ZABBIX 2020 Conference CHINA

演讲主题

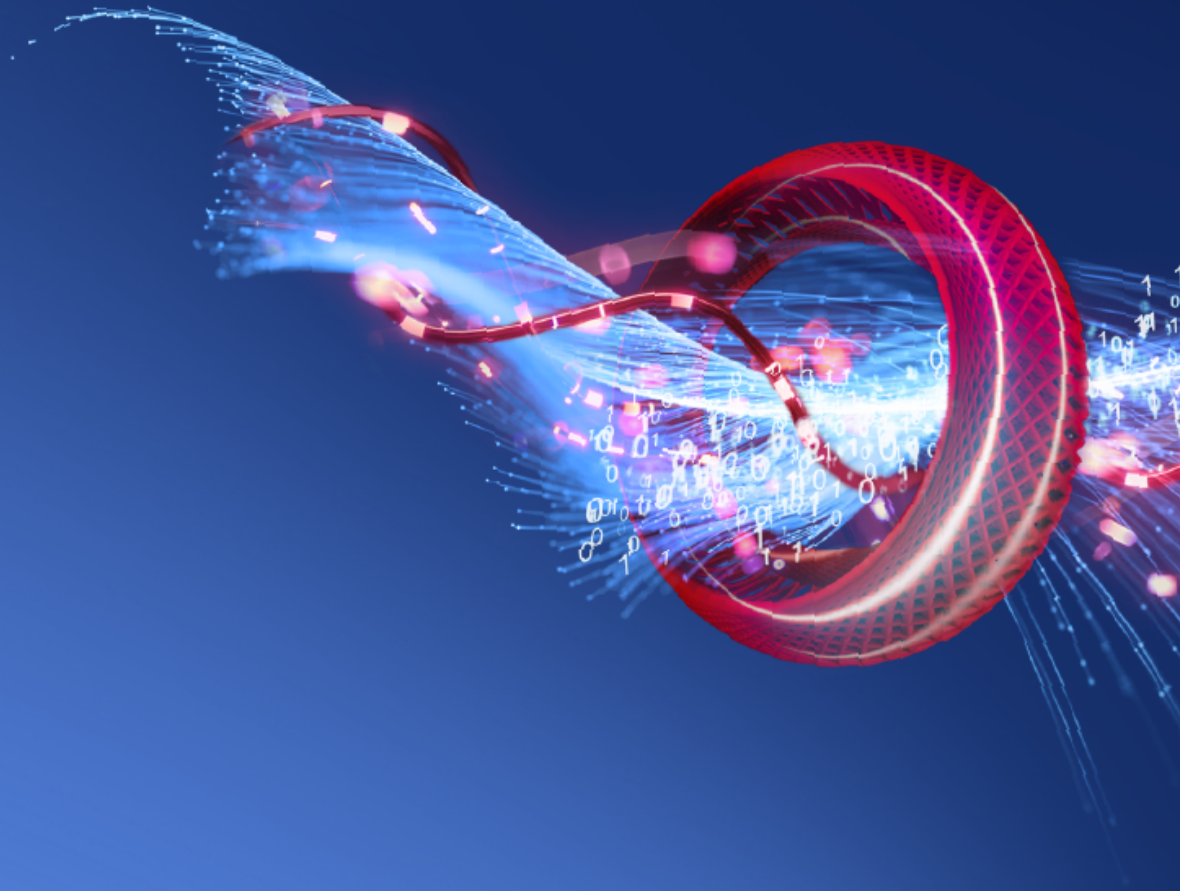
主从监控项经验分享

演讲嘉宾

伍昕 宏时数据

01

主从监控项简介



主从监控项

Dependent Items

Zabbix的一个使用场景

场景：

Zabbix的一次数据采集可能获取多个值，（比如与第三方系统对接，获取数据库所有状态）

show global variables;

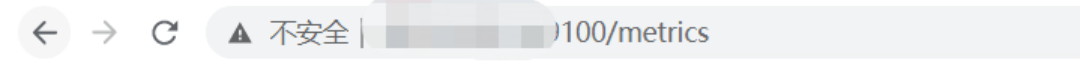
Handler_update	0
Handler_write	414
Innodb_buffer_pool_dump_status	Dumping of buffer pool not started
Innodb_buffer_pool_load_status	Buffer pool(s) load completed at 170531 10:45:37
Innodb_buffer_pool_resize_status	
Innodb_buffer_pool_pages_data	513
Innodb_buffer_pool_bytes_data	8404992
Innodb_buffer_pool_pages_dirty	0
Innodb_buffer_pool_bytes_dirty	0
Innodb_buffer_pool_pages_flushed	37
Innodb_buffer_pool_pages_free	7676
Innodb_buffer_pool_pages_misc	2
Innodb_buffer_pool_pages_total	8191
Innodb_buffer_pool_read_ahead_rnd	0
Innodb_buffer_pool_read_ahead	0
Innodb_buffer_pool_read_ahead_evicted	0
Innodb_buffer_pool_read_requests	2535
Innodb_buffer_pool_reads	479
Innodb_buffer_pool_wait_free	0
Innodb_buffer_pool_write_requests	515
Innodb_data_fsyncs	7
Innodb_data_pending_fsyncs	0
Innodb_data_pending_reads	0
Innodb_data_pending_writes	0
Innodb_data_read	7918080
Innodb_data_reads	505
Innodb_data_writes	54
Innodb_data_written	641024

Zabbix server

主从监控项

Dependent Items

http://exporter_ip:9100/metrics




```
# HELP go_gc_duration_seconds A summary of the GC invocation durations.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 2.4285e-05
go_gc_duration_seconds{quantile="0.25"} 4.4334e-05
go_gc_duration_seconds{quantile="0.5"} 5.7874e-05
go_gc_duration_seconds{quantile="0.75"} 8.7763e-05
go_gc_duration_seconds{quantile="1"} 0.003743636
go_gc_duration_seconds_sum 28.494698484
go_gc_duration_seconds_count 240076
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
go_goroutines 8
# HELP go_info Information about the Go environment.
# TYPE go_info gauge
go_info{version="go1.11.2"} 1
# HELP go_memstats_alloc_bytes Number of bytes allocated and still in use.
# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 1.257816e+06
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
```

主从监控项

Dependent Items

主从监控项

Zabbix的一个使用场景

将Zabbix的一次数据采集获取到的多个值，分别赋值给各个从属监控项

2步操作
2个Zabbix的功能

第一步：

（相关项目）监控项
DEPENDENT ITEM

第二步：

数据预处理
PREPROCESSING

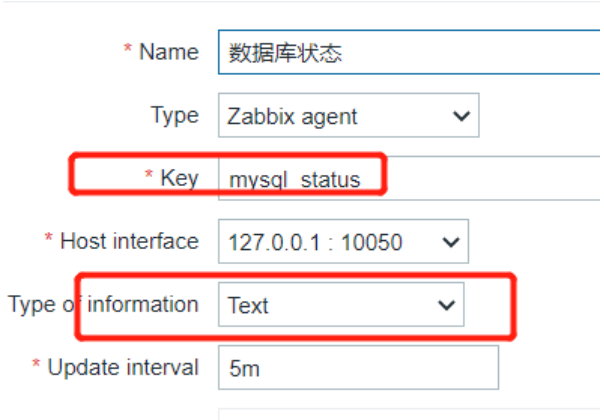
主监控项准备

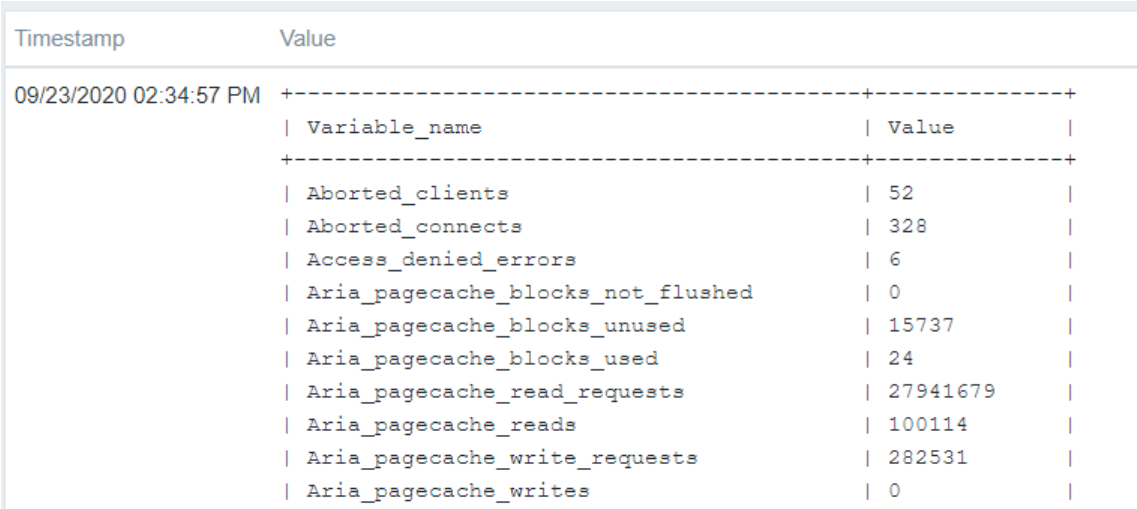
Dependent Items

创建一个自定义监控项：
修改配置agent配置文件：/home/zabbix/zabbix_agent/conf/zabbix_agentd.conf

UserParameter=mysql_status,mysqladmin -uzabbix -p"Workshop123#" extended-status

重启agent
/home/zabbix/zabbix_agent/start_zabbix.sh restart



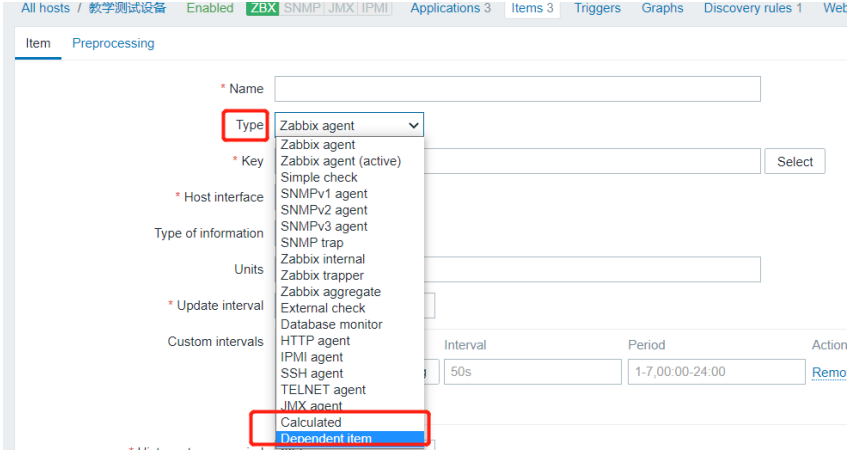


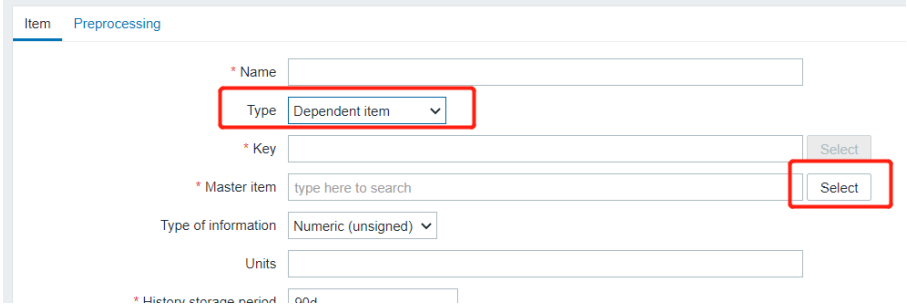
主从监控项

Dependent Items

第一步：配置一个（相关项目）监控项

Item Properties→Type →Depdent item→Master item →Done
创建监控项 →监控项类型→依赖监控项 →选择“主监控项”→ 配置结束





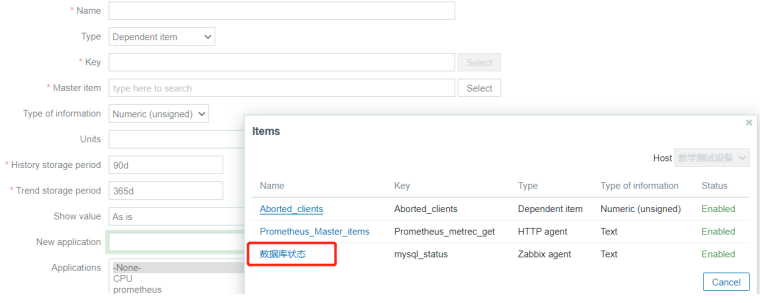
主从监控项

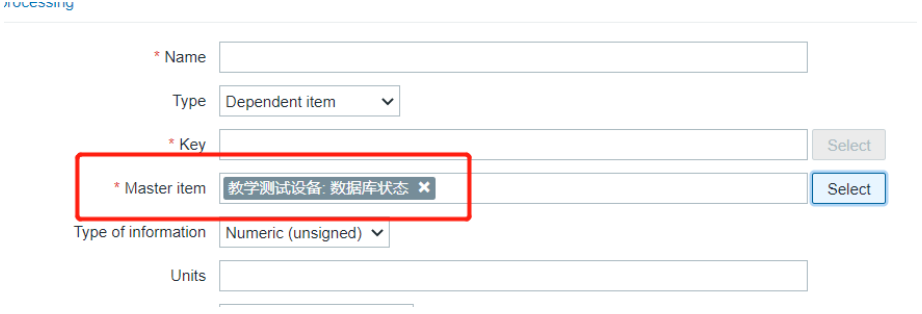
Dependent Items

第一步：配置一个依赖监控项

Item Properties→Type →Depdent item→Master item →Done

创建监控项 →监控项类型→依赖监控项 →选择“主监控项”→ 配置结束





主从监控项

Dependent Items

第一步：配置一个依赖监控项

主监控项：Master Items

Item Properties→Type→Depdent item→Master item→Done

相关项目监控项：DEPENDENT ITEMS

配置完成后，主监控项将会自动将自己的监控数据传给每一个依赖监控项

主从监控项

Dependent Items

第二步：数据预处理

功能：在入库前，对接收到的数据，按照配置的规则做转换处理后入库。

官方文档地址：

https://www.zabbix.com/documentation/current/manual/config/items/preprocessing/preprocessing_details?s[]=preprocessing

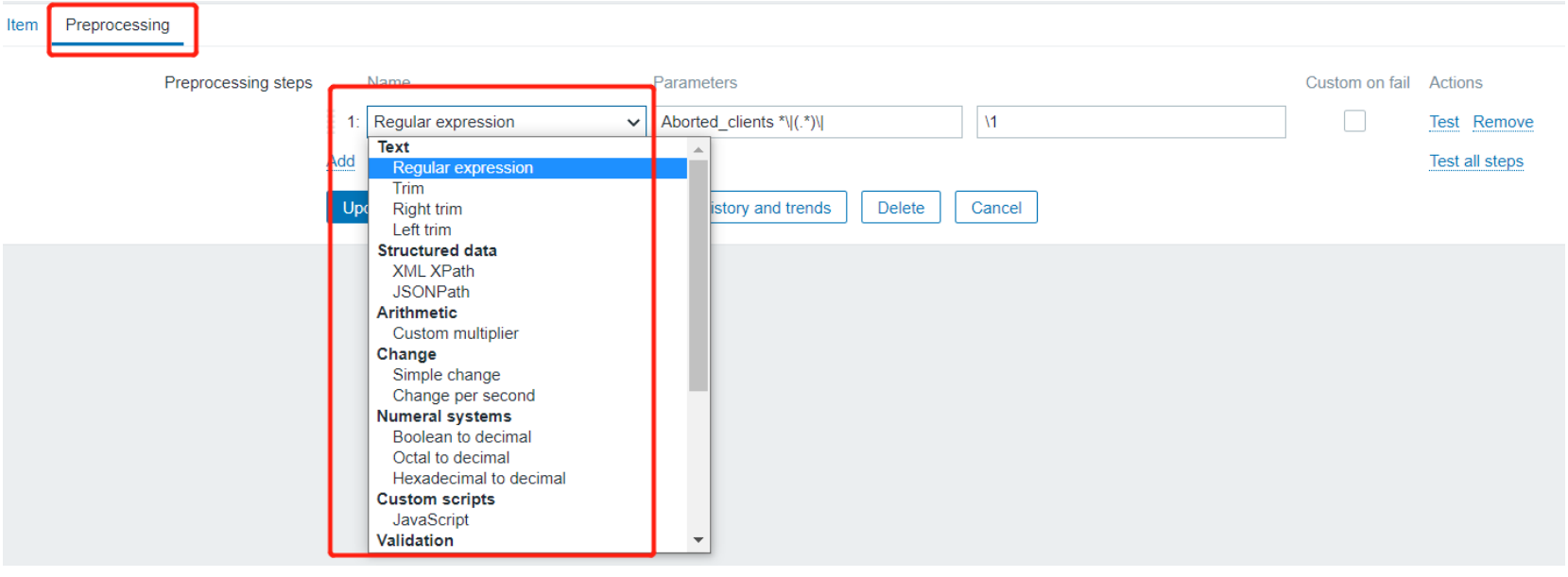
主从监控项

Dependent Items

第二步：配置一个数据预处理

Item Properties→Preprocessing →Preprocessing steps →Done

监控项配置页面 →数据预处理 → 配置对应的预处理方式 →配置结束



主从监控项

Dependent Items

第二步：配置一个数据预处理

Preprocessing steps	Name	Parameters		Custom on fail	Actions
1:	Regular expression	Aborted_clients *|(.*)|	\1	☐	Test Remove
Add					Test all steps

- other - (2 Items)		
Aborted_clients	09/20/2020 07:04:57 PM	52
数据库状态	09/20/2020 07:04:57 PM	+----------

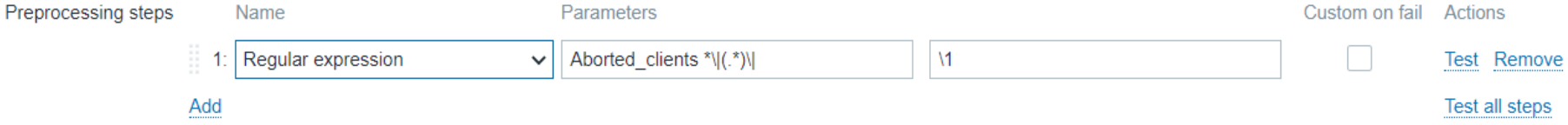
Timestamp	Value
09/20/2020 07:04:57 PM	+----------+

```
| Variable_name                          | Value        |
+----------------------------------------+--------------+
| Aborted_clients                        | 52           |
| Aborted_connects                       | 290          |
| Access_denied_errors                   | 6            |
| Aria_pagecache_blocks_not_flushed      | 0            |
| Aria_pagecache_blocks_unused           | 15737        |
| Aria_pagecache_blocks_used             | 24           |
```

主从监控项

Dependent Items

第二步：配置一个数据预处理



常用的正则表达式预处理规则：

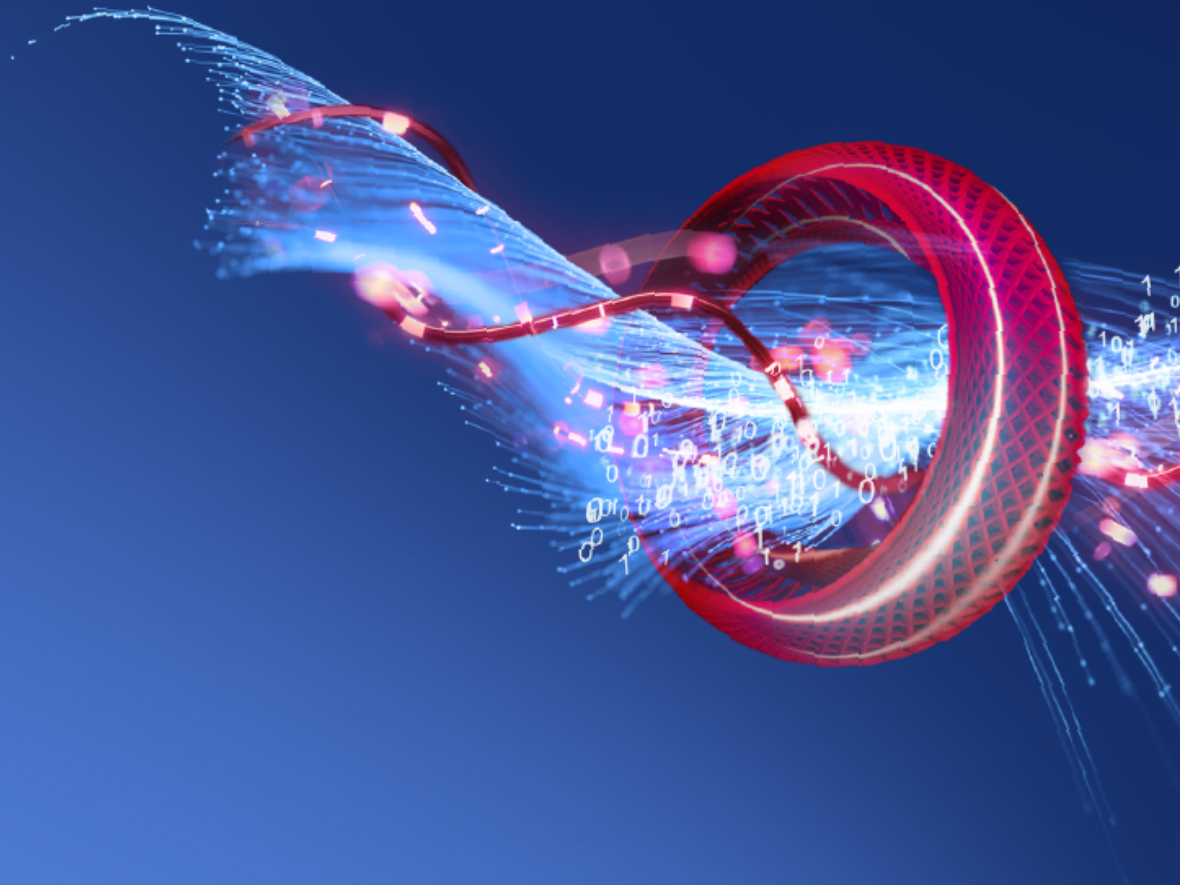
Pattern：关键字(.*)关键字(.*)关键字
Output:\N　抓取上述第N个括号里面的内容

输入数据：
NAME ZHANG3 AGE 28 SALARY 10000
NAME LI4 AGE 22 SALARY 20000
NAME ZHAO5 AGE 30 SALARY 25000

Pattern：ZHANG3 AGE (.*) SALARY (.*)
Output:\2
测试结果：10000

03

现场练习



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现场练习

做一个Prometheus 的主从监控项


```
# HELP go_gc_duration_seconds A summary of the GC invocation durations.
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go_gc_duration_seconds{quantile="0"} 2.4285e-05
go_gc_duration_seconds{quantile="0.25"} 4.4334e-05
go_gc_duration_seconds{quantile="0.5"} 5.7874e-05
go_gc_duration_seconds{quantile="0.75"} 8.7763e-05
go_gc_duration_seconds{quantile="1"} 0.003743636
go_gc_duration_seconds_sum 28.494698484
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# TYPE go_memstats_alloc_bytes gauge
go_memstats_alloc_bytes 1.257816e+06
# HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed.
# TYPE go_memstats_alloc_bytes_total counter
```

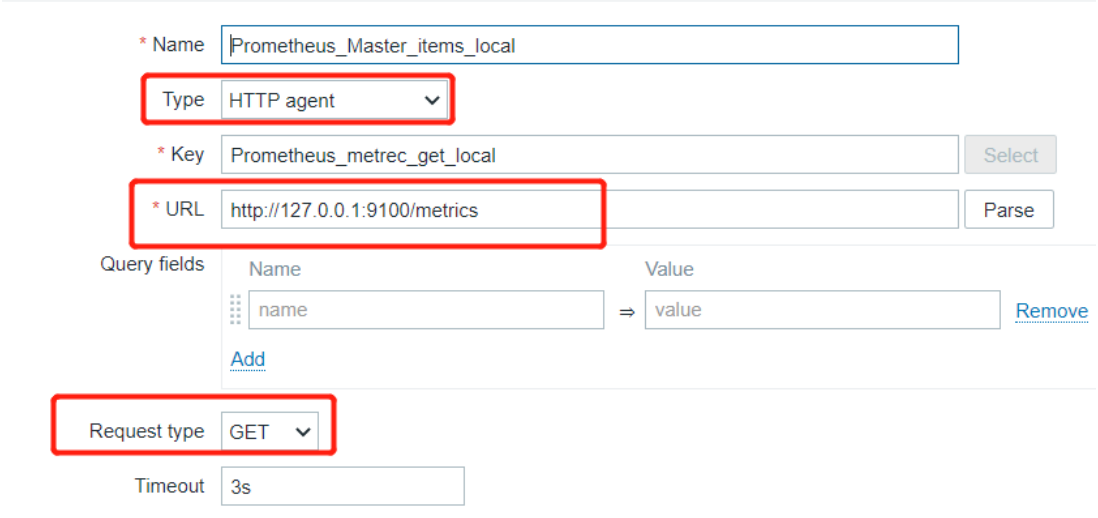
现场练习

Node-export 确认
1.登录测试机器
2.启动export 命令： /home/zabbix/node_exporter/node_exporter &
3. Curl http://127.0.0.1:9100/metrics

```
[root@iZ8vb1u7pa78d410d8yopvZ ~]# curl http://127.0.0.1:9100/metrics
# HELP go_gc_duration_seconds A summary of the GC invocation durations.
# TYPE go_gc_duration_seconds summary
go_gc_duration_seconds{quantile="0"} 2.4321e-05
go_gc_duration_seconds{quantile="0.25"} 4.192e-05
go_gc_duration_seconds{quantile="0.5"} 5.8568e-05
go_gc_duration_seconds{quantile="0.75"} 8.8028e-05
go_gc_duration_seconds{quantile="1"} 0.003695831
go_gc_duration_seconds_sum 29.074967638
go_gc_duration_seconds_count 245704
# HELP go_goroutines Number of goroutines that currently exist.
# TYPE go_goroutines gauge
```

现场练习

监控项类型：http
url：http://127.0.0.1:9100/metrics
数据类型：文本/text



现场练习

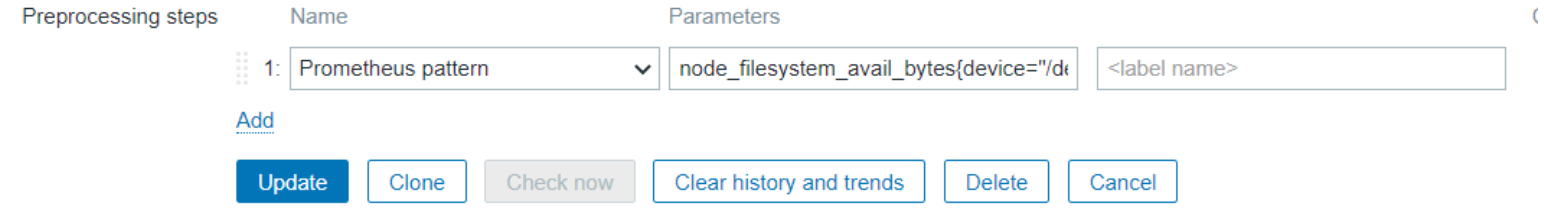
数据效果

Timestamp	Value
09/24/2020 02:00:04 PM	# HELP go_gc_duration_seconds A summary of the GC invocation durations. # TYPE go_gc_duration_seconds summary go_gc_duration_seconds{quantile="0"} 2.1868e-05 go_gc_duration_seconds{quantile="0.25"} 4.192e-05 go_gc_duration_seconds{quantile="0.5"} 5.8422e-05 go_gc_duration_seconds{quantile="0.75"} 8.5638e-05 go_gc_duration_seconds{quantile="1"} 0.003695831 go_gc_duration_seconds_sum 29.076426714 go_gc_duration_seconds_count 245723 # HELP go_goroutines Number of goroutines that currently exist. # TYPE go_goroutines gauge go_goroutines 7 # HELP go_info Information about the Go environment. # TYPE go_info gauge go_info{version="go1.11.2"} 1 # HELP go_memstats_alloc_bytes Number of bytes allocated and still in use. # TYPE go_memstats_alloc_bytes gauge go_memstats_alloc_bytes 2.862e+06 # HELP go_memstats_alloc_bytes_total Total number of bytes allocated, even if freed. # TYPE go_memstats_alloc_bytes_total counter go_memstats_alloc_bytes_total 6.95714315776e+11 # HELP go_memstats_buck_hash_sys_bytes Number of bytes used by the profiling bucket hash table. # TYPE go_memstats_buck_hash_sys_bytes gauge

现场练习

预处理类型：Prometheus pattern

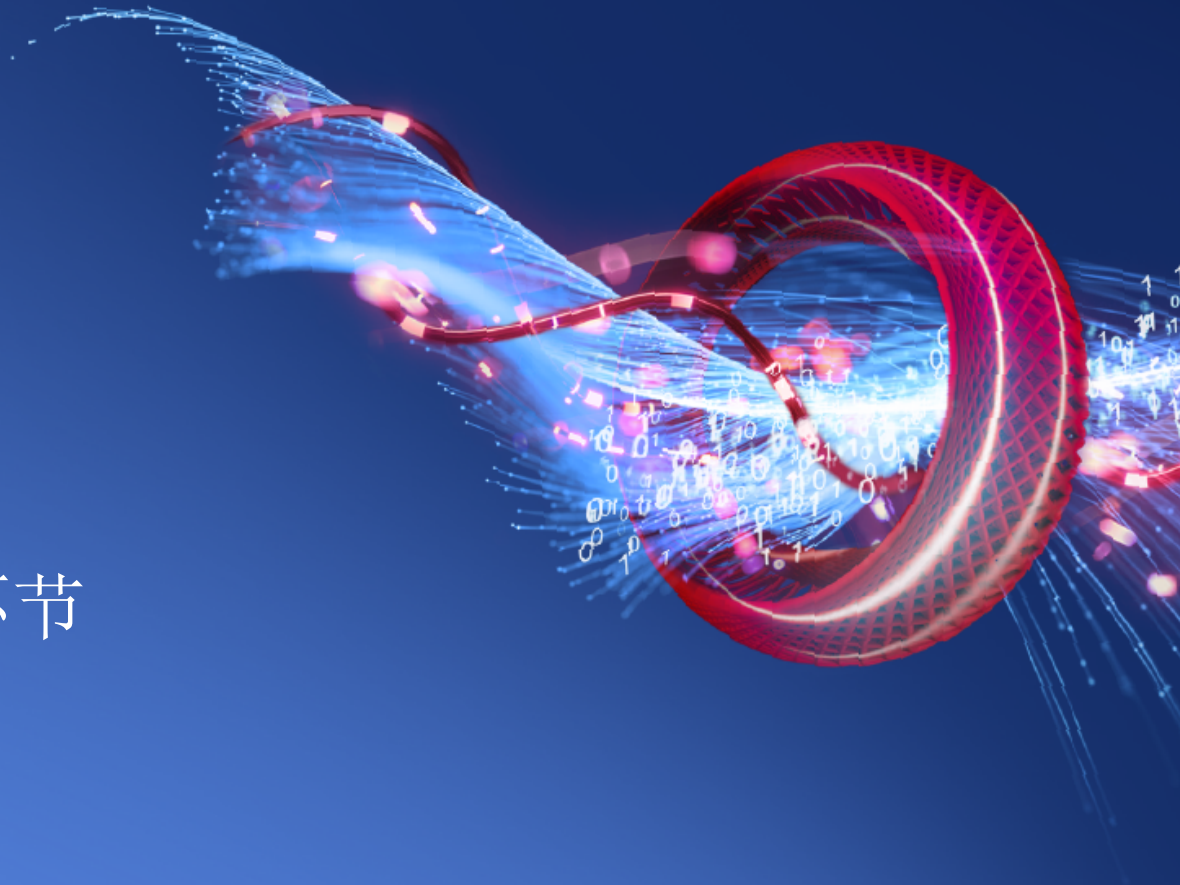
预处理语法：
node_filesystem_avail_bytes{device="/dev/vda1",fstype="ext4",mountpoint="/"}




```
# TYPE node_filesystem_avail_bytes gauge
node_filesystem_avail_bytes{device="/dev/vda1",fstype="ext4",mountpoint="/"} 3.0050566144e+10
node_filesystem_avail_bytes{device="rootfs",fstype="rootfs",mountpoint="/"} 3.0050566144e+10
node_filesystem_avail_bytes{device="tmpfs",fstype="tmpfs",mountpoint="/run"} 1.986256896e+09
node_filesystem_avail_bytes{device="tmpfs",fstype="tmpfs",mountpoint="/run/user/0"} 3.97357056e+08
```

04

一些备注与提问环节



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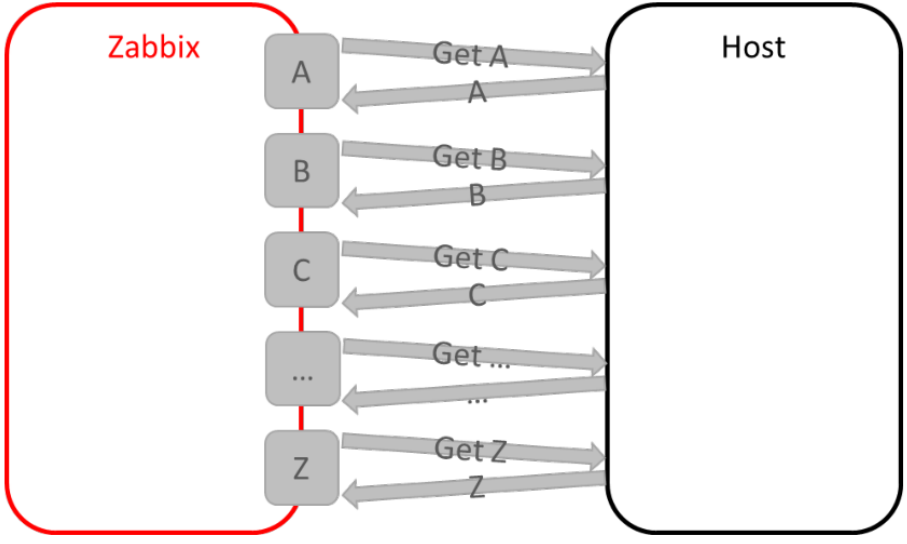
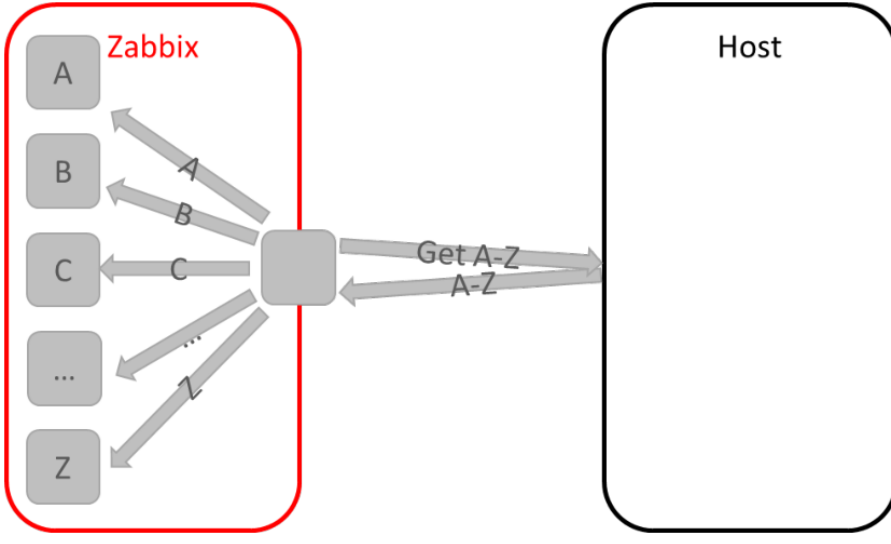
主从监控项

Dependent Items

优点：降低Zabbix对第三方的访问量



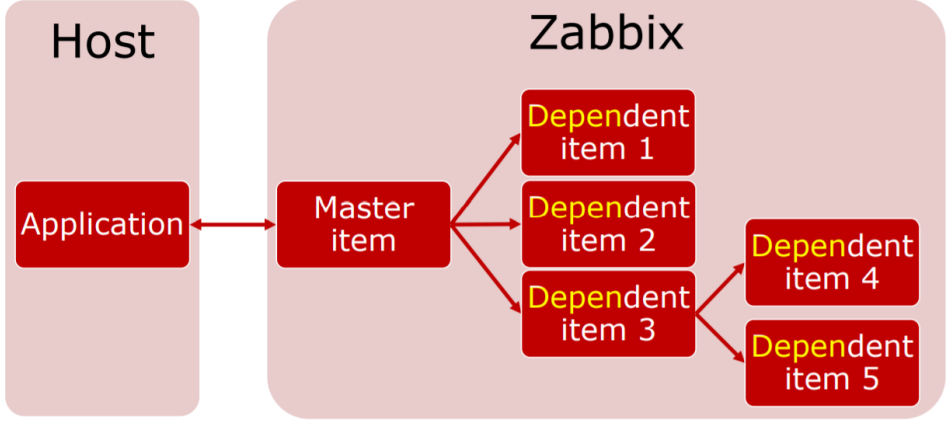


主从监控项

Dependent Items

依赖监控项
DEPENDENT ITEMS

- 依赖监控项的范围限于同一个主机/模板/自动发现规则内
- 一个主监控项最多支持999个依赖监控项
- 依赖监控项最多支持三层
- 如果主监控项在模板中而从属监控项创建在主机上，该从属监控项将无法通过模板导出。
- 主监控项历史数据保存时间可以设置为0

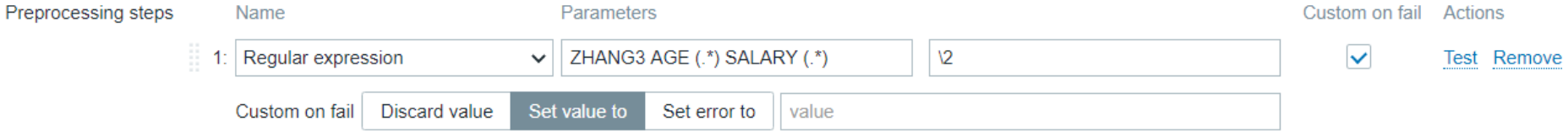


主从监控项

Dependent Items

数据预处理
PREPROCESSING

- 5.0版本前，所有预处理操作在Server端处理，5.0版本及以后预处理操作在Proxy端操作。
- 预处理的相关配置项：StartPreprocessors= 默认为3
- 4.4 版本后，当预处理失败后，可以选择输出默认值，4.4版本前需要保证输入值正常，否则处理失败后监控项会变成不支持



问答时间

questions

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