Real time performance counters

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- . (Nlog,Log4j)
- . ( )
- ( )

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Matrix . CPU,

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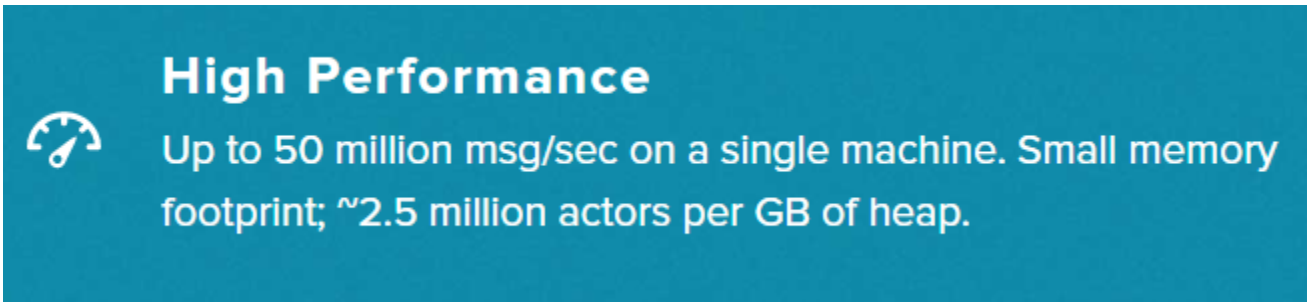

: https://akka.io/

5 , ( ) .

, Netty TCP ,Netty 160tps .

Akka Remote TPS , .

Netty : https://github.com/ronenhamias/netty-perf-testing/wiki/Netty-3-Throughput-test

Akka , .

```
using Akka.Monitoring;
using Akka.Monitoring.ApplicationInsights;
using Akka.Monitoring.Datadog;
using Akka.Monitoring.PerformanceCounters;
using Akka.Monitoring.Prometheus;

var MonitorTool = Environment.GetEnvironmentVariable("MonitorTool");
var MonitorToolCon = Environment.GetEnvironmentVariable("MonitorToolCon");

switch (MonitorTool)
{
        case "win":
                var win = ActorMonitoringExtension.RegisterMonitor(actorSystem,
                        new ActorPerformanceCountersMonitor(
                                new CustomMetrics
                                {
                                        Counters = { "akka.custom.metric1", "akkacore.message" },
                                        Gauges = { "akka.messageboxsize" },
                                        Timers = { "akka.handlertime" }
                                }));
                break;
        case "azure":
                var azure = ActorMonitoringExtension.RegisterMonitor(actorSystem, new ActorAppInsightsMonitor
(appConfig.MonitorToolCon));
                break;
        case "prometheus":
                // prometheusMonotor  , MerticServer ...( ,Agent)
                // http://localhost:10250/metrics  -   metrics      .
                metricServer = new MetricServer(10250);
                metricServer.Start();
                var prometheus = ActorMonitoringExtension.RegisterMonitor(actorSystem, new
ActorPrometheusMonitor(actorSystem));
                break;
        case "datadog":
                var statsdConfig = new StatsdConfig
                {
                        StatsdServerName = MonitorToolCon
                };
                var dataDog = ActorMonitoringExtension.
                        RegisterMonitor(actorSystem, new ActorDatadogMonitor(statsdConfig));
                break;
}
```

, / AppInsight / Promethes /DataDog 3

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- : ( )
- Azure AppinSight : Azure
- Phomethes : (Grafana , DataDog .)

, () .

```
//  : 10
for (int i = 0; i < 100000; i++)
    MonitorActor.Tell(value);

//  :
ReceiveAsync<string>(async msg =>
{
    int auto_delay = random.Next(1, 100);  //1    (     )
    await Task.Delay(auto_delay);
    Context.IncrementCounter("akka.custom.metric1");  // 1
    Context.IncrementCounter("akka.custom.metric2",100); //   ( 100    100   .)
});
```

("akka.custom.metri1") , .

 , 10 1

100 3   .

 10 , (IncrementCount) .

- Finite State Machines

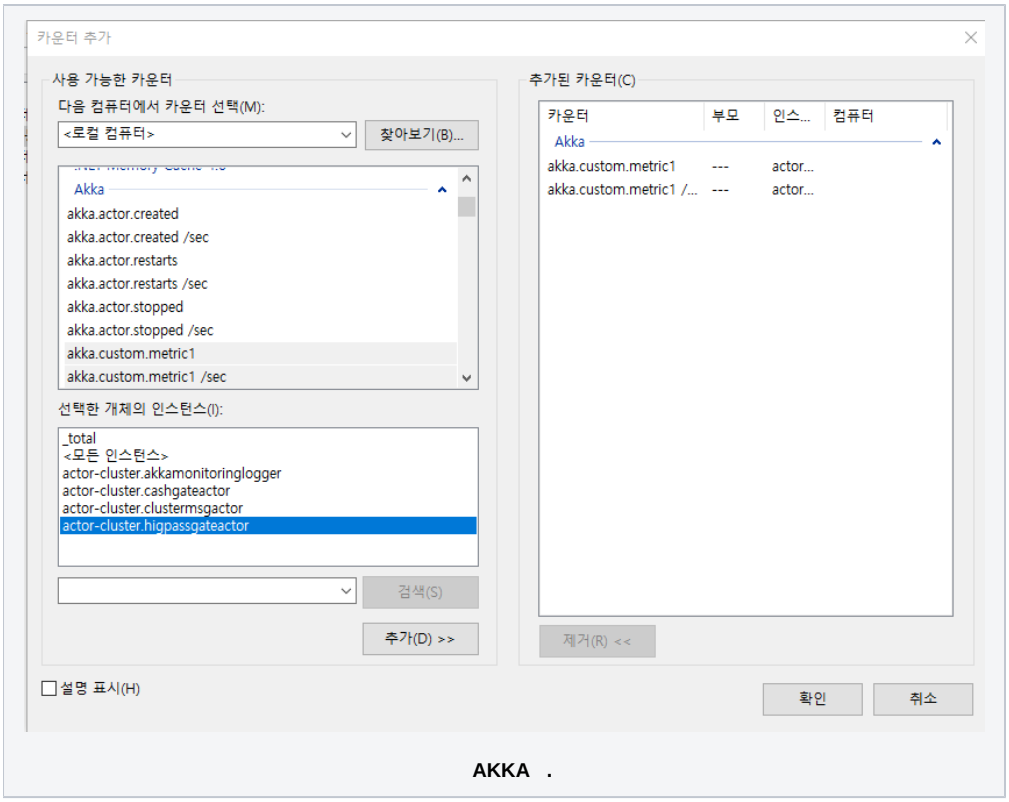
FSM() , . ,

 API   .

 ,   TPS (1000 ,2000,3000)   .

  , TPS

   .



AKKA .

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1PC .

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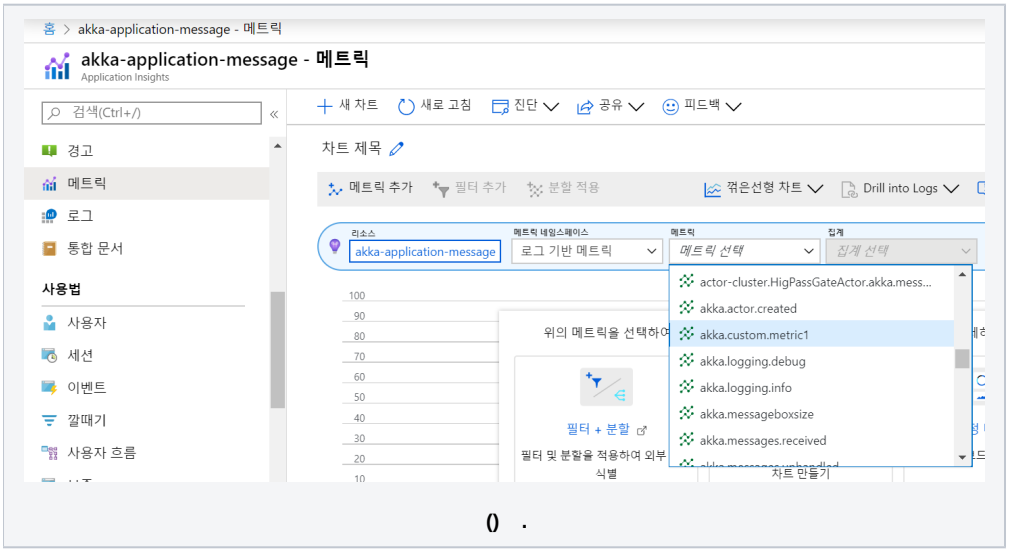

() .

,Azure AppInsight , . (Grafana,DataDog....)

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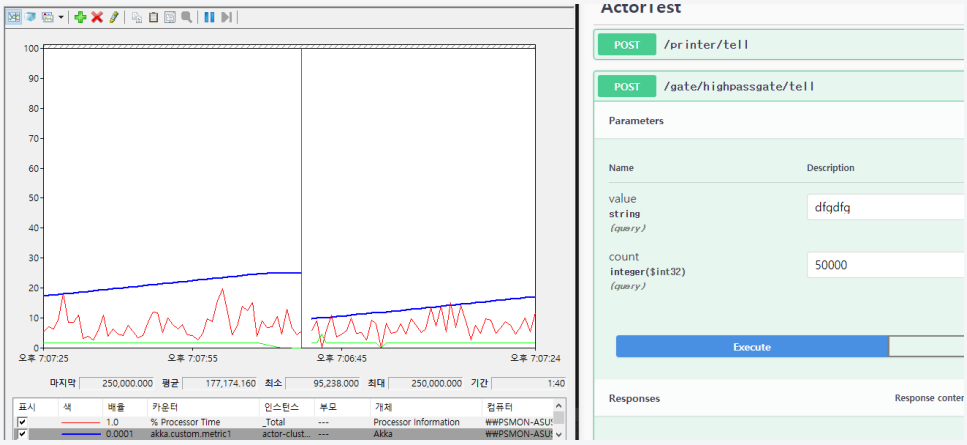
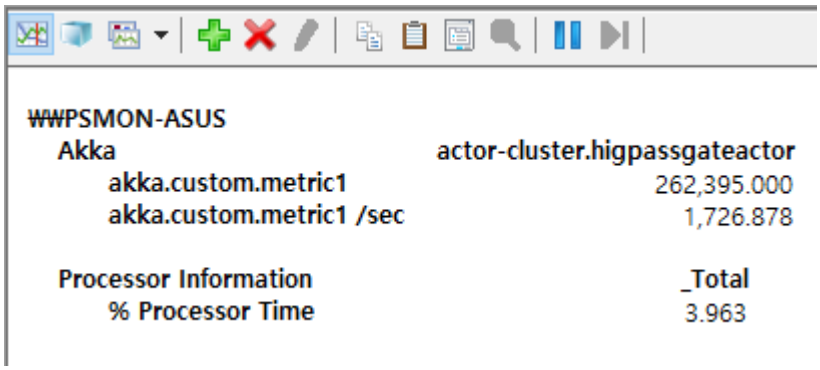
/ .

MonitorActor.Tell(value); Tell .

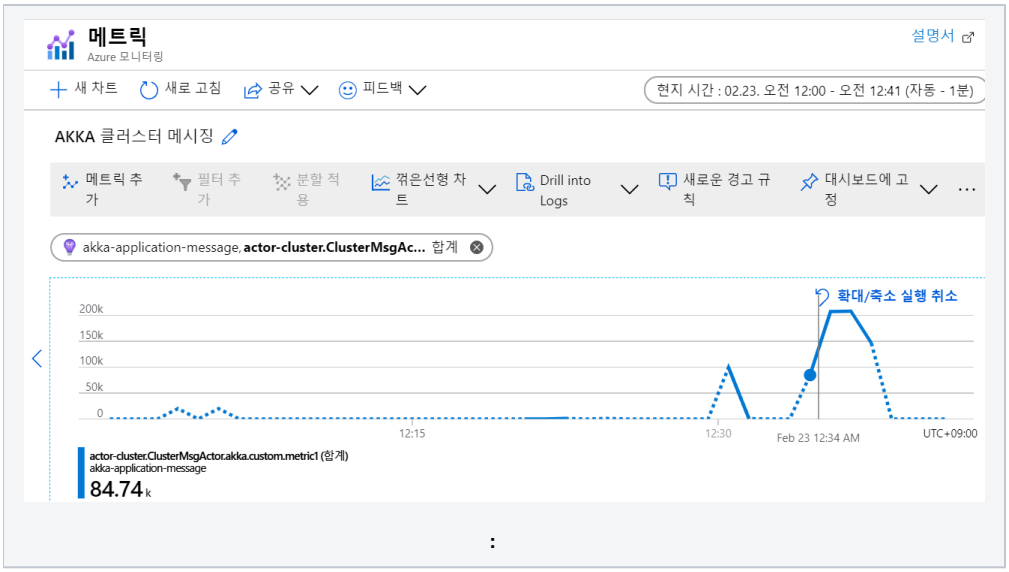


: CPU . (0.0001,10000)



:TPS .

Azure ApplicationInsight


메트릭
Azure 모니터링
설명서
새 차트
새로 고침
공유
피드백
현지 시간 : 02.23. 오전 12:00 - 오전 12:41 (자동 - 1분)
AKKA 클러스터 메시징
메트릭 추가
필터 추가
분할 적용
꺾은선형 차트
Drill into Logs
새로운 경고 규칙
대시보드에 고정
akka-application-message, actor-cluster.ClusterMsgAc... 합계
확대/축소 실행 취소
200k
150k
100k
50k
0
12:15
12:30
Feb 23 12:34 AM
UTC+09:00
actor-cluster.ClusterMsgActor.akka.custom.metric1 (합계)
akka-application-message
84.74k

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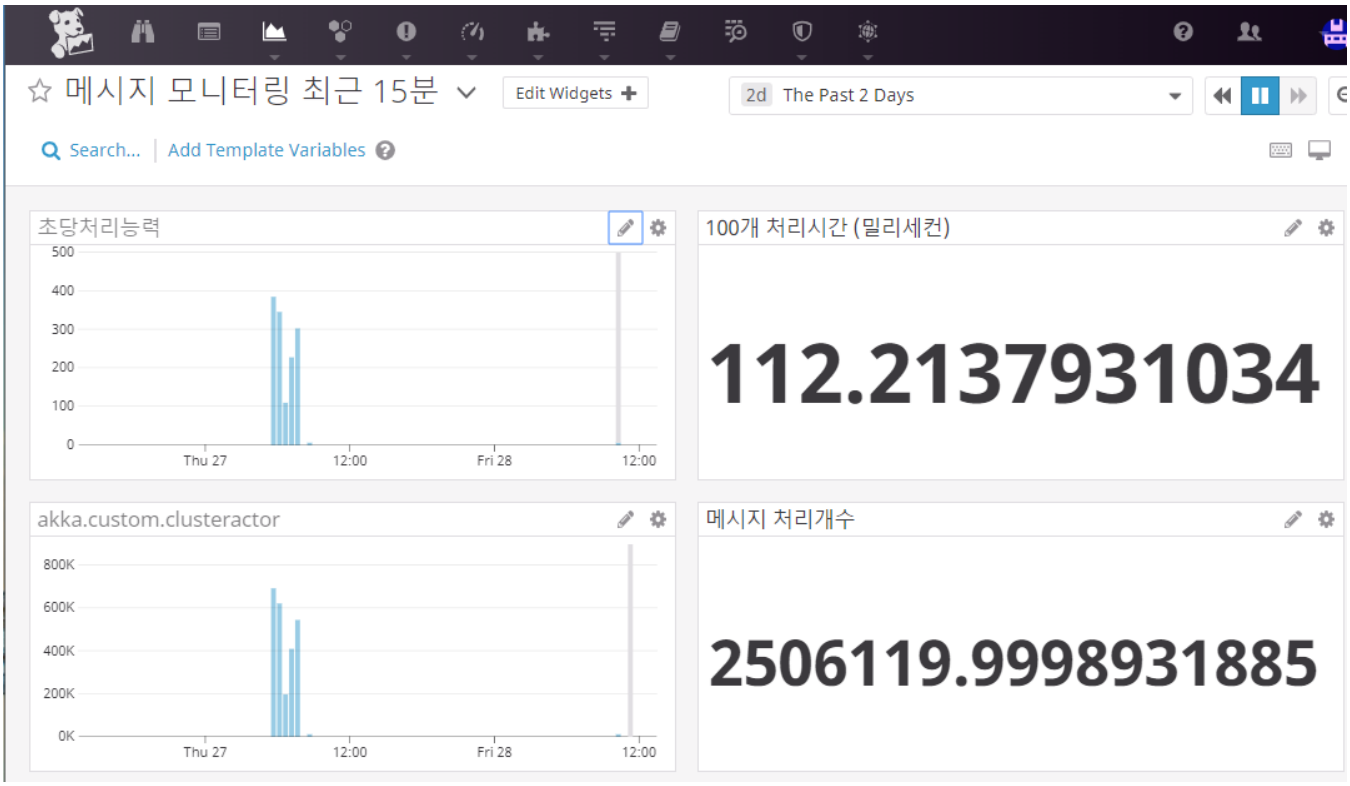
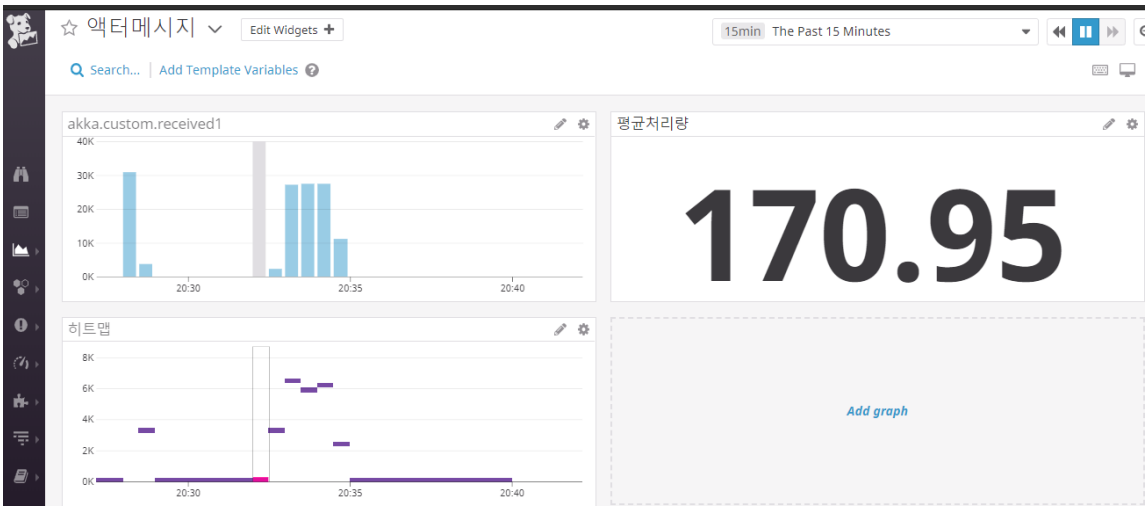
Data Dog


메시지 모니터링 최근 15분
Edit Widgets
2d The Past 2 Days
Search...
Add Template Variables
초당처리능력
500
400
300
200
100
0
Thu 27
12:00
Fri 28
12:00
100개 처리시간 (밀리세컨)
112.2137931034
akka.custom.clusteractor
800K
600K
400K
200K
0K
Thu 27
12:00
Fri 28
12:00
메시지 처리개수
2506119.9998931885



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> *Phobos is a commercial add-on for Akka.NET that allows developers to automatically record distributed traces and metrics from their actors without the need for any manual instrumentation code.*

APM Akka.net .

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: https://petabridge.com/blog/phobos-2.0-otel/?fbclid=IwAR2d3ZKv16_frBmfGKjftya_yL7zQzH4j6BoaeTFv3xlV0csaXl9iVPTskA

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- : https://github.com/psmon/AkkaForNetCore/blob/master/AkkaNetCore/Startup.cs
- : https://github.com/petabridge/akka-monitoring
- Finite State Machines