

Enable JMX Operations - Proposal 22 May 2018

- Customer Acceptance
- Out of scope

Customer Acceptance

ZBXNEXT-1142 - Getting issue details... STATUS

1. Add support of JMX operations monitoring with *String parameters*.
2. To execute operations on Zabbix java gateway, user shall be able to specify object name, operation and optional parameter or parameters for operation:

Example to be filled by user

```
jmx_operation["<object name>", "<operation>", ["<Parameter-0>", "  
<Parameter-1>"]]
```

Get the name of the log level associated with the specified logger.

```
jmx_operation["java.util.logging:type=Logging", "getLoggerLevel"]
```

The screenshot displays the Java Monitoring & Management Console interface. The main window title is "Java Monitoring & Management Console". The connection is identified as "pid: 14847 com.example.mbeans.Main". The "MBeans" tab is active, showing a tree view on the left and a detailed view on the right.

The tree view on the left shows the following structure:

- JMImplementation
 - com.example.mbeans
 - Hello
 - Attributes
 - Operations
 - sayHello
 - add
 - com.sun.management
 - java.lang
 - java.nio
 - java.util.logging
 - Logging
 - Attributes
 - ObjectName
 - LoggerNames
 - Operations
 - getLoggerLevel (selected)
 - setLoggerLevel
 - getParentLogger

The detailed view on the right shows the "Operation invocation" for "getLoggerLevel" with a parameter "p0" of type "String". Below this are two tables:

MBeanOperationInfo

Name	Value
Operation:	
Name	getLoggerLevel
Description	getLoggerLevel
Impact	UNKNOWN
ReturnType	java.lang.String
Parameter-0:	
Name	p0
Description	p0
Type	java.lang.String

Descriptor

Name	Value
Operation:	
openType	javax.management.openmbean.SimpleType(name=java.lang.String)
originalType	java.lang.String
Parameter-0:	
openType	javax.management.openmbean.SimpleType(name=java.lang.String)
originalType	java.lang.String

- Only primitive return data type (an integer, a string etc.) is supported.
- Only string parameters will be supported, so following will result in unsupported item if parameters are not strings.

```
jmx_operation["com.example.mbeans:type=Hello", "add", [1, 2]]
```

Out of scope

- It would be nice to support other parameter types

```
jmx_operation["<object name>", "<operation>", ["<Parameter-0>", "<Parameter-1>"], ["<Parameter-0-Type>", "<Parameter-1-Type>"]]
```

Add 2 integers

```
jmx_operation[ "com.example.mbeans:type=Hello", "add", [ "1", "2" ], [ "int", "int" ] ]
```

The screenshot shows the Java Monitoring & Management Console interface. The title bar reads "Java Monitoring & Management Console". Below the title bar is a menu bar with "Connection", "Window", and "Help". The main window title is "pid: 14847 com.example.mbeans.Main".

The interface is divided into several sections:

- Overview Tab:** Contains a tree view of the MBean hierarchy. The "Hello" MBean is expanded, and the "add" operation is selected.
- Operation invocation:** Shows the operation name "add" and its parameters: "p1" with value "0" and "p2" with value "0".
- MBeanOperationInfo:** A table listing the operation's metadata.
- Descriptor:** A table for the operation's descriptor.

Name	Value
Operation:	
Name	add
Description	Operation exposed for management
Impact	UNKNOWN
ReturnType	int
Parameter-0:	
Name	p1
Description	
Type	int
Parameter-1:	
Name	p2
Description	
Type	int

Name	Value
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pid: 14847 com.example.mbeans.Main