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Sentinel

Sentinel

Sentinel Sentinel



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Sentinel

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Hello World

```
<dependency>
  <groupId>com.alibaba.csp</groupId>
  <artifactId>sentinel-core</artifactId>
  <version>1.4.0</version>
```

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[illegible]

```
import
    com.alibaba.csp.sentinel.Entry;import
    com.alibaba.csp.sentinel.SphU;import
    com.alibaba.csp.sentinel.slots.block.BlockException;

public class SentinelTest
{public static void main(String[] args)
{
    // 初始化
    List<FlowRule> rules = new
        ArrayList<>();FlowRule rule = new
        FlowRule();rule.setResource("tutorial"
    );// QPS 限制 1
    rule.setCount(
    );
    rule.setGrade(RuleConstant.FLOW_GRADE_QPS);rule.setLimitApp("default"
    );
    rules.add(rule);        // 添加规则
    FlowRuleManager.loadRules(rules);        // 加载规则
    while (true
    ) {Entry entry = null
    ;try
```

```

    {entry = SphU.entry(tutorial"
);System.out.println("hello world"
);catch
    (BlockException e) {System.out.println("locked"
);finally
    {if (entry != null
    ) {
        entry.exit();
    }
    try
    {Thread.sleep(500)
    };catch
    (InterruptedException e) {}
    }
    }
}

```

Sentinel tutorial QPS 1 QPS 2

```

INFO: log
base dir is: /Users/qianwp/logs/csp/INFO: log name use pid is: false
hello world
blocked
hello world
blocked
hello world
blocked
hello world
blocked
...

```

Sentinel

bool

```

import
    java.util.ArrayList;import
    java.util.List;import
    com.alibaba.csp.sentinel.Sph0;import
    com.alibaba.csp.sentinel.slots.block.RuleConstant;import
    com.alibaba.csp.sentinel.slots.block.flow.FlowRule;import
    com.alibaba.csp.sentinel.slots.block.flow.FlowRuleManager;
public class SentinelTest
{public static void main(String[] args)
{// 测试
    List<FlowRule> rules = new
        ArrayList<>();FlowRule rule = new
        FlowRule();rule.setResource("tutorial"
    );// QPS 限制 1
    rule.setCountDown(
    );
    rule.setGrade(RuleConstant.FLOW_GRADE_QPS);rule.setLimitApp("default"
    );
    rules.add(rule);
    FlowRuleManager.loadRules(rules);// 测试成功
    while (true
    ) {if (Sph0.entry("tutorial"
    )) {try
        {System.out.println("hello world"
        );}finally
        {
        Sph0.exit();
        }
        else
        {System.out.println("unlocked"
        );
        }
        try
        {Thread.sleep(500
        );}catch
        (InterruptedException e) {}
    }
}
}

```

```
}  
}
```

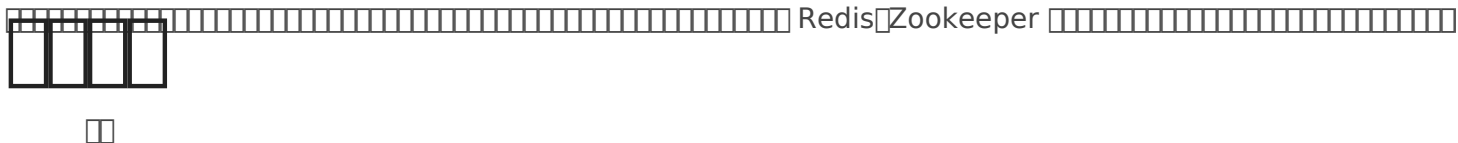


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Sentinel redis

```
// redis  
RedisConnectionConfig redisConf = new RedisConnectionConfig("localhost", 6379, 1000  
);  
Converter<String, List<FlowRule>> converter = r -> JSON.parseArray(r, FlowRule.class);  
// key pubsub channel key  
ReadableDataSource<String, List<FlowRule>> redisDataSource = new  
    RedisDataSource<List<FlowRule>>(redisConf, "app_key", "app_pubsub_key", converter);  
FlowRuleManager.register2Property(redisDataSource.getProperty());
```

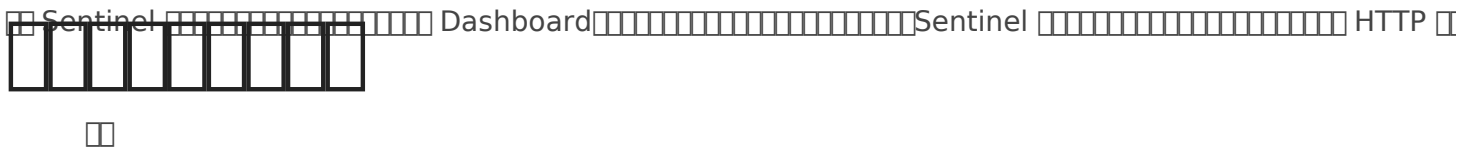


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Sentinel Dashboard Dashboard HTTP

Dashboard HTTP

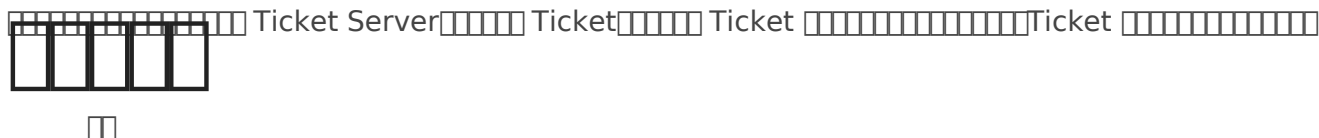
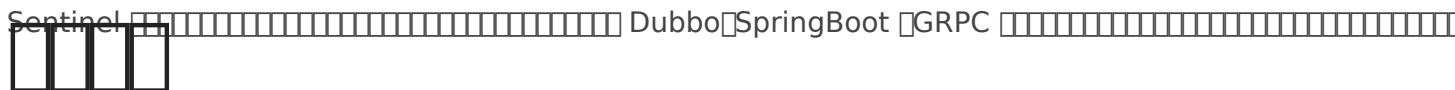


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Ticket Server Ticket Server



```
// 初始化
List<DegradRule> rules = new
    ArrayList<>();DegradRule rule = new
    DegradRule();rule.setResource("tutorial"
);// 5s10
rule.setCount(10
);
rule.setGrade(RuleConstant.DEGRADE_GRADE_EXCEPTION_COUNT);rule.setLimitApp("default");
rules.add(rule);
DegradRuleManager.loadRules(rules);
Entry entry = null
;try
{
    entry = SphU.entry(key); // 初始化
} catch
(Throwable t) { // 异常
    if
(!BlockException.isBlockException(t)) {
        Tracer.trace(t);
    } finally
    { if (entry != null
```

```

) {
    entry.exit();
}
}
}

```

FlowException
DegradeException
BlockException

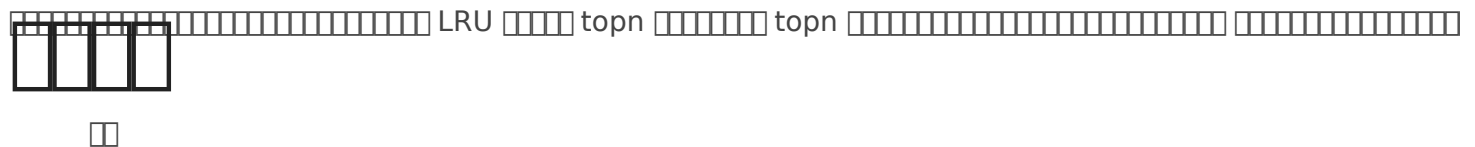


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```

ParamFlowRule ruleUser = new
    ParamFlowRule();// userId QPS 10
ruleUser.setParamIdx(0).setCount(10
);// qianwpQPS 100
ParamFlowItem uitem = new ParamFlowItem("qianwp", 100, String.class);
ruleUser.setParamFlowItemList(Collections.singletonList(uitem));
ParamFlowRule ruleBook = new
    ParamFlowRule();// bookId QPS 20
ruleBook.setParamIdx(1).setCount(20
);// redisQPS 100
ParamFlowItem bitem = new ParamFlowItem("redis", 100, String.class);
ruleBook.setParamFlowItemList(Collections.singletonList(item));
//
List<ParamFlowRule> rules = new
    ArrayList<>();
rules.add(ruleUser);
rules.add(ruleBook);
ParamFlowRuleManager.loadRules(rules)
// userIdbookId
Entry entry = Sphu.entry(key, EntryType.IN, 1

```



```
, userId, bookId);
```

Sentinel LeapArray



QPS QPS QPS

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ThreadNum * (1/ResponseTime) = QPS QPS

2. QPS

```
List<SystemRule> rules = new
    ArrayList<SystemRule>();SystemRule rule = new
    SystemRule();rule.setHighestSystemLoad(3.0
);rule.setAvgRt(10
);rule.setQps(20
);rule.setMaxThread(10
);
rules.add(rule);
SystemRuleManager.loadRules(Collections.singletonList(rule));
```

<https://juejin.im/post/5c26023151882545e24f2ed9>