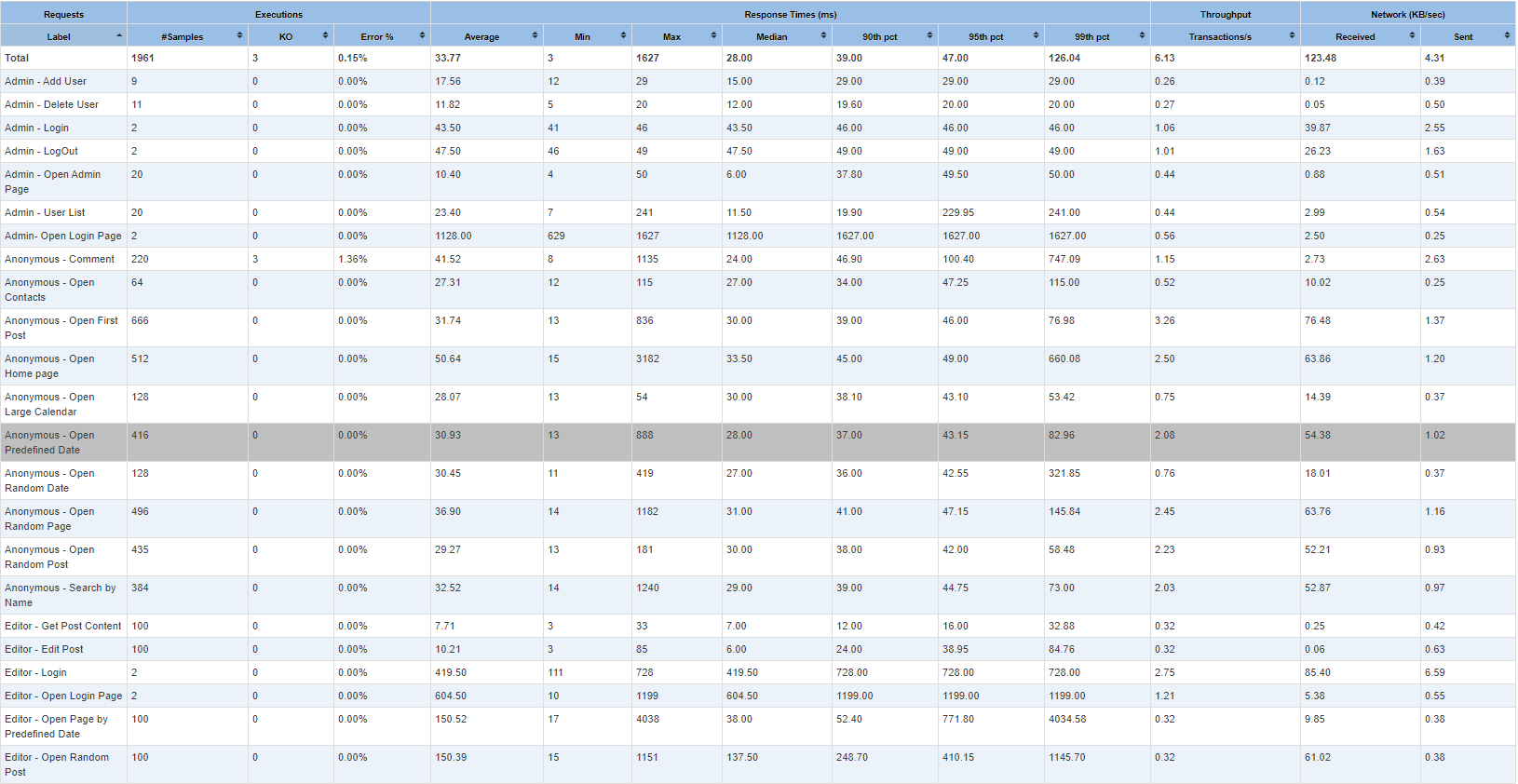
**Scaling CPU – 3 Result**

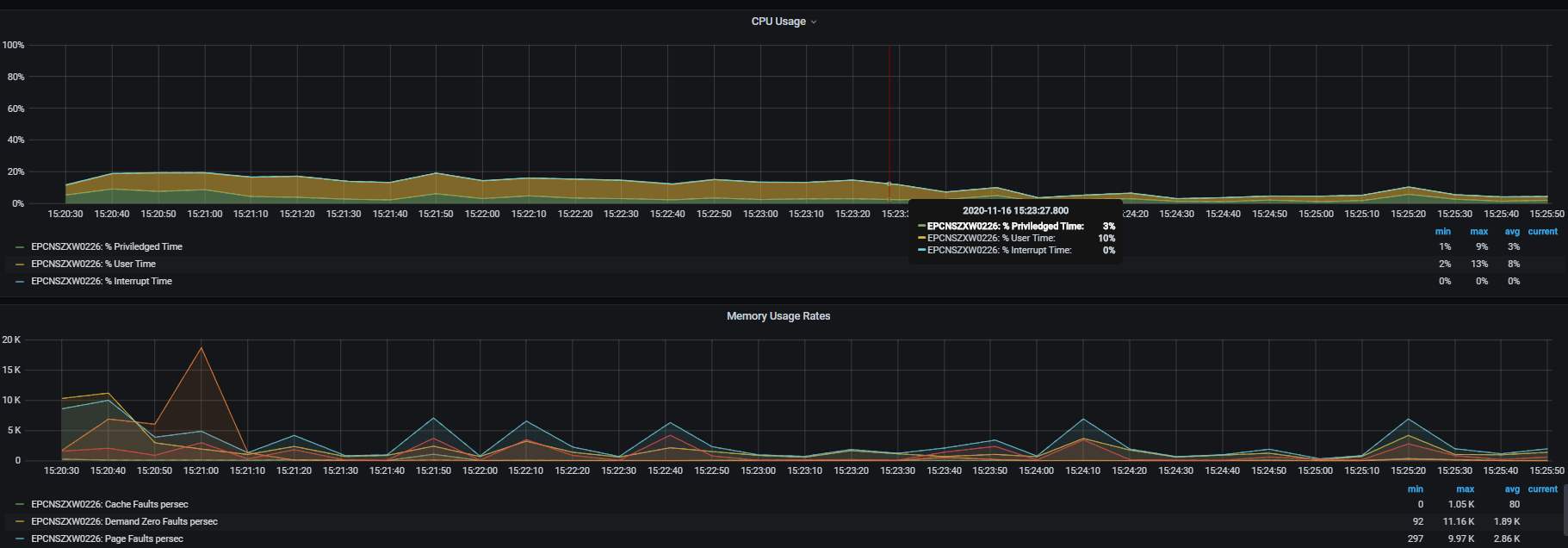
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[**https://snapshot.raintank.io/dashboard/snapshot/m2h5FjgvMKTwXW7eU7tl3yUNdxQMpUXh**](https://snapshot.raintank.io/dashboard/snapshot/m2h5FjgvMKTwXW7eU7tl3yUNdxQMpUXh)

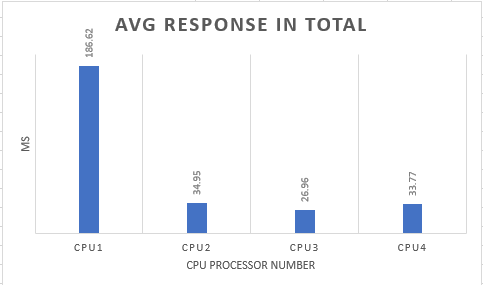
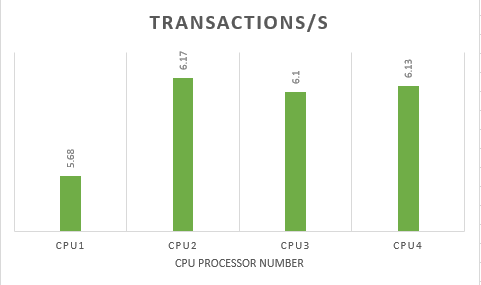
**Scaling CPU – 4 Result**

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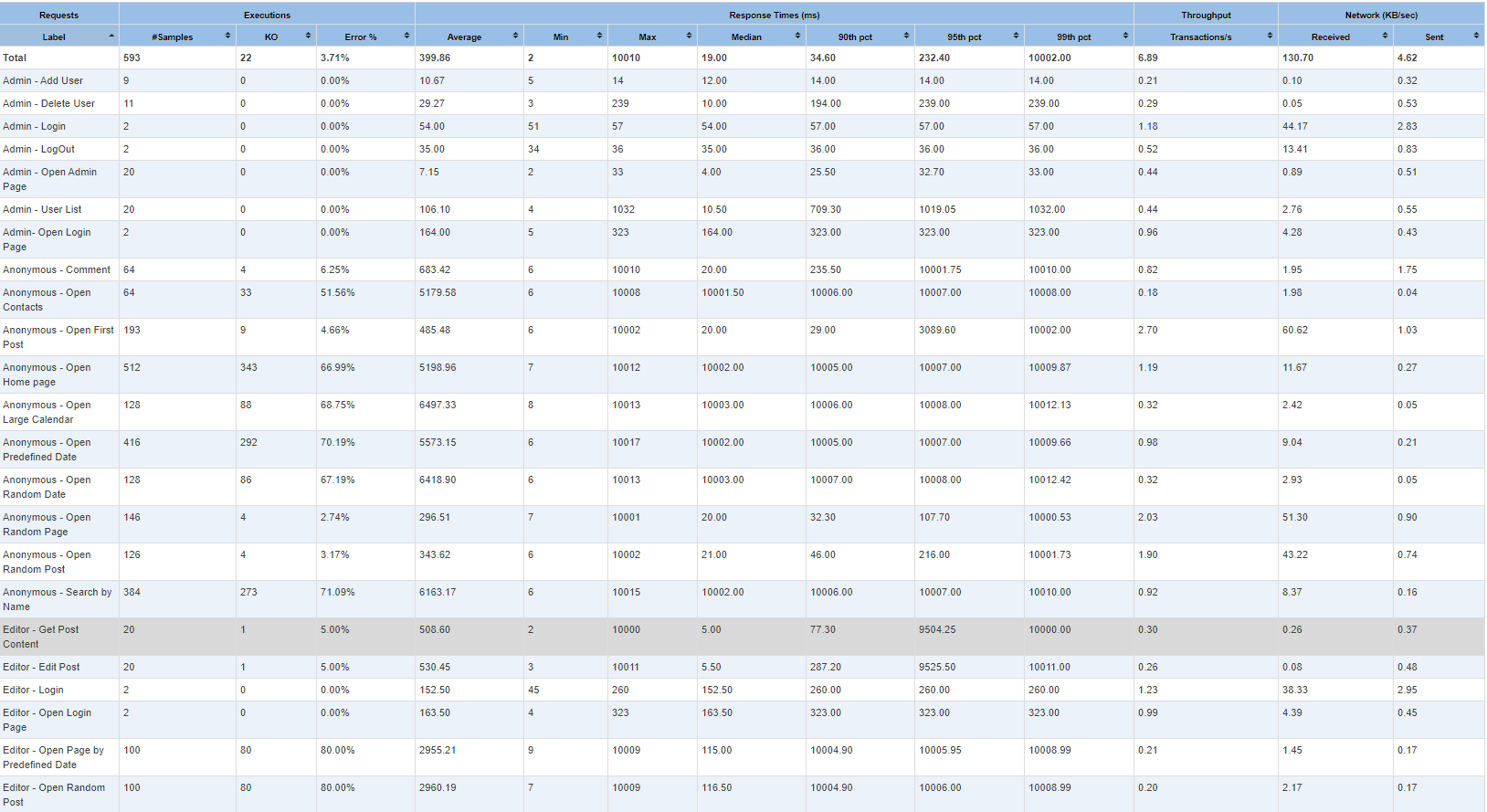
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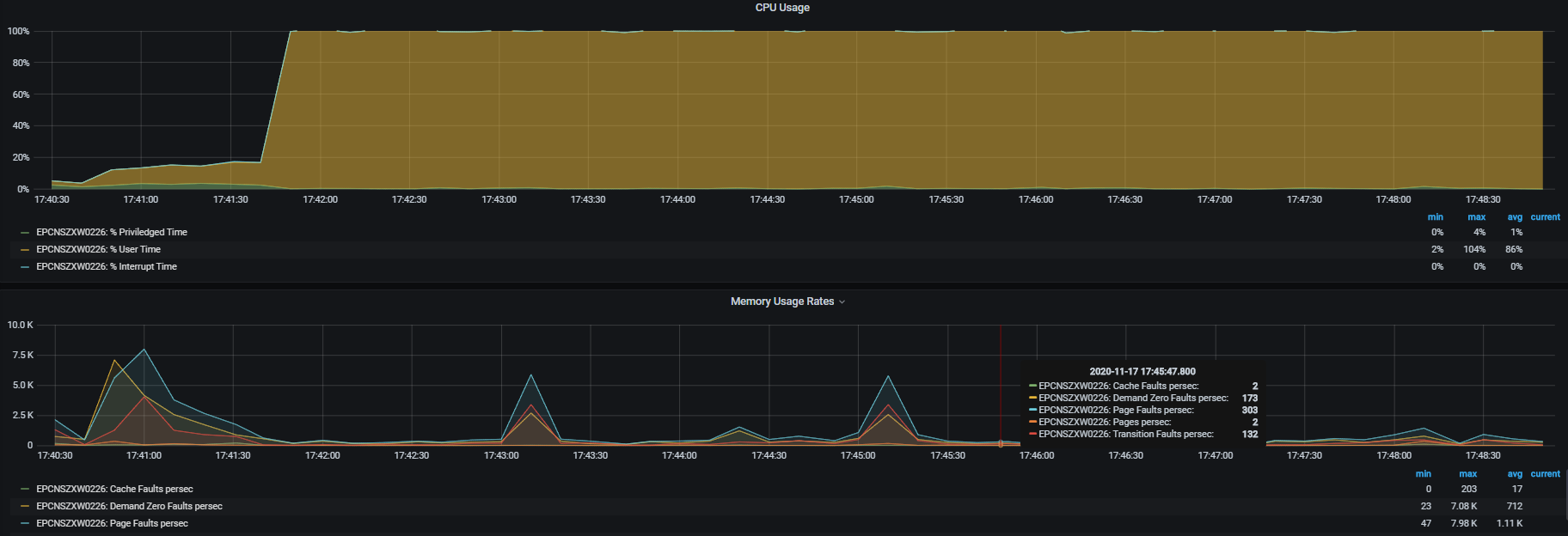
**CPU Scaling Comparison**

* Application could work properly in all the processor setting
* From above chart when CPU processor=1 the response time is high than others and throughput is lower at the same time
* There is no significant differ of the application performance during processor increase from 2-4

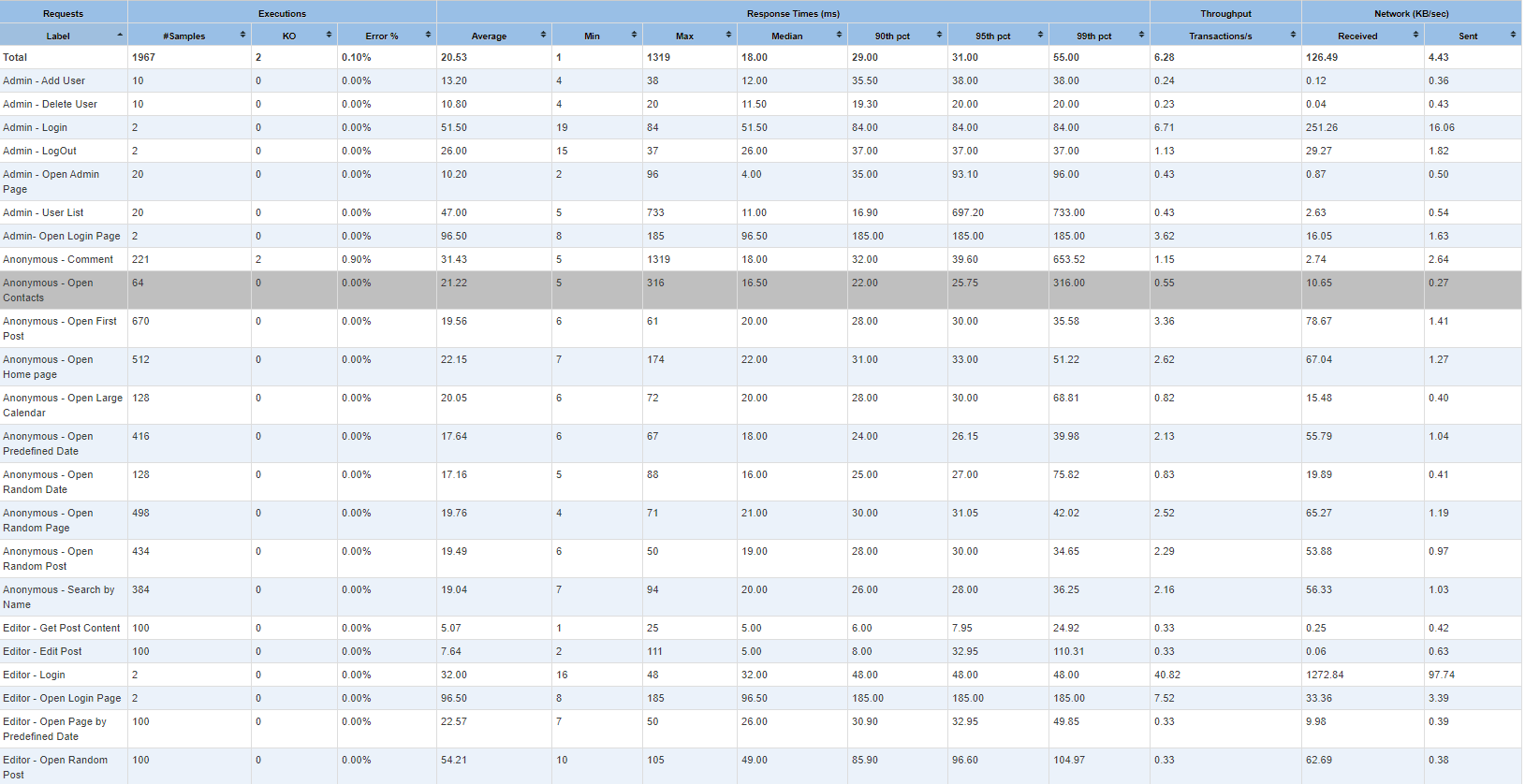
**Scaling Memory – 4G Result**

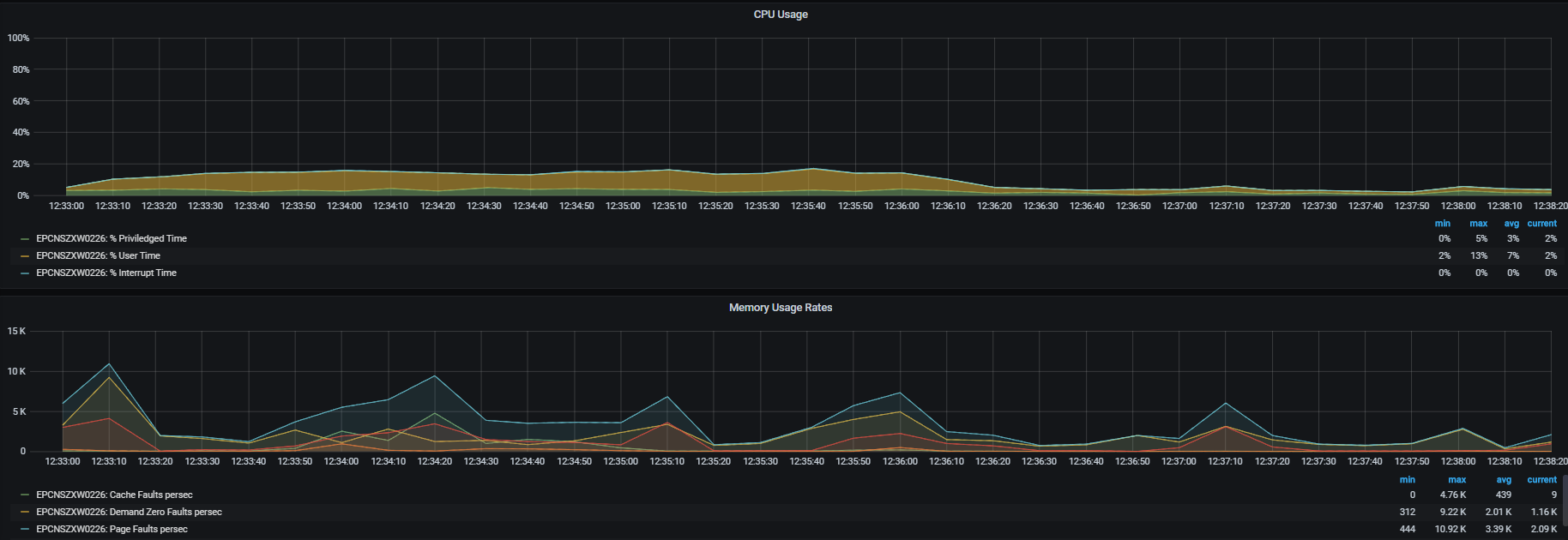
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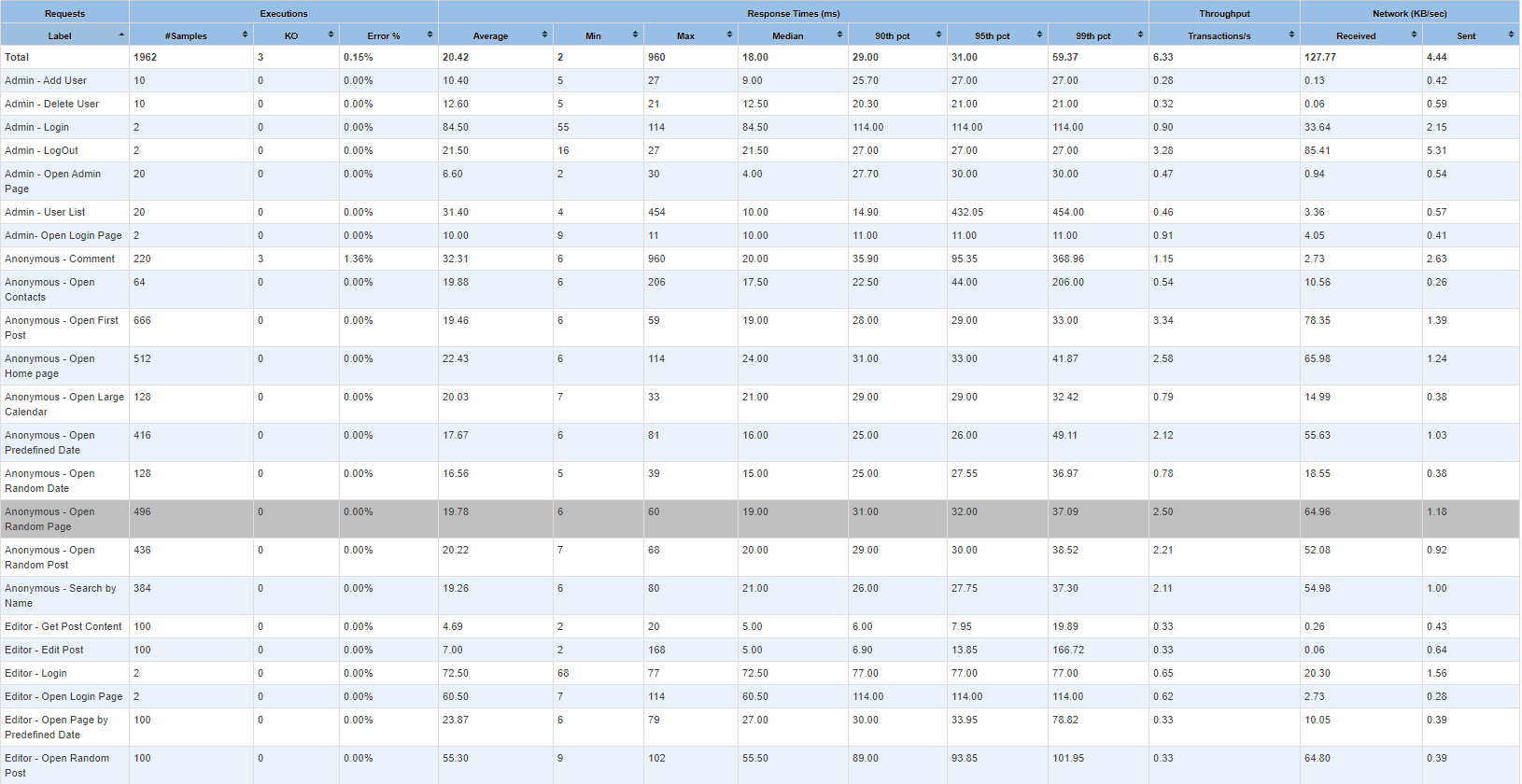
**Scaling Memory – 8G Result**

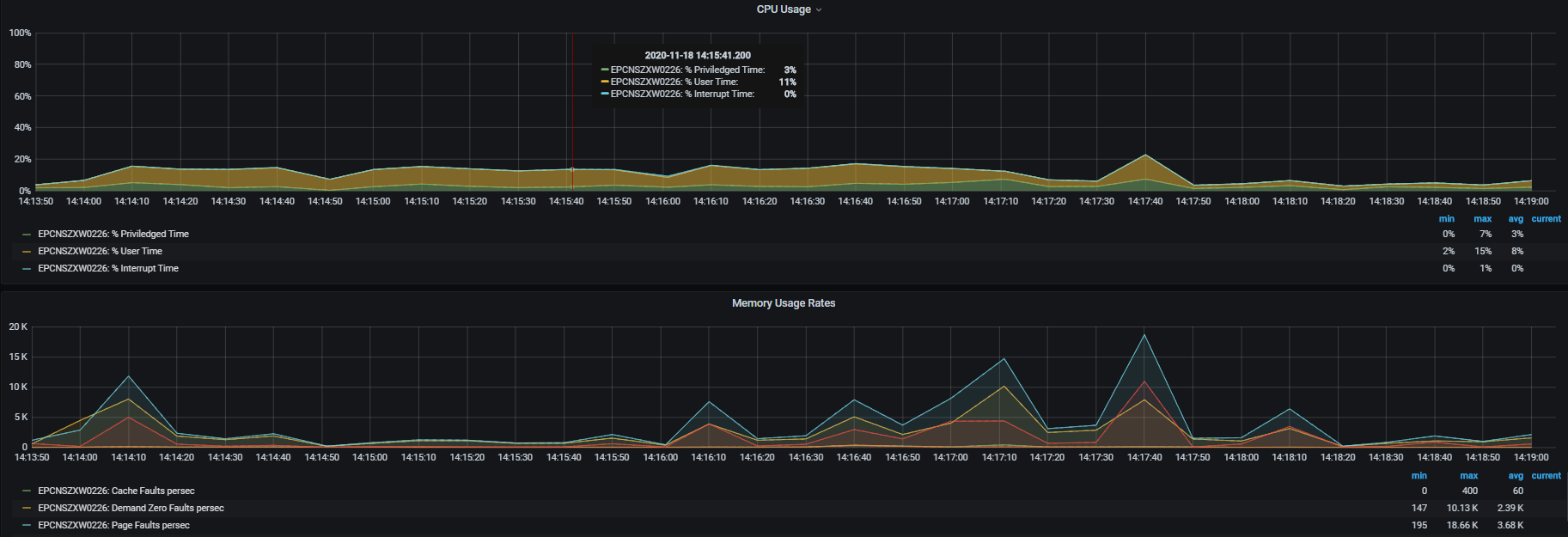
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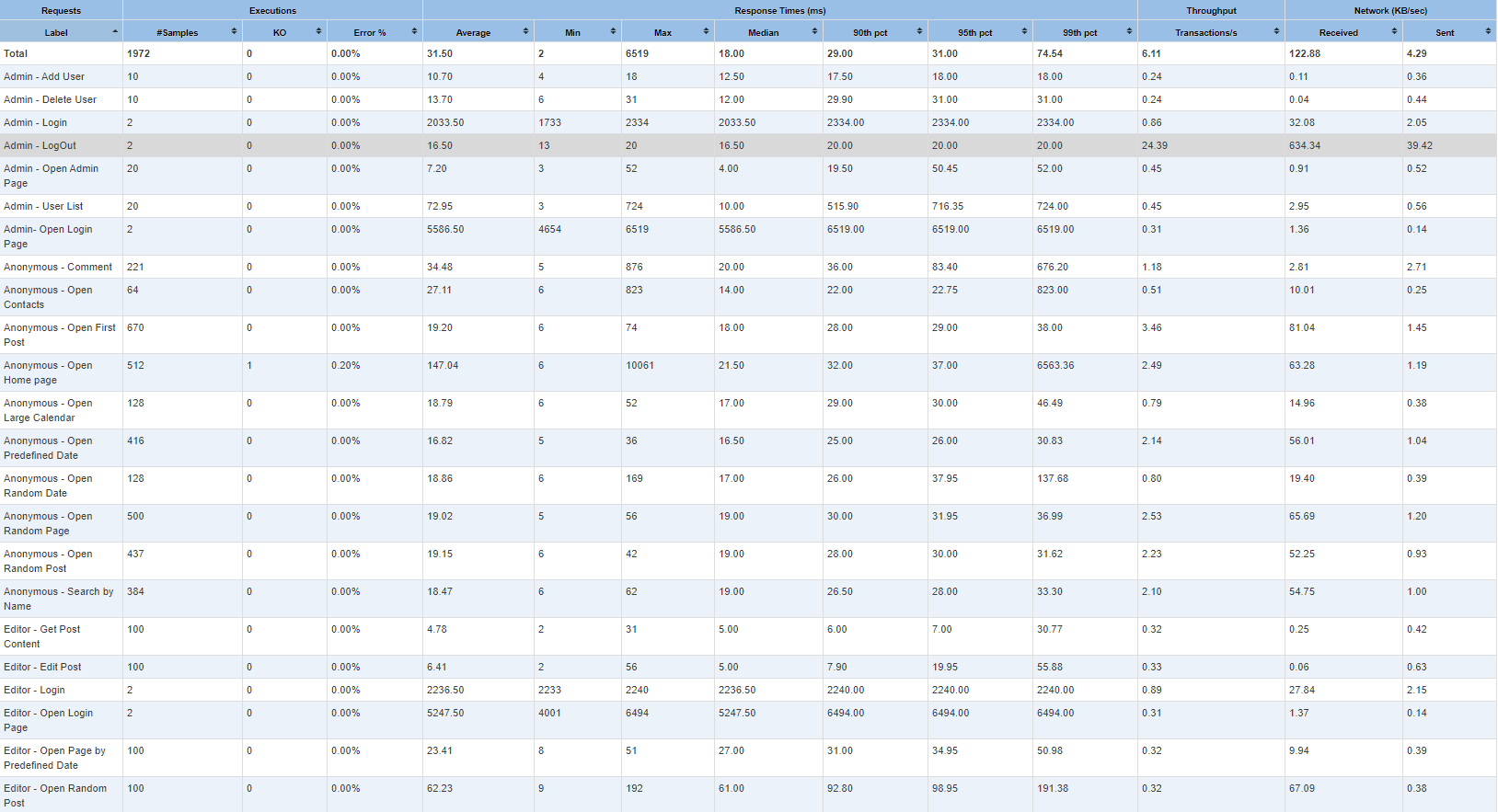
**Scaling Memory – 12G Result**

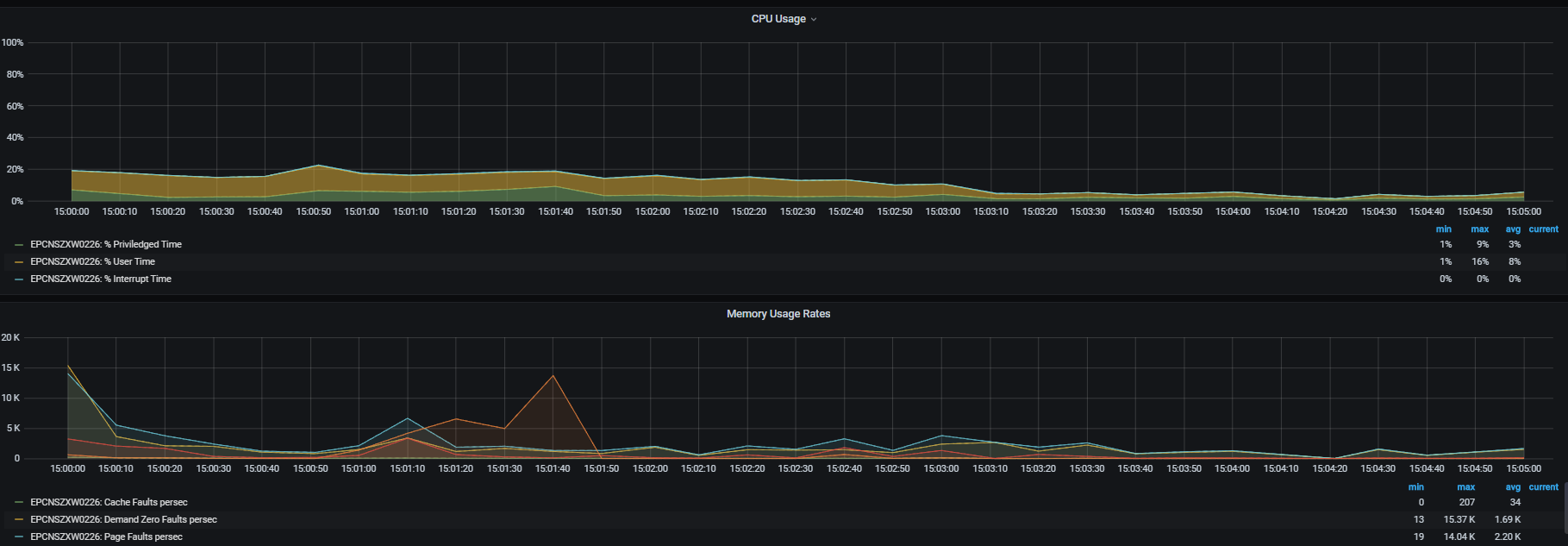




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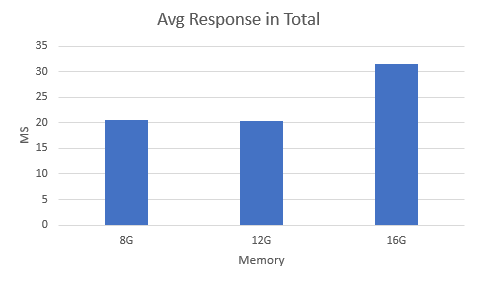
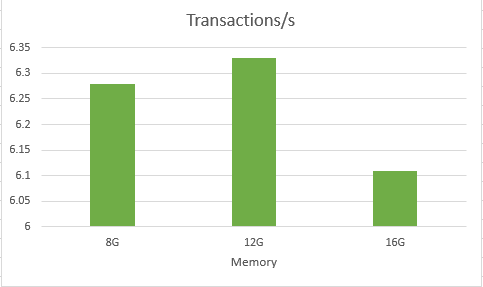
**Scaling Memory – 16G Result**

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<https://snapshot.raintank.io/dashboard/snapshot/JFDhVskbA3iqgY3zqBC1arlG58KeOb2n>

**Memory Scaling Comparison**

* 3.71% error rate when memory size = 4G, that means the application could NOT work properly. The reason is the server itself already need more than 3G to run, the left is not enough for our application.
* The application works properly start with memory size=8G.So this is should be the min size setting in memory.
* There is no significant differ of the application performance during memory size increase from 8-16G

**Best configuration suggestion: Memory=8G CPU=4**

* The application MUST work under memory more than 4G
* Performance is very similar during CPU scaling. So no need to do any setting for CPU just using the server default value should be fine.