

# Analyse détaillée des Tests JMeter

Tests de charge effectués avec Apache JMeter sur le chemin `/films\_genres\_afficher/0` sur un serveur Flask hébergé sur Azure. Quatre configurations ont été testées pour évaluer les performances et la robustesse du serveur sous différentes charges simulées.

## Configuration 10.1.5

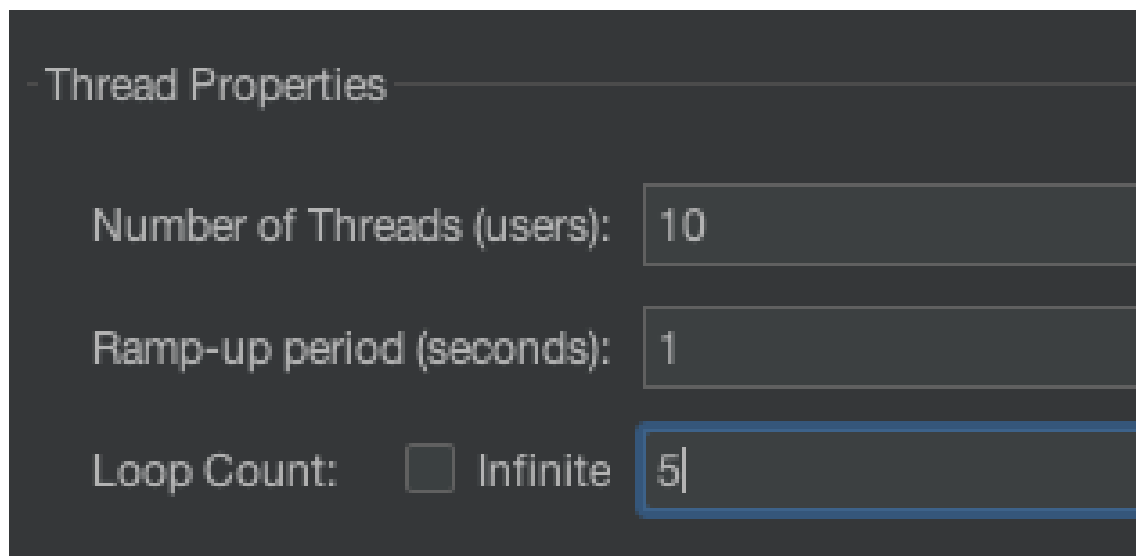
**\*\*Charge simulée :** 10 utilisateurs simultanés, 1 itération, 5 secondes de délai entre les requêtes.

### Observations

- Temps de réponse faibles (souvent < 200 ms).
- Aucune erreur constatée, tous les codes HTTP sont 200 (OK).
- Le serveur répond avec une excellente réactivité.

### Interprétation

Charge très faible, idéale pour des scénarios de test unitaires ou des charges réelles très limitées. Le serveur est parfaitement stable.



Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec
HTTP Request	50	29	21	57	8.83	0.00%	47.5/sec	1808.08
TOTAL	50	29	21	57	8.83	0.00%	47.5/sec	1808.08



1	17:14:10.612	Thread Group 1-1	HTTP Request	57	✓	38955	139	47
2	17:14:10.670	Thread Group 1-1	HTTP Request	26	✓	38955	139	26
3	17:14:10.696	Thread Group 1-1	HTTP Request	25	✓	38955	139	25
4	17:14:10.721	Thread Group 1-1	HTTP Request	25	✓	38955	139	25
5	17:14:10.715	Thread Group 1-2	HTTP Request	48	✓	38955	139	38
6	17:14:10.746	Thread Group 1-1	HTTP Request	23	✓	38955	139	23
7	17:14:10.763	Thread Group 1-2	HTTP Request	24	✓	38955	139	22
8	17:14:10.787	Thread Group 1-2	HTTP Request	23	✓	38955	139	23
9	17:14:10.810	Thread Group 1-2	HTTP Request	24	✓	38955	139	23
10	17:14:10.815	Thread Group 1-3	HTTP Request	42	✓	38955	139	33
11	17:14:10.834	Thread Group 1-2	HTTP Request	24	✓	38955	139	23
12	17:14:10.858	Thread Group 1-3	HTTP Request	21	✓	38955	139	21
13	17:14:10.879	Thread Group 1-3	HTTP Request	25	✓	38955	139	25
14	17:14:10.904	Thread Group 1-3	HTTP Request	23	✓	38955	139	23
15	17:14:10.927	Thread Group 1-3	HTTP Request	25	✓	38955	139	25
16	17:14:10.912	Thread Group 1-4	HTTP Request	43	✓	38955	139	33
17	17:14:10.955	Thread Group 1-4	HTTP Request	25	✓	38955	139	25
18	17:14:10.980	Thread Group 1-4	HTTP Request	24	✓	38955	139	24
19	17:14:11.004	Thread Group 1-4	HTTP Request	25	✓	38955	139	25
20	17:14:11.029	Thread Group 1-4	HTTP Request	27	✓	38955	139	27
21	17:14:11.013	Thread Group 1-5	HTTP Request	43	✓	38955	139	34
22	17:14:11.056	Thread Group 1-5	HTTP Request	25	✓	38955	139	25
23	17:14:11.081	Thread Group 1-5	HTTP Request	25	✓	38955	139	25
24	17:14:11.106	Thread Group 1-5	HTTP Request	24	✓	38955	139	24
25	17:14:11.130	Thread Group 1-5	HTTP Request	26	✓	38955	139	26
26	17:14:11.115	Thread Group 1-6	HTTP Request	41	✓	38955	139	32
27	17:14:11.156	Thread Group 1-6	HTTP Request	24	✓	38955	139	24
28	17:14:11.180	Thread Group 1-6	HTTP Request	22	✓	38955	139	21
29	17:14:11.202	Thread Group 1-6	HTTP Request	28	✓	38955	139	25
30	17:14:11.230	Thread Group 1-6	HTTP Request	29	✓	38955	139	28
31	17:14:11.215	Thread Group 1-7	HTTP Request	50	✓	38955	139	37
32	17:14:11.265	Thread Group 1-7	HTTP Request	26	✓	38955	139	26
33	17:14:11.291	Thread Group 1-7	HTTP Request	26	✓	38955	139	26
34	17:14:11.317	Thread Group 1-7	HTTP Request	23	✓	38955	139	23
35	17:14:11.313	Thread Group 1-8	HTTP Request	46	✓	38955	139	37
36	17:14:11.340	Thread Group 1-7	HTTP Request	26	✓	38955	139	26
37	17:14:11.359	Thread Group 1-8	HTTP Request	27	✓	38955	139	27
38	17:14:11.356	Thread Group 1-8	HTTP Request	25	✓	38955	139	25

## Configuration 50.1.10

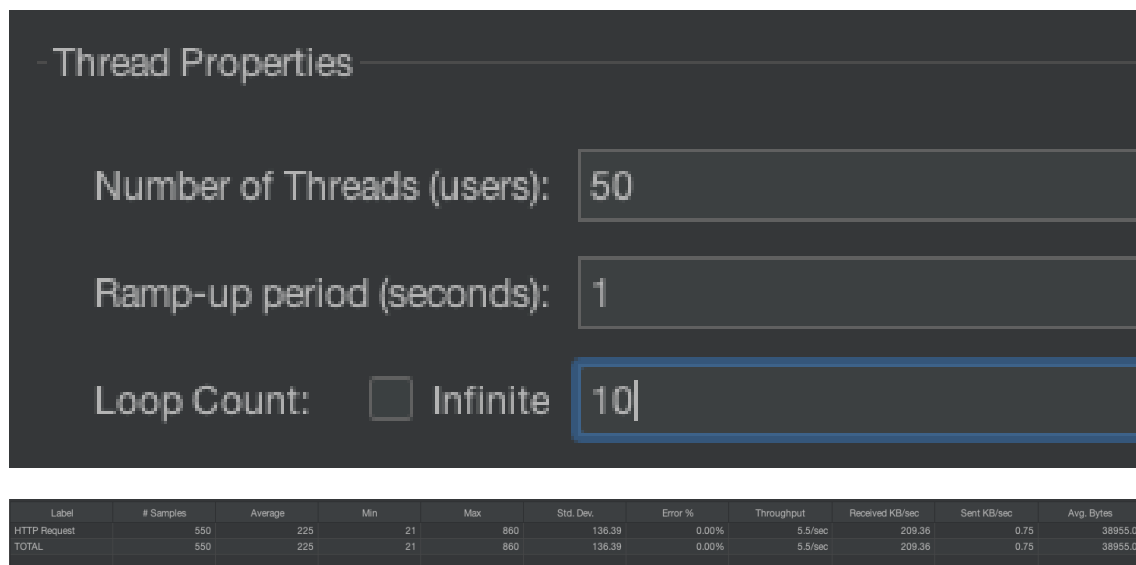
**\*\*Charge simulée :\*\* 50 utilisateurs simultanés, 1 itération, 10 secondes de délai.**

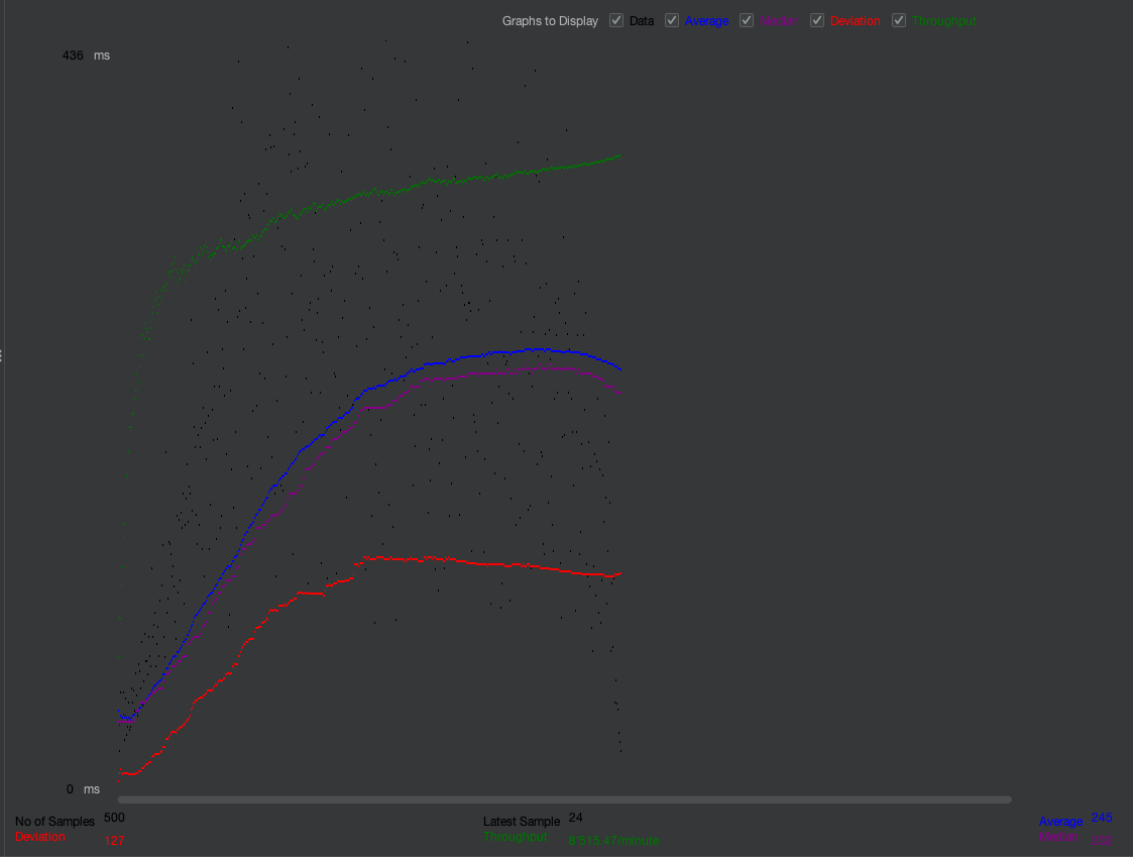
### Observations

- Temps de réponse majoritairement < 500 ms, quelques pointes détectées.
- Pas d'erreurs détectées.
- Légère montée en charge visible dans les graphes d'agrégats.

### Interprétation

Le serveur supporte bien la charge modérée. Convient pour un usage réel avec trafic modéré.





Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	17:15:47.029	Thread Group 1-1	HTTP Request	53		38955	139	43	16
2	17:15:47.054	Thread Group 1-2	HTTP Request	41		38955	139	32	9
3	17:15:47.082	Thread Group 1-1	HTTP Request	24		38955	139	24	0
4	17:15:47.074	Thread Group 1-3	HTTP Request	58		38955	139	48	10
5	17:15:47.095	Thread Group 1-2	HTTP Request	42		38955	139	42	0
6	17:15:47.107	Thread Group 1-1	HTTP Request	41		38955	139	41	0
7	17:15:47.094	Thread Group 1-4	HTTP Request	58		38955	139	49	9
8	17:15:47.132	Thread Group 1-3	HTTP Request	30		38955	139	30	0
9	17:15:47.112	Thread Group 1-5	HTTP Request	54		38955	139	43	10
10	17:15:47.137	Thread Group 1-2	HTTP Request	33		38955	139	33	0
11	17:15:47.148	Thread Group 1-1	HTTP Request	38		38955	139	35	0
12	17:15:47.134	Thread Group 1-6	HTTP Request	52		38955	139	41	9
13	17:15:47.152	Thread Group 1-4	HTTP Request	36		38955	139	36	0
14	17:15:47.162	Thread Group 1-3	HTTP Request	38		38955	139	38	0
15	17:15:47.154	Thread Group 1-7	HTTP Request	60		38955	139	49	9
16	17:15:47.166	Thread Group 1-5	HTTP Request	52		38955	139	52	0
17	17:15:47.170	Thread Group 1-2	HTTP Request	59		38955	139	59	0
18	17:15:47.186	Thread Group 1-1	HTTP Request	47		38955	139	47	0
19	17:15:47.171	Thread Group 1-8	HTTP Request	69		38955	139	59	9
20	17:15:47.186	Thread Group 1-6	HTTP Request	56		38955	139	56	0
21	17:15:47.218	Thread Group 1-5	HTTP Request	44		38955	139	44	0
22	17:15:47.194	Thread Group 1-9	HTTP Request	74		38955	139	62	11
23	17:15:47.200	Thread Group 1-3	HTTP Request	70		38955	139	70	0
24	17:15:47.214	Thread Group 1-7	HTTP Request	60		38955	139	60	0
25	17:15:47.188	Thread Group 1-4	HTTP Request	87		38955	139	86	0
26	17:15:47.233	Thread Group 1-1	HTTP Request	50		38955	139	49	0
27	17:15:47.240	Thread Group 1-8	HTTP Request	64		38955	139	63	0
28	17:15:47.212	Thread Group 1-10	HTTP Request	92		38955	139	80	9
29	17:15:47.229	Thread Group 1-2	HTTP Request	76		38955	139	75	0
30	17:15:47.242	Thread Group 1-6	HTTP Request	76		38955	139	75	0
31	17:15:47.262	Thread Group 1-5	HTTP Request	68		38955	139	68	0
32	17:15:47.254	Thread Group 1-12	HTTP Request	90		38955	139	80	10
33	17:15:47.275	Thread Group 1-4	HTTP Request	79		38955	139	79	0
34	17:15:47.283	Thread Group 1-1	HTTP Request	73		38955	139	73	0
35	17:15:47.230	Thread Group 1-11	HTTP Request	130		38955	139	120	11
36	17:15:47.274	Thread Group 1-7	HTTP Request	90		38955	139	90	0
37	17:15:47.272	Thread Group 1-13	HTTP Request	97		38955	139	86	11
38	17:15:47.270	Thread Group 1-3	HTTP Request	104		38955	139	104	0

☐ Scroll automatically? ☐ Child samples? No of Samples 500 Latest Sample 24 Average 248 Deviation 127

## Configuration 500.3.5

**\*\*Charge simulée : 500 utilisateurs, 3 itérations, 5 secondes de délai.**

### Observations

- Temps de réponse en hausse : souvent > 1000 ms.
- Pas d'erreurs HTTP, mais surcharge détectée.
- Dégradation progressive de la performance.

### Interprétation

Surcharge modérée visible. Le serveur commence à montrer ses limites en réactivité.

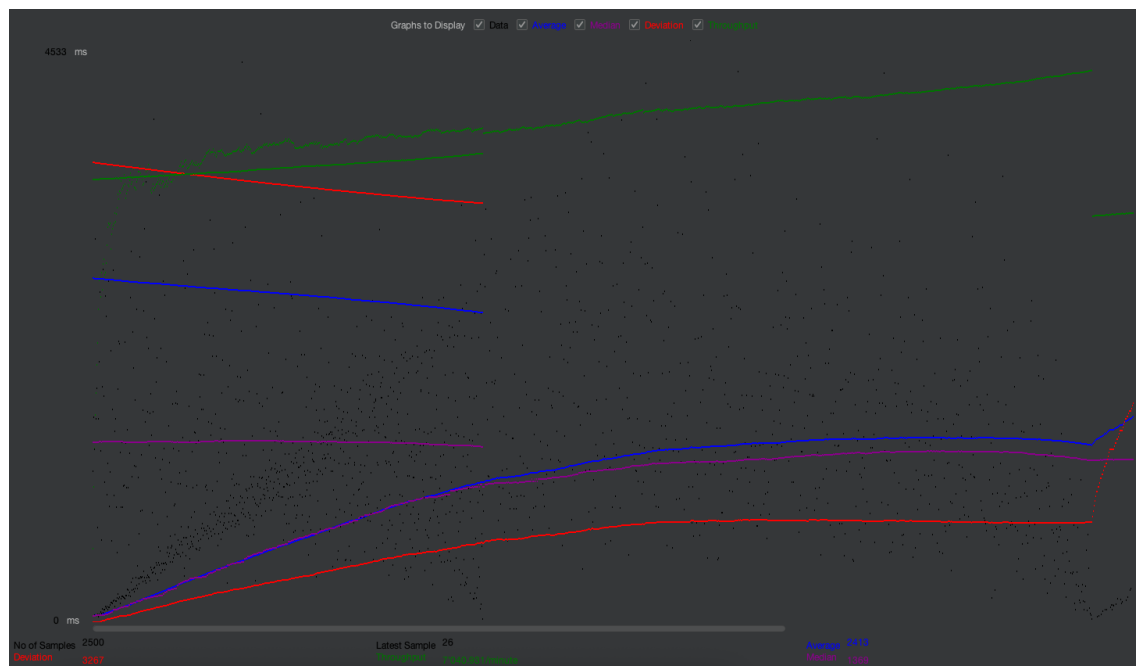
**Thread Properties**

Number of Threads (users):

Ramp-up period (seconds):

Loop Count: ☐ Infinite

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
HTTP Request	3050	2019	21	14665	3076.10	0.00%	16.6/sec	632.16	2.26	38955.9
TOTAL	3050	2019	21	14665	3076.10	0.00%	16.6/sec	632.16	2.26	38955.9



Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	17:16:52.850	Thread Group 1-1	HTTP Request	54		38955	139	45	15
2	17:16:52.856	Thread Group 1-2	HTTP Request	53		38955	139	40	9
3	17:16:52.864	Thread Group 1-3	HTTP Request	55		38955	139	45	11
4	17:16:52.869	Thread Group 1-4	HTTP Request	58		38955	139	46	9
5	17:16:52.877	Thread Group 1-5	HTTP Request	60		38955	139	48	10
6	17:16:52.883	Thread Group 1-6	HTTP Request	60		38955	139	48	10
7	17:16:52.889	Thread Group 1-7	HTTP Request	61		38955	139	49	10
8	17:16:52.904	Thread Group 1-1	HTTP Request	48		38955	139	46	0
9	17:16:52.901	Thread Group 1-6	HTTP Request	54		38955	139	55	9
10	17:16:52.909	Thread Group 1-2	HTTP Request	57		38955	139	56	0
11	17:16:52.904	Thread Group 1-10	HTTP Request	81		38955	139	71	11
12	17:16:52.919	Thread Group 1-3	HTTP Request	68		38955	139	68	0
13	17:16:52.897	Thread Group 1-9	HTTP Request	109		38955	139	99	11
14	17:16:52.927	Thread Group 1-4	HTTP Request	79		38955	139	78	0
15	17:16:52.914	Thread Group 1-11	HTTP Request	101		38955	139	91	9
16	17:16:52.931	Thread Group 1-14	HTTP Request	103		38955	139	91	10
17	17:16:52.920	Thread Group 1-12	HTTP Request	124		38955	139	113	10
18	17:16:52.937	Thread Group 1-5	HTTP Request	113		38955	139	113	0
19	17:16:52.926	Thread Group 1-13	HTTP Request	125		38955	139	109	9
20	17:16:52.952	Thread Group 1-1	HTTP Request	100		38955	139	100	0
21	17:16:52.943	Thread Group 1-6	HTTP Request	117		38955	139	117	0
22	17:16:52.955	Thread Group 1-8	HTTP Request	116		38955	139	114	0
23	17:16:52.941	Thread Group 1-16	HTTP Request	139		38955	139	128	11
24	17:16:52.949	Thread Group 1-17	HTTP Request	158		38955	139	146	10
25	17:16:52.950	Thread Group 1-7	HTTP Request	157		38955	139	157	0
26	17:16:52.966	Thread Group 1-20	HTTP Request	148		38955	139	136	9
27	17:16:52.956	Thread Group 1-18	HTTP Request	166		38955	139	157	10
28	17:16:52.958	Thread Group 1-19	HTTP Request	172		38955	139	160	9
29	17:16:53.006	Thread Group 1-9	HTTP Request	127		38955	139	127	0
30	17:16:52.983	Thread Group 1-23	HTTP Request	166		38955	139	155	9
31	17:16:52.985	Thread Group 1-10	HTTP Request	168		38955	139	166	0
32	17:16:52.966	Thread Group 1-2	HTTP Request	192		38955	139	191	0
33	17:16:52.933	Thread Group 1-15	HTTP Request	225		38955	139	216	10
34	17:16:52.987	Thread Group 1-3	HTTP Request	184		38955	139	184	0
35	17:16:52.978	Thread Group 1-22	HTTP Request	198		38955	139	184	0
36	17:16:53.034	Thread Group 1-14	HTTP Request	151		38955	139	151	0
37	17:16:52.999	Thread Group 1-26	HTTP Request	186		38955	139	177	8
38	17:16:52.997	Thread Group 1-25	HTTP Request	204		38955	139	192	9

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☐ Child samples?

No of Samples: 2500

Latest Sample: 26

Average: 20.0

Deviation: 5.67

## Configuration 500.5.30

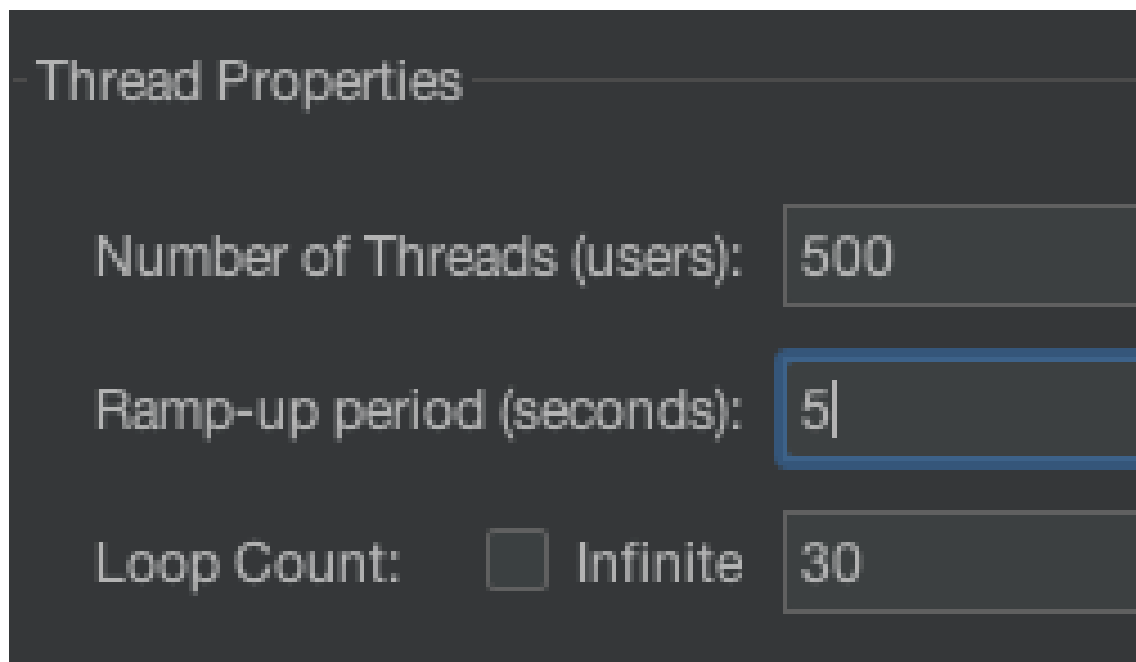
**\*\*Charge simulée : \*\*** 500 utilisateurs, 5 itérations, 30 secondes de délai.

### Observations

- Temps de réponse très élevé (> 2000 ms), instabilité apparente.
- Erreurs visibles : timeout, socket closed.
- Saturation du serveur en cours de test.

### Interprétation

La limite de la plateforme est atteinte. Ce niveau de charge nécessite des optimisations ou du scaling.



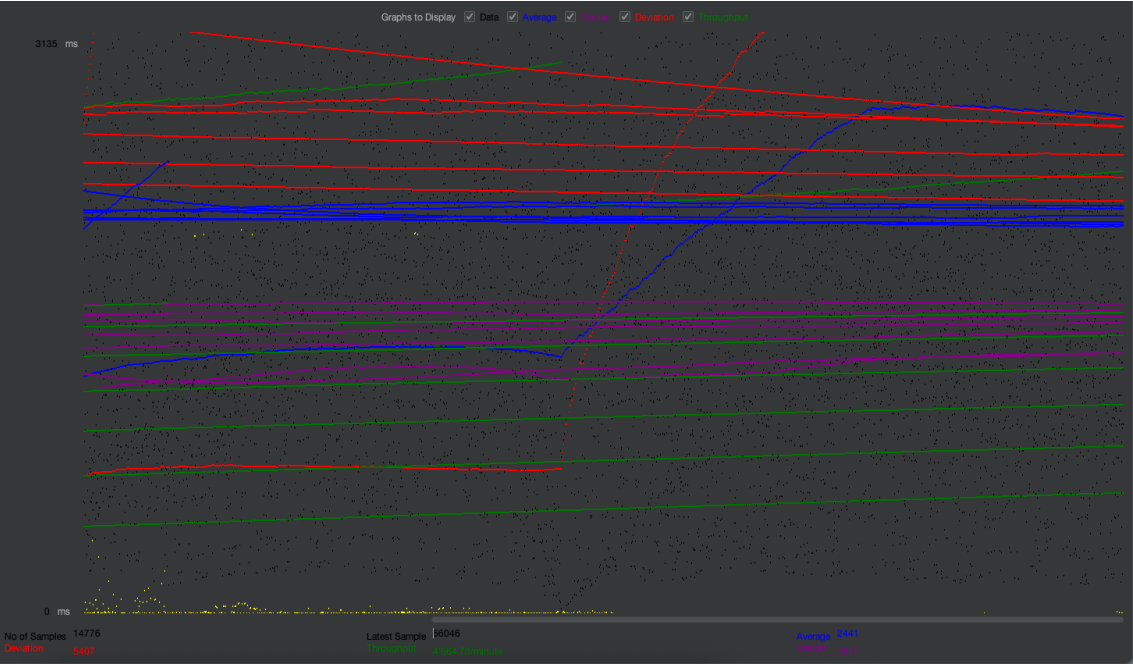
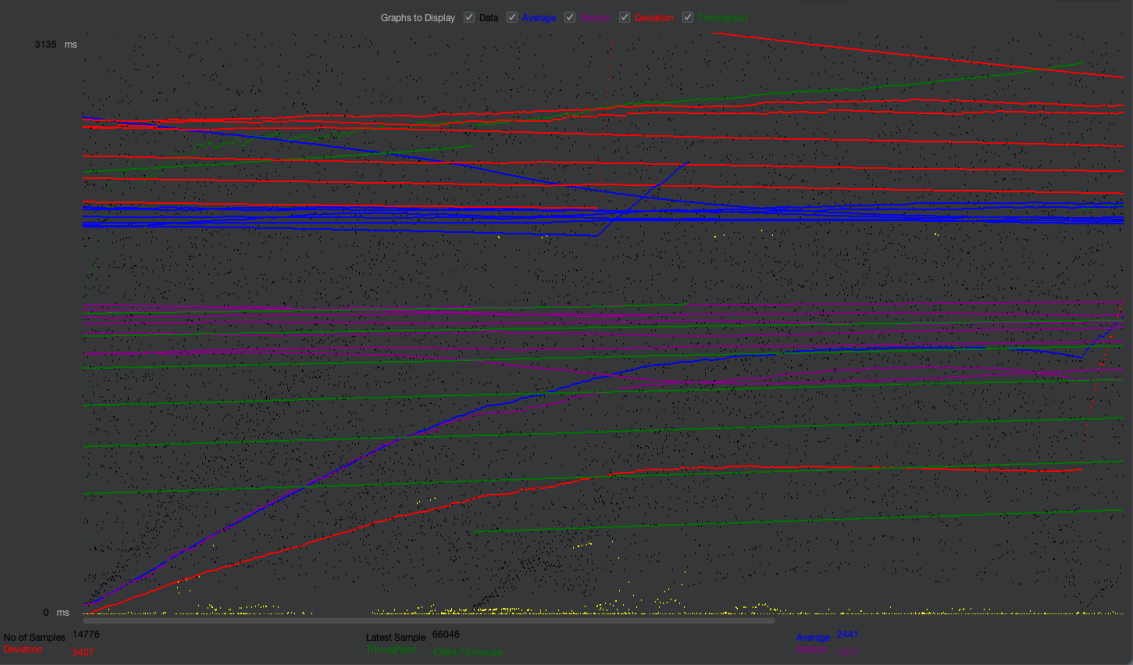
Thread Properties

Number of Threads (users): 500

Ramp-up period (seconds): 5

Loop Count: ☐ Infinite 30

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/sec	Sent KB/sec	Avg. Bytes
HTTP Request	15326	2361	0	66166	5325.51	7.32%	43.5/sec	1341.13	5.47	31568.0
TOTAL	15326	2361	0	66166	5325.51	7.32%	43.5/sec	1341.13	5.47	31568.0





Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
1	17:16:52.850	Thread Group 1-1	HTTP Request	54	✓	38955	139	45	15
2	17:16:52.856	Thread Group 1-2	HTTP Request	53	✓	38955	139	40	9
3	17:16:52.864	Thread Group 1-3	HTTP Request	55	✓	38955	139	45	11
4	17:16:52.869	Thread Group 1-4	HTTP Request	58	✓	38955	139	46	9
5	17:16:52.877	Thread Group 1-5	HTTP Request	60	✓	38955	139	48	10
6	17:16:52.883	Thread Group 1-6	HTTP Request	60	✓	38955	139	48	12
7	17:16:52.889	Thread Group 1-7	HTTP Request	61	✓	38955	139	49	10
8	17:16:52.904	Thread Group 1-1	HTTP Request	48	✓	38955	139	46	0
9	17:16:52.891	Thread Group 1-8	HTTP Request	64	✓	38955	139	55	9
10	17:16:52.909	Thread Group 1-2	HTTP Request	57	✓	38955	139	56	0
11	17:16:52.904	Thread Group 1-10	HTTP Request	81	✓	38955	139	71	11
12	17:16:52.919	Thread Group 1-3	HTTP Request	68	✓	38955	139	68	0
13	17:16:52.897	Thread Group 1-9	HTTP Request	109	✓	38955	139	99	11
14	17:16:52.927	Thread Group 1-4	HTTP Request	79	✓	38955	139	78	0
15	17:16:52.914	Thread Group 1-11	HTTP Request	101	✓	38955	139	91	9
16	17:16:52.931	Thread Group 1-14	HTTP Request	103	✓	38955	139	91	10
17	17:16:52.920	Thread Group 1-12	HTTP Request	124	✓	38955	139	113	10
18	17:16:52.937	Thread Group 1-5	HTTP Request	113	✓	38955	139	113	0
19	17:16:52.926	Thread Group 1-13	HTTP Request	125	✓	38955	139	109	9
20	17:16:52.952	Thread Group 1-1	HTTP Request	100	✓	38955	139	100	0
21	17:16:52.943	Thread Group 1-6	HTTP Request	117	✓	38955	139	117	0
22	17:16:52.955	Thread Group 1-8	HTTP Request	116	✓	38955	139	114	0
23	17:16:52.941	Thread Group 1-16	HTTP Request	139	✓	38955	139	128	11
24	17:16:52.949	Thread Group 1-17	HTTP Request	158	✓	38955	139	146	10
25	17:16:52.950	Thread Group 1-7	HTTP Request	157	✓	38955	139	157	0
26	17:16:52.966	Thread Group 1-20	HTTP Request	148	✓	38955	139	136	9
27	17:16:52.956	Thread Group 1-18	HTTP Request	166	✓	38955	139	157	10
28	17:16:52.958	Thread Group 1-19	HTTP Request	172	✓	38955	139	160	9
29	17:16:53.006	Thread Group 1-9	HTTP Request	127	✓	38955	139	127	0
30	17:16:52.983	Thread Group 1-23	HTTP Request	166	✓	38955	139	155	9
31	17:16:52.985	Thread Group 1-10	HTTP Request	168	✓	38955	139	166	0
32	17:16:52.966	Thread Group 1-2	HTTP Request	192	✓	38955	139	191	0
33	17:16:52.933	Thread Group 1-15	HTTP Request	225	✓	38955	139	216	10
34	17:16:52.987	Thread Group 1-3	HTTP Request	184	✓	38955	139	184	0
35	17:16:52.978	Thread Group 1-22	HTTP Request	196	✓	38955	139	184	9
36	17:16:53.034	Thread Group 1-14	HTTP Request	151	✓	38955	139	151	0
37	17:16:52.999	Thread Group 1-26	HTTP Request	186	✓	38955	139	177	8
38	17:16:52.997	Thread Group 1-25	HTTP Request	204	✓	38955	139	192	9
<div><input type="checkbox"/> Scroll automatically? <input type="checkbox"/> Child samples?</div> <div>No of Samples: 14776    Latest Sample: 66046    Average: 5491    Deviation: 5407</div>									