```
 1 /Users/yisheng/Developer/py/venv3.7/bin/python3 /Users/
   yisheng/Developer/Github/AnswerTea/A2/manager_UI/run.py
 2  * Serving Flask app "app" (lazy loading)
 3  * Environment: production
 4    WARNING: Do not use the development server in a
   production environment.
 5    Use a production WSGI server instead.
 6  * Debug mode: on
 7  * Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
 8  * Restarting with stat
 9  * Debugger is active!
10  * Debugger PIN: 286-991-927
11 127.0.0.1 - - [16/Mar/2019 13:55:48] "GET / HTTP/1.1" 200 -
12 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
13 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
14 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
15 127.0.0.1 - - [16/Mar/2019 13:55:51] "GET /ec2_worker? HTTP
   /1.1" 200 -
16 127.0.0.1 - - [16/Mar/2019 13:56:52] "POST /
   manage_worker_pool HTTP/1.1" 302 -
17 2019-03-16 17:56:52.743957:
18 127.0.0.1 - - [16/Mar/2019 13:56:53] "GET /ec2_worker HTTP/
   1.1" 200 -
19 average load: 30.34
20 max_threshold: 50
21 min_threshold:  30
22 instance number: 1
23 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
24 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
25 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
26 2019-03-16 17:57:54.314685:
27 average load: 29.67
28 max_threshold: 50
29 min_threshold:  30
30 instance number: 1
31 minus_instance_num: 0
32 127.0.0.1 - - [16/Mar/2019 13:57:54] "POST /
   manage_worker_pool HTTP/1.1" 302 -
```

```
33 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
34 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
35 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
36 127.0.0.1 - - [16/Mar/2019 13:57:54] "GET /ec2_worker HTTP/
   1.1" 200 -
37 2019-03-16 17:58:56.056576:
38 average load: 30.17
39 max_threshold: 50
40 min_threshold:  30
41 instance number: 1
42 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
43 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
44 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
45 127.0.0.1 - - [16/Mar/2019 13:58:56] "POST /
   manage_worker_pool HTTP/1.1" 302 -
46 127.0.0.1 - - [16/Mar/2019 13:58:56] "GET /ec2_worker HTTP/
   1.1" 200 -
47 2019-03-16 17:59:57.542332:
48 average load: 44.17
49 max_threshold: 50
50 min_threshold:  30
51 instance number: 1
52 127.0.0.1 - - [16/Mar/2019 13:59:57] "POST /
   manage_worker_pool HTTP/1.1" 302 -
53 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
54 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
55 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
56 127.0.0.1 - - [16/Mar/2019 13:59:58] "GET /ec2_worker HTTP/
   1.1" 200 -
57 2019-03-16 18:00:58.962912:
58 average load: 48.5
59 max_threshold: 50
```

```
60 min_threshold:  30
61 instance number: 1
62 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
63 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
64 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
65 127.0.0.1 - - [16/Mar/2019 14:00:58] "POST /
   manage_worker_pool HTTP/1.1" 302 -
66 127.0.0.1 - - [16/Mar/2019 14:00:59] "GET /ec2_worker HTTP
   /1.1" 200 -
67 2019-03-16 18:02:00.534826:
68 average load: 35.33
69 max_threshold: 50
70 min_threshold:  30
71 instance number: 1
72 127.0.0.1 - - [16/Mar/2019 14:02:00] "POST /
   manage_worker_pool HTTP/1.1" 302 -
73 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
74 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
75 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
76 127.0.0.1 - - [16/Mar/2019 14:02:00] "GET /ec2_worker HTTP
   /1.1" 200 -
77 2019-03-16 18:03:02.090514:
78 average load: 22.33
79 max_threshold: 50
80 min_threshold:  30
81 instance number: 1
82 minus_instance_num: 0
83 127.0.0.1 - - [16/Mar/2019 14:03:02] "POST /
   manage_worker_pool HTTP/1.1" 302 -
84 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   ece1779_a2_user'}]
85 i-0dc12a5044d7b079c ami-09655c1332fdc8329
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
86 i-07e1d8174c6af91af ami-011ca59f929d7842d
   ece1779_winter2019 [{'Key': 'Name', 'Value': '
   a2_additional_workers'}]
```

```
 87 127.0.0.1 - - [16/Mar/2019 14:03:02] "GET /ec2_worker HTTP
    /1.1" 200 -
 88 2019-03-16 18:04:03.602701:
 89 average load: 43.67
 90 max_threshold: 50
 91 min_threshold:  30
 92 instance number: 1
 93 127.0.0.1 - - [16/Mar/2019 14:04:03] "POST /
    manage_worker_pool HTTP/1.1" 302 -
 94 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
 95 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
 96 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
 97 127.0.0.1 - - [16/Mar/2019 14:04:04] "GET /ec2_worker HTTP
    /1.1" 200 -
 98  * Detected change in '/Users/yisheng/Developer/Github/
    AnswerTea/A2/manager_UI/app/workers.py', reloading
 99  * Restarting with stat
100  * Debugger is active!
101  * Debugger PIN: 286-991-927
102 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
103 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
104 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
105 127.0.0.1 - - [16/Mar/2019 14:04:15] "GET /ec2_worker HTTP
    /1.1" 200 -
106  * Detected change in '/Users/yisheng/Developer/Github/
    AnswerTea/A2/manager_UI/app/workers.py', reloading
107  * Restarting with stat
108  * Debugger is active!
109  * Debugger PIN: 286-991-927
110 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
111 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
112 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
```

```
113 127.0.0.1 - - [16/Mar/2019 14:04:57] "GET /ec2_worker HTTP
    /1.1" 200 -
114 127.0.0.1 - - [16/Mar/2019 14:05:58] "POST /
    manage_worker_pool HTTP/1.1" 302 -
115 127.0.0.1 - - [16/Mar/2019 14:05:59] "GET /ec2_worker HTTP
    /1.1" 200 -
116 2019-03-16 18:05:58.978945:
117 average load: 32.33
118 cpu_stats_1: [32.33]
119 max_threshold: 50
120 min_threshold:  30
121 instance number: 1
122 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
123 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
124 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
125 2019-03-16 18:07:00.660934:
126 average load: 31.8
127 cpu_stats_1: [31.8]
128 max_threshold: 50
129 min_threshold:  30
130 instance number: 1
131 127.0.0.1 - - [16/Mar/2019 14:07:00] "POST /
    manage_worker_pool HTTP/1.1" 302 -
132 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
133 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
134 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
135 127.0.0.1 - - [16/Mar/2019 14:07:01] "GET /ec2_worker HTTP
    /1.1" 200 -
136 2019-03-16 18:08:02.254538:
137 average load: 45.93
138 cpu_stats_1: [45.93]
139 max_threshold: 50
140 min_threshold:  30
141 instance number: 1
142 127.0.0.1 - - [16/Mar/2019 14:08:02] "POST /
    manage_worker_pool HTTP/1.1" 302 -
143 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
```

```
143 ece1779_a2_user'}]
144 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
145 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
146 127.0.0.1 - - [16/Mar/2019 14:08:02] "GET /ec2_worker HTTP
    /1.1" 200 -
147 2019-03-16 18:09:04.117914:
148 average load: 31.17
149 cpu_stats_1: [31.17]
150 max_threshold: 50
151 min_threshold:  30
152 instance number: 1
153 127.0.0.1 - - [16/Mar/2019 14:09:04] "POST /
    manage_worker_pool HTTP/1.1" 302 -
154 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
155 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
156 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
157 127.0.0.1 - - [16/Mar/2019 14:09:04] "GET /ec2_worker HTTP
    /1.1" 200 -
158 2019-03-16 18:10:05.735275:
159 average load: 51.67
160 cpu_stats_1: [51.67]
161 max_threshold: 50
162 min_threshold:  30
163 instance number: 1
164 add_instance_num: 2
165 2019-03-16 18:11:06.109337:
166 127.0.0.1 - - [16/Mar/2019 14:11:06] "POST /
    manage_worker_pool HTTP/1.1" 302 -
167 average load: 42.0
168 127.0.0.1 - - [16/Mar/2019 14:11:06] "GET /ec2_worker HTTP
    /1.1" 200 -
169 cpu_stats_1: [42.0]
170 max_threshold: 50
171 min_threshold:  30
172 instance number: 3
173 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
174 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
```

```
174 a2_additional_workers'}]
175 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
176 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
177 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
178 2019-03-16 18:12:08.054893:
179 average load: 37.63
180 cpu_stats_1: [37.63]
181 max_threshold: 50
182 min_threshold:  30
183 instance number: 3
184 127.0.0.1 - - [16/Mar/2019 14:12:08] "POST /
    manage_worker_pool HTTP/1.1" 302 -
185 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
186 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
187 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
188 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
189 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
190 127.0.0.1 - - [16/Mar/2019 14:12:08] "GET /ec2_worker HTTP
    /1.1" 200 -
191 2019-03-16 18:13:10.127523:
192 average load: 39.556666666666665
193 cpu_stats_1: [20.0, 42.0, 56.67]
194 max_threshold: 50
195 min_threshold:  30
196 instance number: 3
197 127.0.0.1 - - [16/Mar/2019 14:13:10] "POST /
    manage_worker_pool HTTP/1.1" 302 -
198 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
199 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
200 i-07e1d8174c6af91af ami-011ca59f929d7842d
```

```
200 ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
201 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
202 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
203 127.0.0.1 - - [16/Mar/2019 14:13:10] "GET /ec2_worker HTTP
    /1.1" 200 -
204 2019-03-16 18:14:12.315925:
205 average load: 14.496666666666664
206 cpu_stats_1: [21.83, 0.33, 21.33]
207 max_threshold: 50
208 min_threshold:  30
209 instance number: 3
210 minus_instance_num: 1
211 ['i-07e1d8174c6af91af']
212 2019-03-16 18:15:12.083650:
213 average load: 12.94
214 cpu_stats_1: [19.32, 0.17, 19.33]
215 max_threshold: 50
216 min_threshold:  30
217 instance number: 3
218 minus_instance_num: 1
219 ['i-07e1d8174c6af91af']
220 2019-03-16 18:16:12.266850:
221 average load: 13.123333333333333
222 cpu_stats_1: [7.54, 0.33, 31.5]
223 max_threshold: 50
224 min_threshold:  30
225 instance number: 3
226 minus_instance_num: 1
227 ['i-07e1d8174c6af91af']
228 2019-03-16 18:17:12.027969:
229 average load: 12.89
230 cpu_stats_1: [1.17, 0.17, 37.33]
231 max_threshold: 50
232 min_threshold:  30
233 instance number: 3
234 minus_instance_num: 1
235 ['i-07e1d8174c6af91af']
236 2019-03-16 18:18:12.111541:
237 average load: 12.99
238 cpu_stats_1: [1.0, 0.17, 37.8]
239 max_threshold: 50
240 min_threshold:  30
241 instance number: 3
242 minus_instance_num: 1
243 ['i-07e1d8174c6af91af']
```

```
244 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
245 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
246 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
247 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
248 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
249 127.0.0.1 - - [16/Mar/2019 14:18:33] "GET /ec2_worker HTTP
    /1.1" 200 -
250 127.0.0.1 - - [16/Mar/2019 14:19:13] "POST /
    manage_worker_pool HTTP/1.1" 302 -
251 127.0.0.1 - - [16/Mar/2019 14:19:14] "POST /
    manage_worker_pool HTTP/1.1" 302 -
252 127.0.0.1 - - [16/Mar/2019 14:19:15] "POST /
    manage_worker_pool HTTP/1.1" 302 -
253 127.0.0.1 - - [16/Mar/2019 14:19:15] "POST /
    manage_worker_pool HTTP/1.1" 302 -
254 127.0.0.1 - - [16/Mar/2019 14:19:16] "POST /
    manage_worker_pool HTTP/1.1" 302 -
255 2019-03-16 18:19:34.455562:
256 average load: 18.79
257 cpu_stats_1: [0.16, 37.42]
258 max_threshold: 50
259 min_threshold:  30
260 instance number: 2
261 minus_instance_num: 1
262 ['i-0ade5d000f9226770']
263 127.0.0.1 - - [16/Mar/2019 14:19:35] "POST /
    manage_worker_pool HTTP/1.1" 302 -
264 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
265 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
266 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
267 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
268 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
```

```
268 ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
269 127.0.0.1 − − [16/Mar/2019 14:19:35] "GET /ec2_worker HTTP
    /1.1" 200 −
270 127.0.0.1 − − [16/Mar/2019 14:20:33] "POST /
    manage_worker_pool HTTP/1.1" 500 −
271 2019−03−16 18:20:36.995666:
272 average load: 37.97
273 cpu_stats_1: [37.97]
274 max_threshold: 50
275 min_threshold:  30
276 instance number: 1
277 127.0.0.1 − − [16/Mar/2019 14:20:37] "POST /
    manage_worker_pool HTTP/1.1" 302 −
278 i−073bb9dc0fa33d685 ami−080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
279 i−0dc12a5044d7b079c ami−09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
280 i−07e1d8174c6af91af ami−011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
281 i−0ade5d000f9226770 ami−011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
282 i−0f93f75c246ddffa3 ami−011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
283 127.0.0.1 − − [16/Mar/2019 14:20:37] "GET /ec2_worker HTTP
    /1.1" 200 −
284 2019−03−16 18:21:38.670793:
285 average load: 38.17
286 cpu_stats_1: [38.17]
287 max_threshold: 50
288 min_threshold:  30
289 instance number: 1
290 127.0.0.1 − − [16/Mar/2019 14:21:38] "POST /
    manage_worker_pool HTTP/1.1" 302 −
291 i−073bb9dc0fa33d685 ami−080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
292 i−0dc12a5044d7b079c ami−09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
293 i−07e1d8174c6af91af ami−011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
294 i−0ade5d000f9226770 ami−011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
```

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294 a2_additional_workers'}]
295 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
296 127.0.0.1 - - [16/Mar/2019 14:21:39] "GET /ec2_worker HTTP
    /1.1" 200 -
297 2019-03-16 18:22:40.526726:
298 average load: 37.83
299 cpu_stats_1: [37.83]
300 max_threshold: 50
301 min_threshold:  30
302 instance number: 1
303 127.0.0.1 - - [16/Mar/2019 14:22:40] "POST /
    manage_worker_pool HTTP/1.1" 302 -
304 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
305 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
306 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
307 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
308 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
309 127.0.0.1 - - [16/Mar/2019 14:22:41] "GET /ec2_worker HTTP
    /1.1" 200 -
310 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
311 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
312 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
313 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
314 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
315 127.0.0.1 - - [16/Mar/2019 14:22:55] "GET /ec2_worker HTTP
    /1.1" 200 -
316 [{'Timestamp': datetime.datetime(2019, 3, 16, 18, 4,
    tzinfo=tzutc()), 'Sum': 90.0, 'Unit': 'None'}, {'Timestamp
```

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316 ': datetime.datetime(2019, 3, 16, 18, 12, tzinfo=tzutc
    ()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp': datetime.
    datetime(2019, 3, 16, 18, 3, tzinfo=tzutc()), 'Sum': 89.0
    , 'Unit': 'None'}, {'Timestamp': datetime.datetime(2019, 3
    , 16, 18, 2, tzinfo=tzutc()), 'Sum': 86.0, 'Unit': 'None
    '}, {'Timestamp': datetime.datetime(2019, 3, 16, 18, 11,
    tzinfo=tzutc()), 'Sum': 59.0, 'Unit': 'None'}, {'Timestamp
    ': datetime.datetime(2019, 3, 16, 18, 1, tzinfo=tzutc
    ()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp': datetime.
    datetime(2019, 3, 16, 18, 10, tzinfo=tzutc()), 'Sum': 112.
    0, 'Unit': 'None'}, {'Timestamp': datetime.datetime(2019,
    3, 16, 18, 9, tzinfo=tzutc()), 'Sum': 120.0, 'Unit': 'None
    '}, {'Timestamp': datetime.datetime(2019, 3, 16, 18, 0,
    tzinfo=tzutc()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp
    ': datetime.datetime(2019, 3, 16, 17, 59, tzinfo=tzutc
    ()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp': datetime.
    datetime(2019, 3, 16, 18, 8, tzinfo=tzutc()), 'Sum': 109.0
    , 'Unit': 'None'}, {'Timestamp': datetime.datetime(2019, 3
    , 16, 18, 7, tzinfo=tzutc()), 'Sum': 90.0, 'Unit': 'None
    '}, {'Timestamp': datetime.datetime(2019, 3, 16, 17, 58,
    tzinfo=tzutc()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp
    ': datetime.datetime(2019, 3, 16, 17, 57, tzinfo=tzutc
    ()), 'Sum': 49.0, 'Unit': 'None'}, {'Timestamp': datetime.
    datetime(2019, 3, 16, 18, 6, tzinfo=tzutc()), 'Sum': 90.0
    , 'Unit': 'None'}, {'Timestamp': datetime.datetime(2019, 3
    , 16, 18, 14, tzinfo=tzutc()), 'Sum': 25.0, 'Unit': 'None
    '}, {'Timestamp': datetime.datetime(2019, 3, 16, 18, 5,
    tzinfo=tzutc()), 'Sum': 90.0, 'Unit': 'None'}, {'Timestamp
    ': datetime.datetime(2019, 3, 16, 18, 13, tzinfo=tzutc
    ()), 'Sum': 60.0, 'Unit': 'None'}]
317 2019-03-16 18:04:00+00:00
318 4->90.0
319 2019-03-16 18:12:00+00:00
320 12->60.0
321 2019-03-16 18:03:00+00:00
322 3->89.0
323 2019-03-16 18:02:00+00:00
324 2->86.0
325 2019-03-16 18:11:00+00:00
326 11->59.0
327 2019-03-16 18:01:00+00:00
328 1->60.0
329 2019-03-16 18:10:00+00:00
330 10->112.0
331 2019-03-16 18:09:00+00:00
332 9->120.0
333 2019-03-16 18:00:00+00:00
334 0->60.0
335 2019-03-16 17:59:00+00:00
336 59->60.0
```

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337 2019-03-16 18:08:00+00:00
338 8->109.0
339 2019-03-16 18:07:00+00:00
340 7->90.0
341 2019-03-16 17:58:00+00:00
342 58->60.0
343 2019-03-16 17:57:00+00:00
344 57->49.0
345 2019-03-16 18:06:00+00:00
346 6->90.0
347 2019-03-16 18:14:00+00:00
348 14->25.0
349 2019-03-16 18:05:00+00:00
350 5->90.0
351 2019-03-16 18:13:00+00:00
352 13->60.0
353 127.0.0.1 - - [16/Mar/2019 14:22:59] "GET /ec2_worker/i-
    07e1d8174c6af91af? HTTP/1.1" 200 -
354 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
355 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
356 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
357 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
358 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
359 127.0.0.1 - - [16/Mar/2019 14:23:09] "GET /ec2_worker?
    HTTP/1.1" 200 -
360 []
361 127.0.0.1 - - [16/Mar/2019 14:23:11] "GET /ec2_worker/i-
    0ade5d000f9226770? HTTP/1.1" 200 -
362 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
363 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
364 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
365 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
```

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366 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
367 127.0.0.1 - - [16/Mar/2019 14:23:20] "GET /ec2_worker?
    HTTP/1.1" 200 -
368 [{'Timestamp': datetime.datetime(2019, 3, 16, 18, 12,
    tzinfo=tzutc()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp
    ': datetime.datetime(2019, 3, 16, 18, 21, tzinfo=tzutc
    ()), 'Sum': 119.0, 'Unit': 'None'}, {'Timestamp': datetime
    .datetime(2019, 3, 16, 18, 20, tzinfo=tzutc()), 'Sum': 120
    .0, 'Unit': 'None'}, {'Timestamp': datetime.datetime(2019
    , 3, 16, 18, 11, tzinfo=tzutc()), 'Sum': 56.0, 'Unit': '
    None'}, {'Timestamp': datetime.datetime(2019, 3, 16, 18,
    19, tzinfo=tzutc()), 'Sum': 120.0, 'Unit': 'None'}, {'
    Timestamp': datetime.datetime(2019, 3, 16, 18, 18, tzinfo=
    tzutc()), 'Sum': 119.0, 'Unit': 'None'}, {'Timestamp':
    datetime.datetime(2019, 3, 16, 18, 17, tzinfo=tzutc()), '
    Sum': 121.0, 'Unit': 'None'}, {'Timestamp': datetime.
    datetime(2019, 3, 16, 18, 16, tzinfo=tzutc()), 'Sum': 119.
    0, 'Unit': 'None'}, {'Timestamp': datetime.datetime(2019,
    3, 16, 18, 15, tzinfo=tzutc()), 'Sum': 120.0, 'Unit': '
    None'}, {'Timestamp': datetime.datetime(2019, 3, 16, 18,
    14, tzinfo=tzutc()), 'Sum': 94.0, 'Unit': 'None'}, {'
    Timestamp': datetime.datetime(2019, 3, 16, 18, 13, tzinfo=
    tzutc()), 'Sum': 60.0, 'Unit': 'None'}, {'Timestamp':
    datetime.datetime(2019, 3, 16, 18, 22, tzinfo=tzutc()), '
    Sum': 82.0, 'Unit': 'None'}]
369 2019-03-16 18:12:00+00:00
370 12->60.0
371 2019-03-16 18:21:00+00:00
372 21->119.0
373 2019-03-16 18:20:00+00:00
374 20->120.0
375 2019-03-16 18:11:00+00:00
376 11->56.0
377 2019-03-16 18:19:00+00:00
378 19->120.0
379 2019-03-16 18:18:00+00:00
380 18->119.0
381 2019-03-16 18:17:00+00:00
382 17->121.0
383 2019-03-16 18:16:00+00:00
384 16->119.0
385 2019-03-16 18:15:00+00:00
386 15->120.0
387 2019-03-16 18:14:00+00:00
388 14->94.0
389 2019-03-16 18:13:00+00:00
390 13->60.0
391 2019-03-16 18:22:00+00:00
```

```
392 22->82.0
393 127.0.0.1 - - [16/Mar/2019 14:23:23] "GET /ec2_worker/i-
    0f93f75c246ddffa3? HTTP/1.1" 200 -
394 i-073bb9dc0fa33d685 ami-080bb209625b6f74f
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    ece1779_a2_user'}]
395 i-0dc12a5044d7b079c ami-09655c1332fdc8329
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
396 i-07e1d8174c6af91af ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
397 i-0ade5d000f9226770 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
398 i-0f93f75c246ddffa3 ami-011ca59f929d7842d
    ece1779_winter2019 [{'Key': 'Name', 'Value': '
    a2_additional_workers'}]
399 127.0.0.1 - - [16/Mar/2019 14:23:31] "GET /ec2_worker?
    HTTP/1.1" 200 -
400
```