Utilisation du PreProcessing Zabbix pour la supervision applicative - JsonPath

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Agenda

01 Description du Besoin

02 Monitoring Performances JVM

03 Monitoring Performances EJB

04 Monitoring Performances SQL

05 Dashboard global

Description du besoin

Supervision du CoreBanking

01

Evolution du CoreBanking

Migration du CoreBanking vers de l’applicatif T24

02

Supervision efficiente de l’Applicatif

Supervision des différents indicateurs de performances
Données dynamiques

03

Consolidation

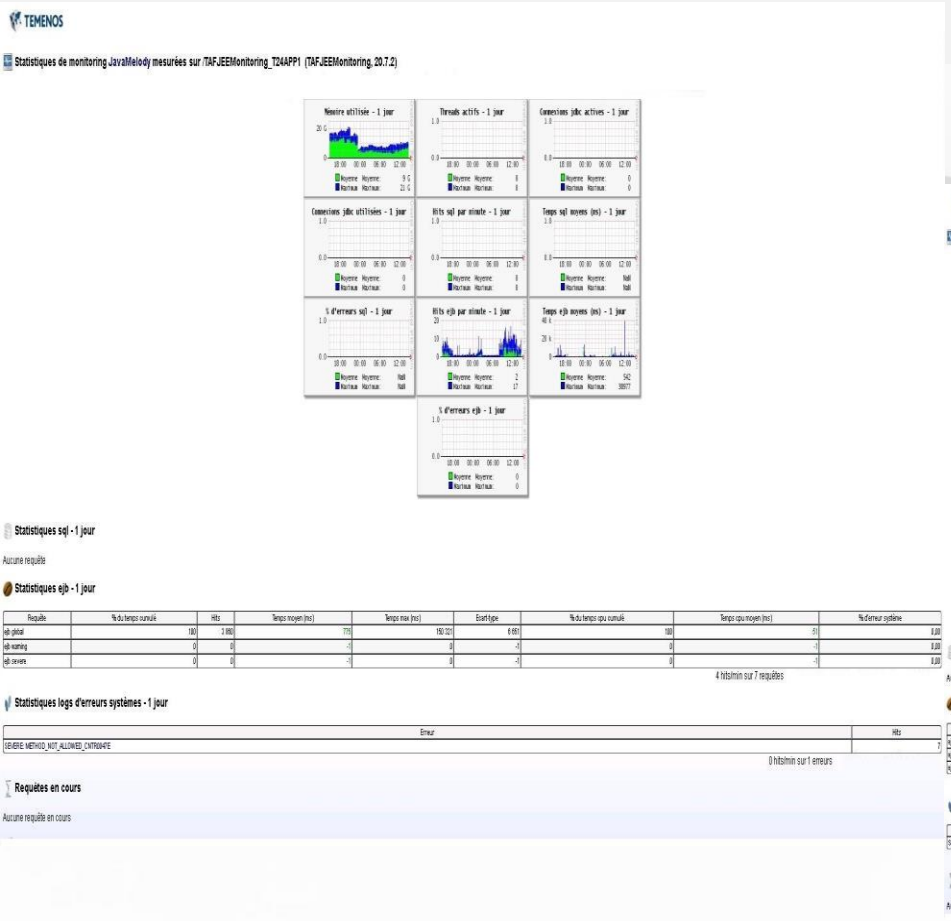
Consolidation des données de performances de 8 instances applicative

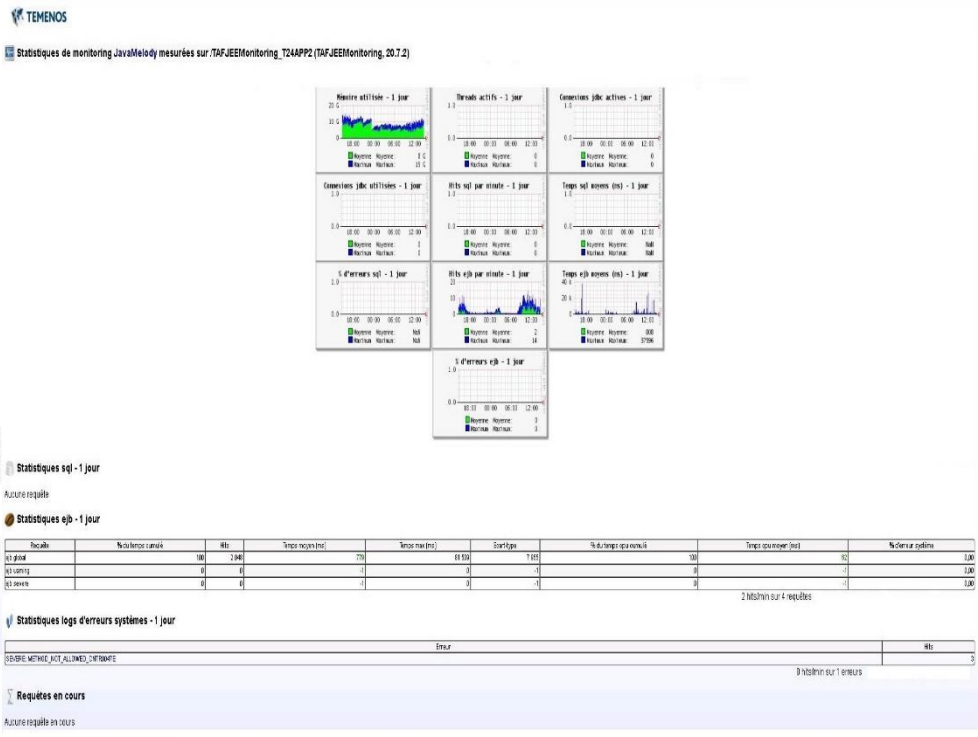
04

Alerting et Dashboarding

Suivi en temps réel
Suivi de l’évolution des Performances de l’applicatif

Interfaces initiales disponibles aux utilisateurs





Format Json

Non sécurisé | t24app1:9080/TAFJEEMonitoring/monitoring?format=json


```
{"list": [
  {
    "application": "/TAFJEEMonitoring_T24APP1",
    "displayed": false,
    "name": "http",
    "errorCounter": false,
    "storageName": "http",
    "iconName": "dbweb.png",
    "childCounterName": "sql",
    "requests": [],
    "rootCurrentContextsByThreadId": [],
    "startDate": "2020-09-02 19:26:15.523 UTC",
    "maxRequestsCount": 10000,
    "estimatedMemorySize": 0
  },
  {
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    "displayed": true,
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    "storageName": "sql",
    "iconName": "db.png",
    "requests": [],
    "rootCurrentContextsByThreadId": [],
    "startDate": "2020-09-02 19:25:19.603 UTC",
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    "estimatedMemorySize": 0
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    "maxRequestsCount": 10000,
    "estimatedMemorySize": 0
  },
  {
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    "name": "ejb",
    "errorCounter": false,
    "storageName": "ejb",
    "iconName": "beans.png",
    "childCounterName": "sql",
    "requests": [
      [
        "CallAtProcessingBean.processRequest:JAVA.FRAMEWORK",
        {
          "name": "CallAtProcessingBean.processRequest:JAVA.FRAMEWORK",
          "id": "ejb6c1575c6ce3a0a249607caee5eb66b21fe7d5721",
          "hits": 13531,
          "durationsSum": 10266671,
          "durationsSquareSum": 13780297565,
          "maximum": 7606,
```


Non sécurisé | t24app2:9081/TAFJEEMonitoring/monitoring?format=json


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{"list": [
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    "displayed": false,
    "name": "http",
    "errorCounter": false,
    "storageName": "http",
    "iconName": "dbweb.png",
    "childCounterName": "sql",
    "requests": [],
    "rootCurrentContextsByThreadId": [],
    "startDate": "2020-09-02 19:28:53.113 UTC",
    "maxRequestsCount": 10000,
    "estimatedMemorySize": 0
  },
  {
    "application": "/TAFJEEMonitoring_T24APP2",
    "displayed": true,
    "name": "sql",
    "errorCounter": false,
    "storageName": "sql",
    "iconName": "db.png",
    "requests": [],
    "rootCurrentContextsByThreadId": [],
    "startDate": "2020-09-02 19:24:55.130 UTC",
    "maxRequestsCount": 10000,
    "estimatedMemorySize": 0
  },
  {
    "application": "/TAFJEEMonitoring_T24APP2",
    "displayed": false,
    "name": "jpa",
    "errorCounter": false,
    "storageName": "jpa",
    "iconName": "db.png",
    "childCounterName": "sql",
    "requests": [],
    "rootCurrentContextsByThreadId": [],
    "startDate": "2020-09-02 19:24:55.134 UTC",
    "maxRequestsCount": 10000,
    "estimatedMemorySize": 0
  },
  {
    "application": "/TAFJEEMonitoring_T24APP2",
    "displayed": true,
    "name": "ejb",
    "errorCounter": false,
    "storageName": "ejb",
    "iconName": "beans.png",
    "childCounterName": "sql",
    "requests": [
      [
        "OFSProcessingBean.processMessage:SWAL",
        {
          "name": "OFSProcessingBean.processMessage:SWAL",
          "id": "ejba3fa8a9770571f56f9d78d1522845b4aa79e03a8",
          "hits": 690,
          "durationsSum": 138060,
          "durationsSquareSum": 329217298,
          "maximum": 7520,
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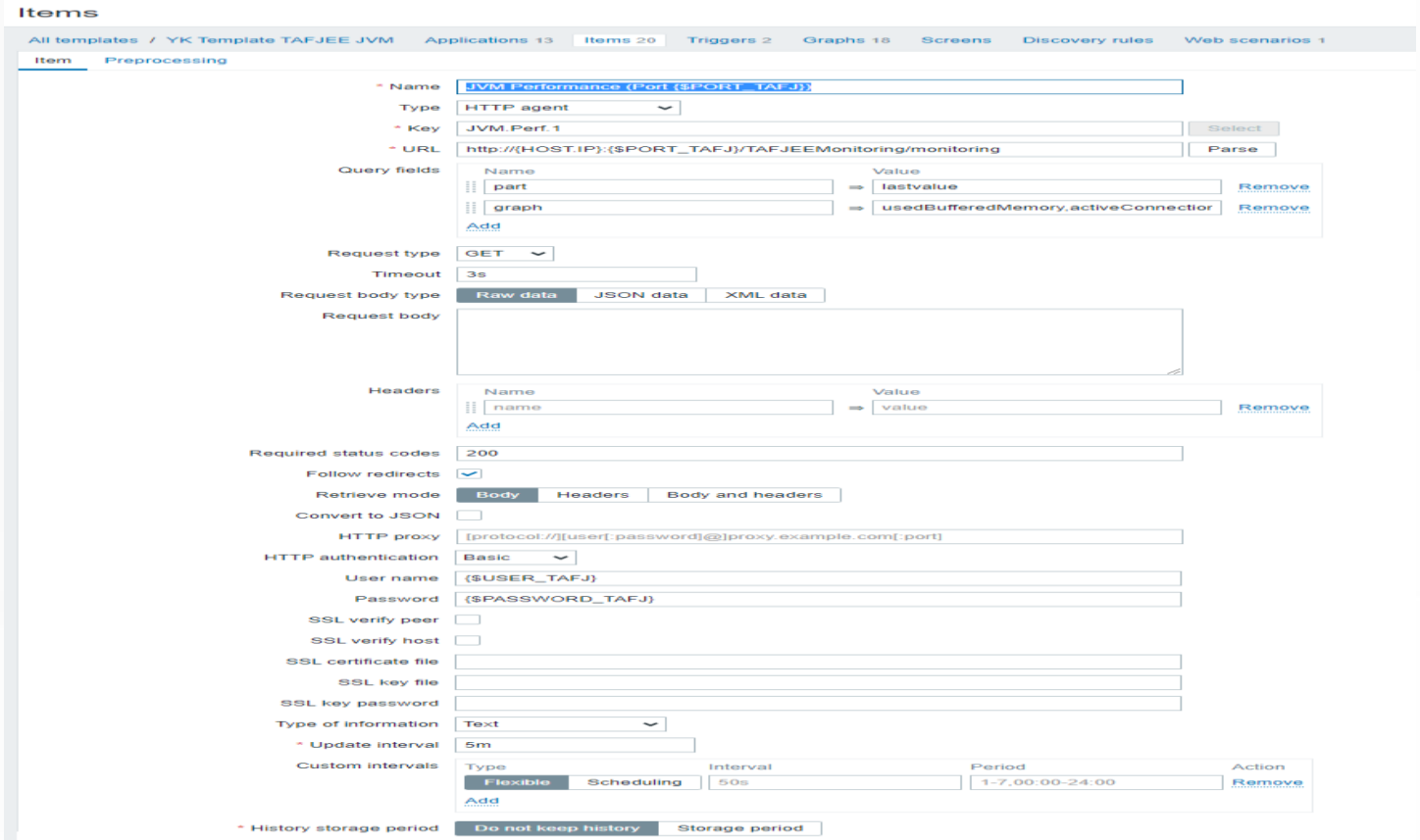
Monitoring Performances JVM

Performances JVM

Elément maître



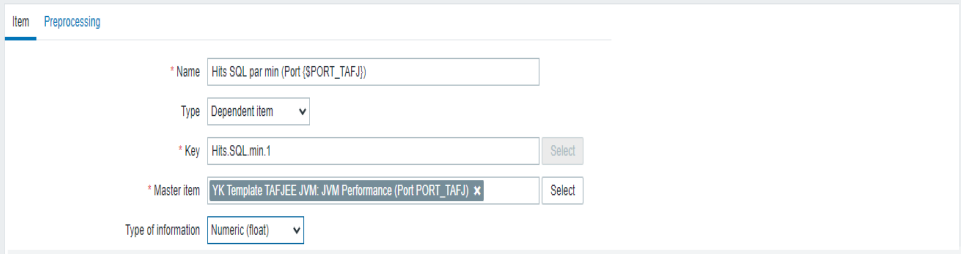
Performances JVM

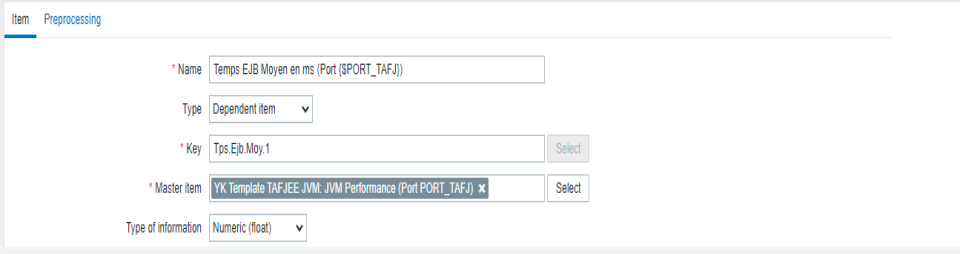
Eléments dépendants

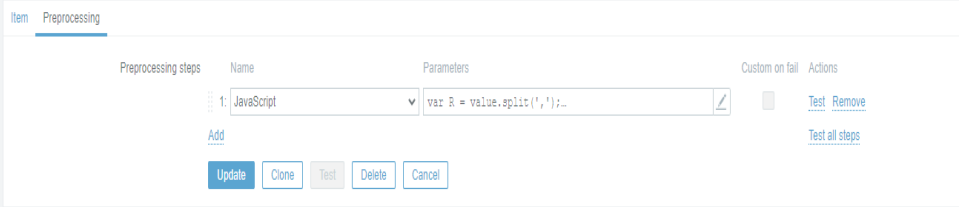
JVM Performance (Port PORT_TAFJ): Hits SQL par min (Port PORT_TAFJ)	Hits.SQL.min.1	30d	365d	Dependent item	JVM SQL
JVM Performance (Port PORT_TAFJ): Transactions par min (Port PORT_TAFJ)	Trans.Rate.1	30d	365d	Dependent item	JVM Transactions
JVM Performance (Port PORT_TAFJ): Temps Ramasse Miette (%) (Port PORT_TAFJ)	Tps.Rms.Mt.1	30d	365d	Dependent item	JVM Tps Ramasse Miette
JVM Performance (Port PORT_TAFJ): Temps EJB Moyen en ms (Port PORT_TAFJ)	Tps.Ejb.Moy.1	30d	365d	Dependent item	JVM EJB
JVM Performance (Port PORT_TAFJ): System Load (Port PORT_TAFJ)	Sys.Load.1	30d	365d	Dependent item	JVM System
JVM Performance (Port PORT_TAFJ): Buffered Memory Used (Port PORT_TAFJ)	Buffered.Memory.Used.1	30d	365d	Dependent item	JVM Memory
JVM Performance (Port PORT_TAFJ): Used Non Heap Memory (Port PORT_TAFJ)	Used.NonHeap.Memory.1	30d	365d	Dependent item	JVM Memory
JVM Performance (Port PORT_TAFJ): JDBC Used Connections (Port PORT_TAFJ)	Jdbc.Used.Cnx.1	30d	365d	Dependent item	JVM JDBC
JVM Performance (Port PORT_TAFJ): Tps SQL Moyen en ms (Port PORT_TAFJ)	Get.Sql.Tps.1	30d	365d	Dependent item	JVM SQL
JVM Performance (Port PORT_TAFJ): Free Disk Space (Port PORT_TAFJ)	Disk.Free.1	30d	365d	Dependent item	JVM Disques
JVM Performance (Port PORT_TAFJ): Erreurs SQL (%) (Port PORT_TAFJ)	Get.Sql.Error.Perct.1	30d	365d	Dependent item	JVM SQL
JVM Performance (Port PORT_TAFJ): Nombre de Threads (Port PORT_TAFJ)	Get.Nbr.thrd.1	30d	365d	Dependent item	JVM Threads
JVM Performance (Port PORT_TAFJ): Nombre de Classes Chargées (Port PORT_TAFJ)	Get.Nbr.Cls.Load.1	30d	365d	Dependent item	JVM Classes
JVM Performance (Port PORT_TAFJ): Memory Used (Port PORT_TAFJ)	Get.Memory.Used.1	30d	365d	Dependent item	JVM Memory
JVM Performance (Port PORT_TAFJ): Hits EJB par min (Port PORT_TAFJ)	Get.Ejb.Hits.1	30d	365d	Dependent item	JVM EJB
JVM Performance (Port PORT_TAFJ): Threads Actifs (Port PORT_TAFJ)	Get.Cnx.thrd.Act.1	30d	365d	Dependent item	JVM Threads
JVM Performance (Port PORT_TAFJ): Connexions JDBC Actives (Port PORT_TAFJ)	Get.Cnx.Jdbc.Act.1	30d	365d	Dependent item	JVM JDBC
JVM Performance (Port PORT_TAFJ): Erreurs EJB (%) (Port PORT_TAFJ)	Ejb.Error.1	30d	365d	Dependent item	JVM EJB

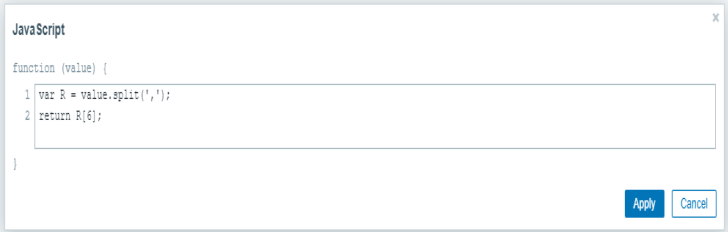
Performances JVM

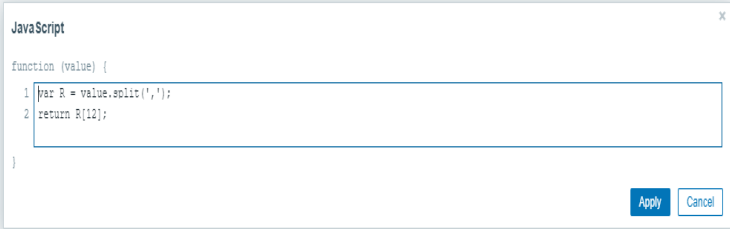
Eléments dépendants











Monitoring Performances EJB

Performances EJB

Règle de découverte

Discovery rule | Preprocessing | LLD macros | Filters | Overrides

* Name: TAFJEE EJB Requests Statistics Discovery [{$PORT_TAFJ}]

Type: External check

* Key: TAFJEE_EJB_Requests_Statisctics_Discovery.sh["{HOST.IP}","{$PORT_TAFJ}","{$

* Update interval: 1h

Custom intervals

Type	Interval	Period	Action
Flexible / Scheduling	50s	1-7,00:00-24:00	Remove

Add

* Keep lost resources period: 1d

Description:

Enabled: ☑

Update | Clone | Test | Delete | Cancel

```
#!/bin/bash
SERVEUR=$1
PORT=$2
USER=$3
PWD=$4
FICHIER_TMP=/tmp/ZABBIX_TAFJEE/javamelody_tafjee_Requests_EJB_$SERVEUR-$PORT.json
curl -s --user $3:$4 "http://$SERVEUR:$PORT/TAFJEEMonitoring/monitoring?format=json&period=jour" | jq '.list[3].requests' > ${FICHIER_TMP}
NB=`cat ${FICHIER_TMP} | jq '. | length'`
NB=$((NB-1))
echo '{ "data":[ '
i=0
while ((i < $NB))
do
REQ=`cat ${FICHIER_TMP} | jq ".[$i][1].name"`
  echo '{ "{#INDEX}":"'$i'", "{#REQ}":'$REQ'},'
  ((i+=1))
done
REQ=`cat ${FICHIER_TMP} | jq ".[$i][1].name"`
echo '{ "{#INDEX}":"'$i'", "{#REQ}":'$REQ'}'
echo ']}'
```

Discovery rule | Preprocessing | LLD macros | Filters | Overrides

Type of calculation: And — A and B and C and D and E and F and G

Filters

Label	Macro		Regular expression	Action
A	{#REQ}	does not match	OFSProcessingBean.processMessage:SWAL	Remove
B	{#REQ}	does not match	OFSProcessingBean.processMessage:IRISINTERNAL	Remove
C	{#REQ}	does not match	OFSProcessingBean.processMessage:GCS	Remove
D	{#REQ}	does not match	OFSProcessingBean.processMessage:BROWSERTC	Remove
E	{#REQ}	does not match	OFSProcessingBean.processMessage:PN.OFS	Remove
F	{#REQ}	does not match	CallAtProcessingBean.processRequest:JAVA.FRAME	Remove
G	{#REQ}	does not match	DebuggerAcceptorBean.getRemoteDebugger:N/A	Remove

Add

Update | Clone | Test | Delete | Cancel

Performances EJB

Règle de découverte – Résultat


```
[
  [
    "CallAtProcessingBean.processRequest:JAVA.FRAMEWORK",
    {
      "name": "CallAtProcessingBean.processRequest:JAVA.FRAMEWORK",
      "id": "ejb6c1575c6ce3a0a249607caee5eb66b21fe7d5721",
      "hits": 642,
      "durationsSum": 322824,
      "durationsSquareSum": 299052902,
      "maximum": 720,
      "cpuTimeSum": 9959,
      "systemErrors": 0,
      "responseSizesSum": -642,
      "childHits": 0,
      "childDurationsSum": 0
    }
  ],
  [
    "OFSProcessingBean.processMessage:SWAL",
    {
      "name": "OFSProcessingBean.processMessage:SWAL",
      "id": "ejba3fa8a9770571f56f9d78d1522845b4aa79e03a8",
      "hits": 7,
      "durationsSum": 694,
      "durationsSquareSum": 102188,
      "maximum": 267,
      "cpuTimeSum": 71,
      "systemErrors": 0,
      "responseSizesSum": -7,
      "childHits": 0,
      "childDurationsSum": 0,
      "childRequestsExecutionsByRequestId": [
        [
          "ejb76836d2bf2aa51032e4f25a843fd491f142f4b57",
          1
        ]
      ]
    }
  ],
  [
    "OFSProcessingBean.processRequest:GCS",
    {
      "name": "OFSProcessingBean.processRequest:GCS",
      "id": "ejb085552b2b6b5f0236076e07b70912cc121bald3e",
      "hits": 525,
      "durationsSum": 110928,
```

```
[
  [
    "OFSProcessingBean.processMessage:BROWSERTC",
    {
      "name": "OFSProcessingBean.processMessage:BROWSERTC",
      "id": "ejb575b3f84ee1b3ffc0135cbd1852fcd51f1d2ebd4",
      "hits": 1757,
      "durationsSum": 4326430,
      "durationsSquareSum": 1957505026946,
      "maximum": 376912,
      "cpuTimeSum": 167520,
      "systemErrors": 0,
      "responseSizesSum": -1757,
      "childHits": 0,
      "childDurationsSum": 0,
      "childRequestsExecutionsByRequestId": [
        [
          "ejb76836d2bf2aa51032e4f25a843fd491f142f4b57",
          10
        ]
      ]
    }
  ],
  [
    "OFSProcessingBean.processMessage:IRISINTERNAL",
    {
      "name": "OFSProcessingBean.processMessage:IRISINTERNAL",
      "id": "ejb53f2594e1cbf6c43562d9f0daf3811b40e1ee279",
      "hits": 282,
      "durationsSum": 38149,
      "durationsSquareSum": 5670281,
      "maximum": 392,
      "cpuTimeSum": 6655,
      "systemErrors": 0,
      "responseSizesSum": -282,
      "childHits": 0,
      "childDurationsSum": 0
    }
  ],
  [
    "DebuggerAcceptorBean.getRemoteDebugger:N/A",
    {
      "name": "DebuggerAcceptorBean.getRemoteDebugger:N/A",
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      "hits": 10,
      "durationsSum": 5,
```
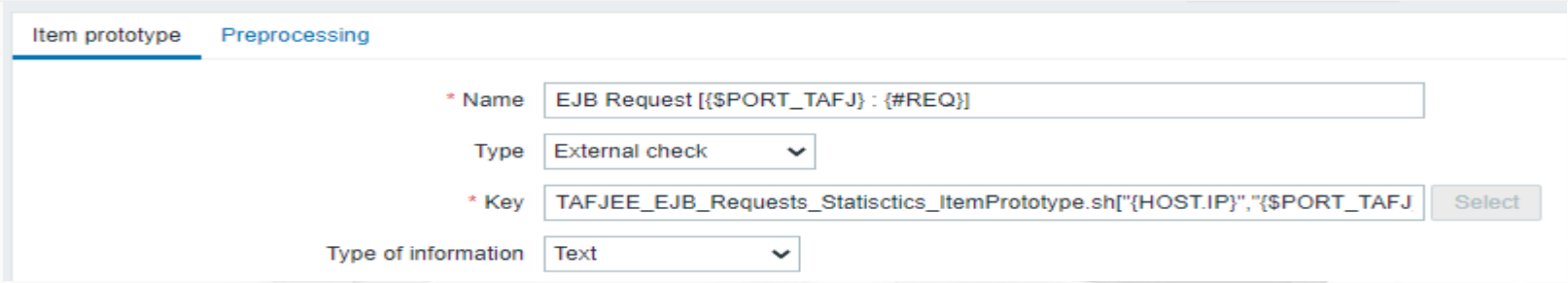
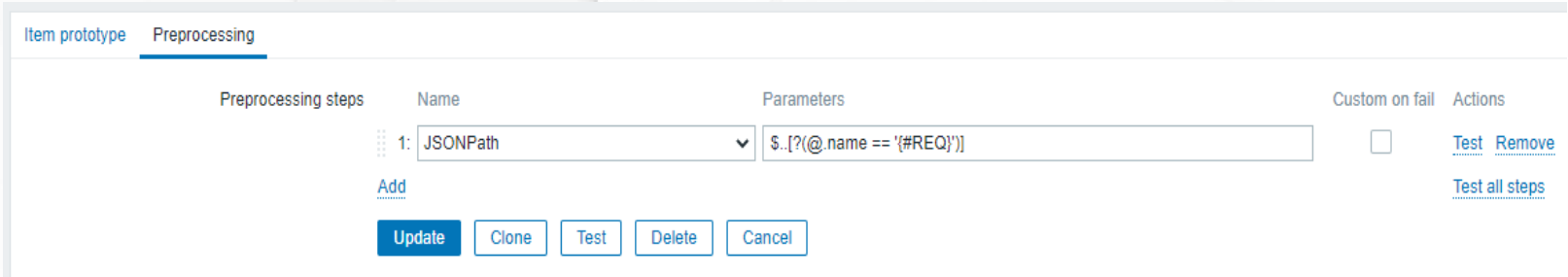

Performances EJB

Prototype d'élément maître




```
#!/bin/bash
SERVEUR=$1
PORT=$2
INDEX=$3
FICHIER_TMP=/tmp/ZABBIX_TAFJEE/javamelody_tafjee_Requests_EJB_$SERVEUR-$PORT.json
REQ=`cat ${FICHIER_TMP}`
echo $REQ
```



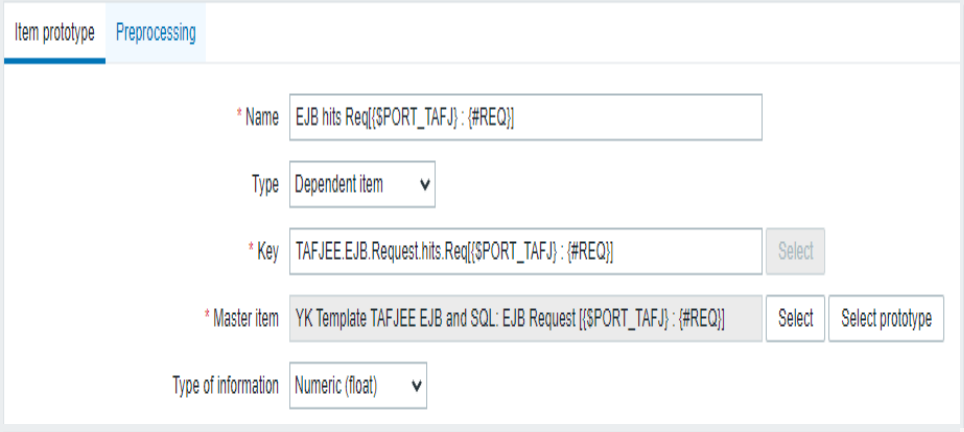
Performances EJB

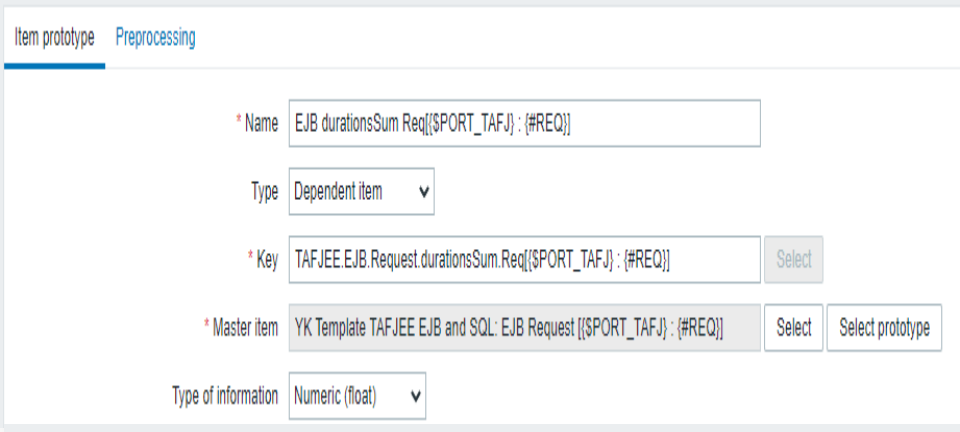
Prototypes d'éléments dépendants

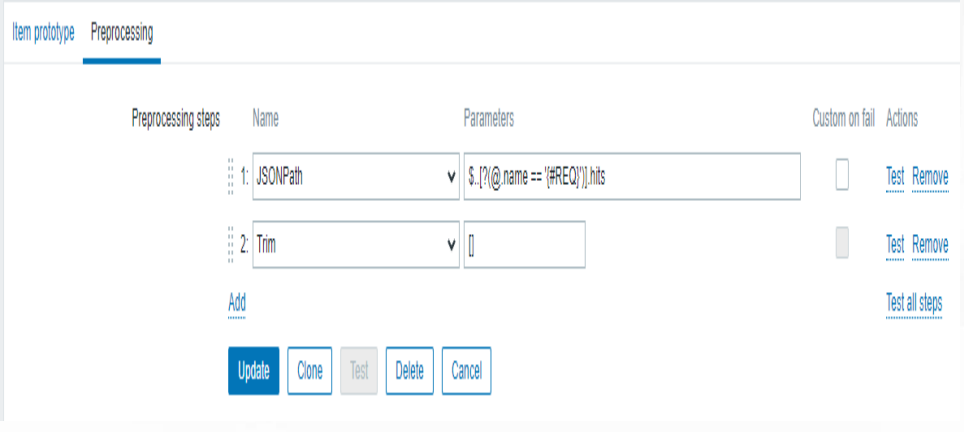
Wizard	Name ▲	Key	Interval	History	Trends	Type
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB childDurationsSum Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.childDurationsSum.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB childHits Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.childHits.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB childRequestsExecutionsByRequestId Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.childRequestsExecutionsByRequestId.Req[{$PORT_TAFJ} : {#REQ}]		3d		Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB cpuTimeSum Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.cpuTimeSum.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB durationsSquareSum Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.durationsSquareSum.Req[{$PORT1} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB durationsSum Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.durationsSum.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB hits Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.hits.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB id Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.id.Req[{$PORT_TAFJ} : {#REQ}]		30d		Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB maximum Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.maximum.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB name Req [{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.name.Req[{$PORT_TAFJ} : {#REQ}]		30d		Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB responseSizesSum Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.responseSizesSum.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item
•••	EJB Request [{$PORT_TAFJ} : {#REQ}]: EJB systemErrors Req[{$PORT_TAFJ} : {#REQ}]	TAFJEE.EJB.Request.systemErrors.Req[{$PORT_TAFJ} : {#REQ}]		30d	365d	Dependent item

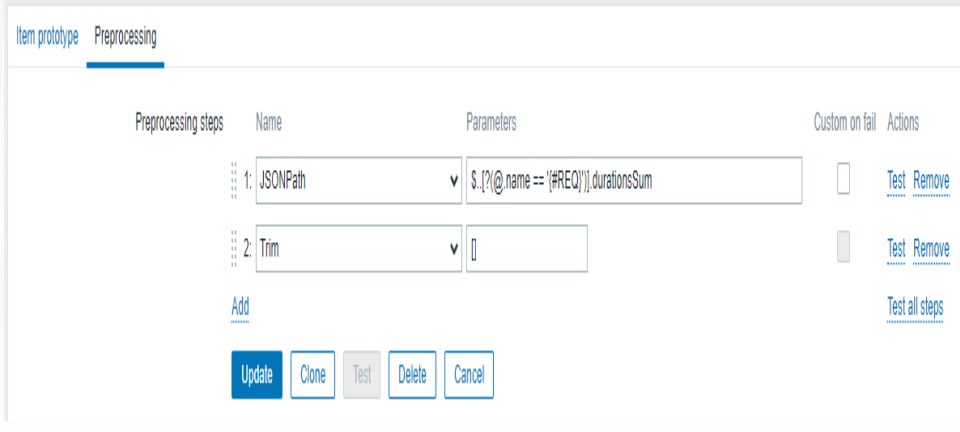
Performances EJB

Prototypes d'éléments dépendants





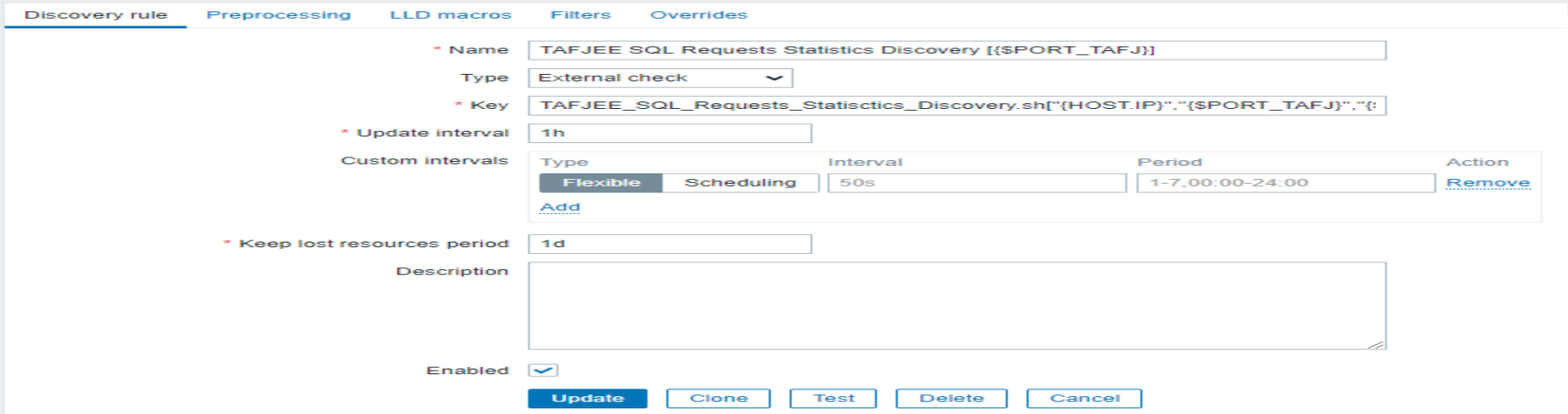




Monitoring Performances SQL

Performances SQL

Règle de découverte




```
#!/bin/bash
SERVEUR=$1
PORT=$2
USER=$3
PWD=$4
FICHIER_TMP=/tmp/ZABBIX_TAFJEE/javamelody_tafjee_Requests_SQL_$SERVEUR-$PORT.json
curl -s --user $3:$4 "http://$SERVEUR:$PORT/TAFJEEMonitoring/monitoring?format=json&period=jour" | jq '[.list[1].requests[] | select(.[1].maximum >= 10000)]' > ${FICHIER_TMP}
NB=`cat ${FICHIER_TMP} | jq '. | length'`
NB=$(($NB-1))
echo '{ "data":[ '
i=0
while ((i < $NB))
do
REQID=`cat ${FICHIER_TMP} | jq ".[$i][1].id"`
  echo '{ "{#INDEX}":"'$i'", "{#REQID}":'$REQID'},'
  ((i+=1))
done
REQID=`cat ${FICHIER_TMP} | jq ".[$i][1].id"`
echo '{ "{#INDEX}":"'$i'", "{#REQID}":'$REQID'}'
echo ']}'
```

Performances SQL

Prototype d'élément maître

Item prototype | Preprocessing

* Name: SQL Request [{$PORT_TAFJ} : {#INDEX}]

Type: External check

* Key: TAFJEE_SQL_Requests_Statisctics_ItemPrototype.sh["{HOST.IP}","{$PORT_TAFJ Select

Type of information: Text

* Update interval: 5m

```
1  #!/bin/bash
2  SERVEUR=$1
3  PORT=$2
4  INDEX=$3
5  FICHIER_TMP=/tmp/ZABBIX_TAFJEE/javamelody_tafjee_Requests_SQL_$SERVEUR-$PORT.json
6  REQ=`cat ${FICHIER_TMP}`
7  echo $REQ
```

Item prototype | Preprocessing

Preprocessing steps	Name	Parameters	Custom on fail	Actions
1:	JSONPath	$.[{#INDEX}]	☐	Test Remove

Add Test all steps

Update Clone Test Delete Cancel

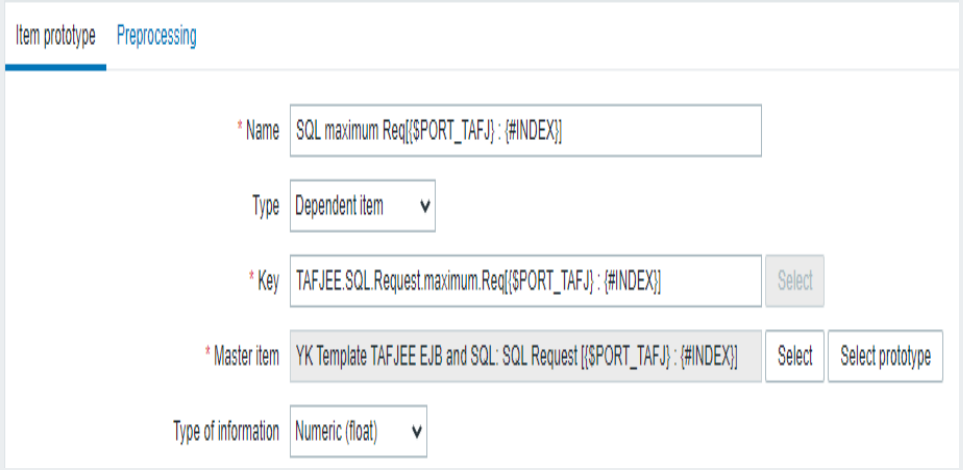
Performances SQL

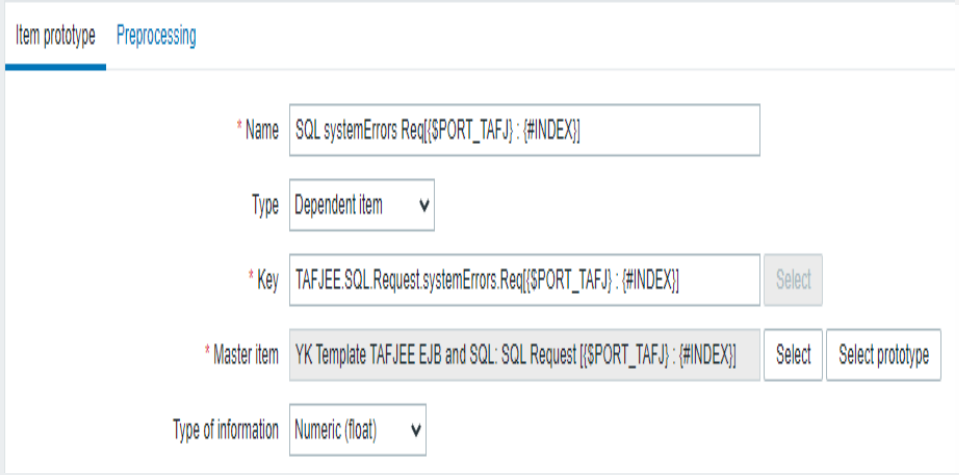
Prototypes d'éléments dépendants

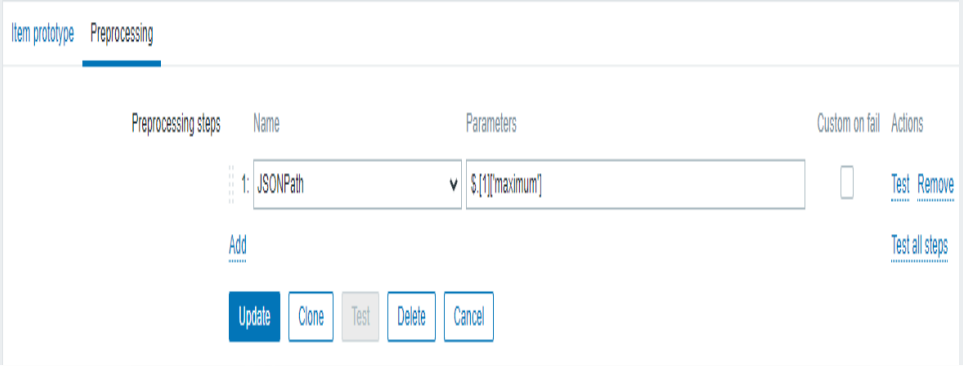
Wizard	Name ▲	Key	Interval	History	Trends	Type
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL childDurationsSum Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.childDurationsSum.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL childHits Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.childHits.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL cpuTimeSum Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.cpuTimeSum.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL durationsSquareSum Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.durationsSquareSum.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL durationsSum Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.durationsSum.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL hits Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.hits.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL id Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.id.Req[{$PORT_TAFJ} : {#INDEX}]		3d		Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL maximum Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.maximum.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL name Req [{$PORT_TAFJ} : {#INDEX} : {#REQID}]	TAFJEE.SQL.Request.name.Req[{$PORT_TAFJ} : {#INDEX} : {#REQID}]		3d		Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL responseSizesSum Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.responseSizesSum.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item
•••	SQL Request [{$PORT_TAFJ} : {#INDEX}]: SQL systemErrors Req[{$PORT_TAFJ} : {#INDEX}]	TAFJEE.SQL.Request.systemErrors.Req[{$PORT_TAFJ} : {#INDEX}]		3d	365d	Dependent item

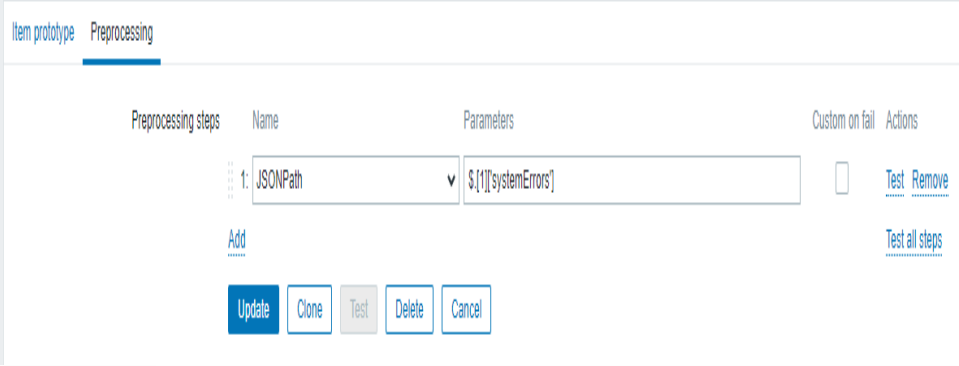
Performances SQL

Prototypes d'éléments dépendants



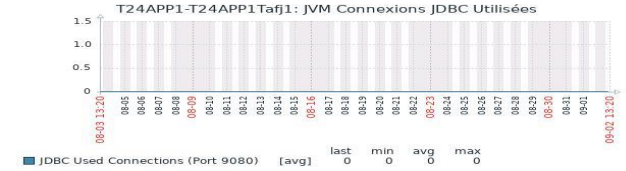


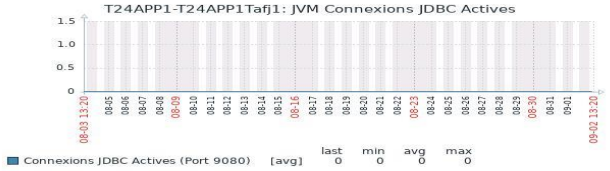


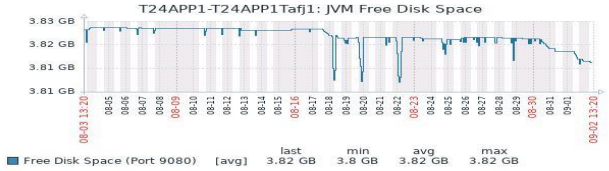


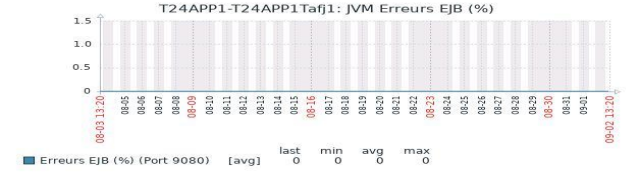
Dashboard global

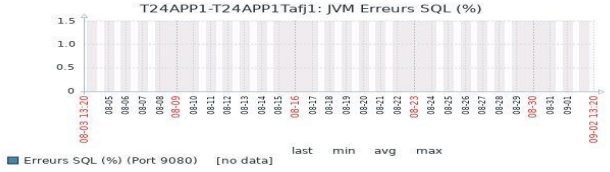
Ecran Zabbix

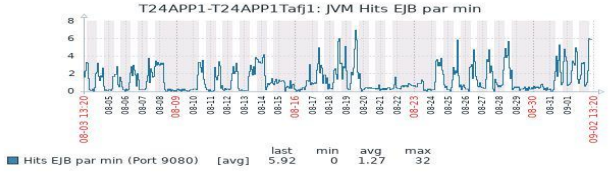


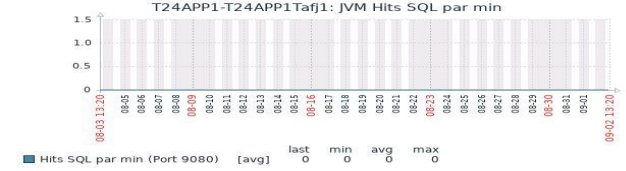


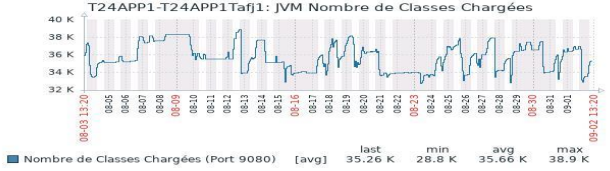


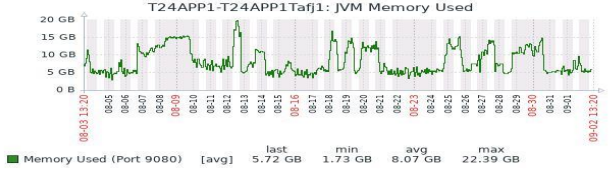


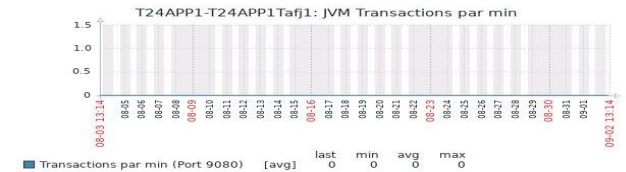


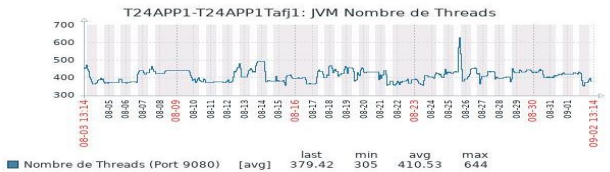


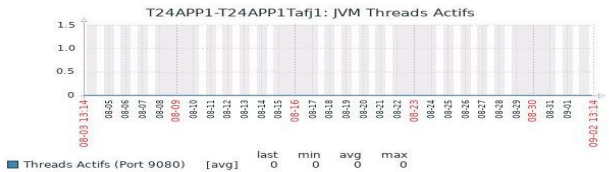


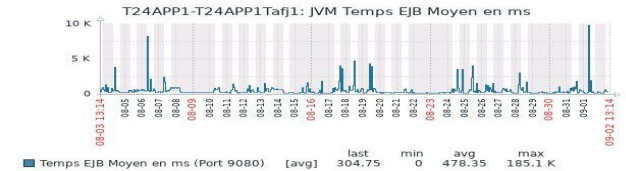


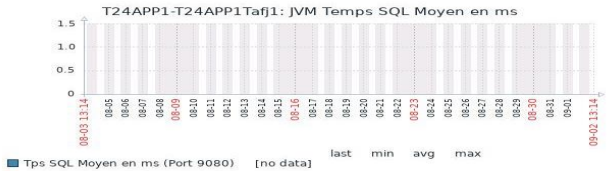


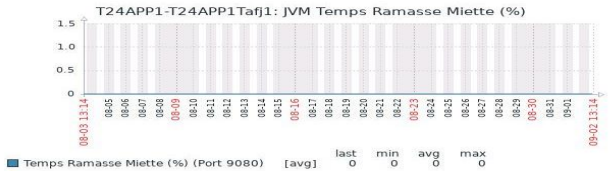












ZABBIX
Merci pour
votre attention