Trace Manager integration OpenScape FM/PM

In addition to QDC/QoS traps send directly by the phones, the trace manager can be used as source of QoS data for the performance management (PM) of OpenScape FM. This document describes the steps to connect the PM to the trace manager.

Preparation of the trace manager

Remote Access

The QoS data is collected by an OpenScape FM system management (SM) agent. This agent can be installed locally on the trace manager or on a separate system. If the agent is installed on a separate system (e.g. the internal agent of the OpenScape FM server is used), the trace manager has to be configured to allow remote access.

Locate the file "trustedIP.txt" (standard location C:\MTC\Config) and add the IP address of the machine where the SM agent is running. If the internal agent of the OpenScape FM server is used, enter the address of the OpenScape FM server.

SQL queries

The SM agent will execute three SQL queries to request the QoS data and information about the related IP phones. The queries are pre-defined in the trace manager since version V8R0.1.3.

Connecting OpenScape FM/PM to the trace manager

Log into the FM client and select "Add-Ons"->"Performance Management WebClient", or open https://<FM-server>:3043 in a web browser and click on "Performance Management"

Note: If you get an error message about "DataTypes", please clear the browser cache, close the PM tab and invoke it again.

In the PM Web-UI, navigate to the tab "Configuration" and click on "Trace Manager". Then press the "Add" button (see Figure 1).
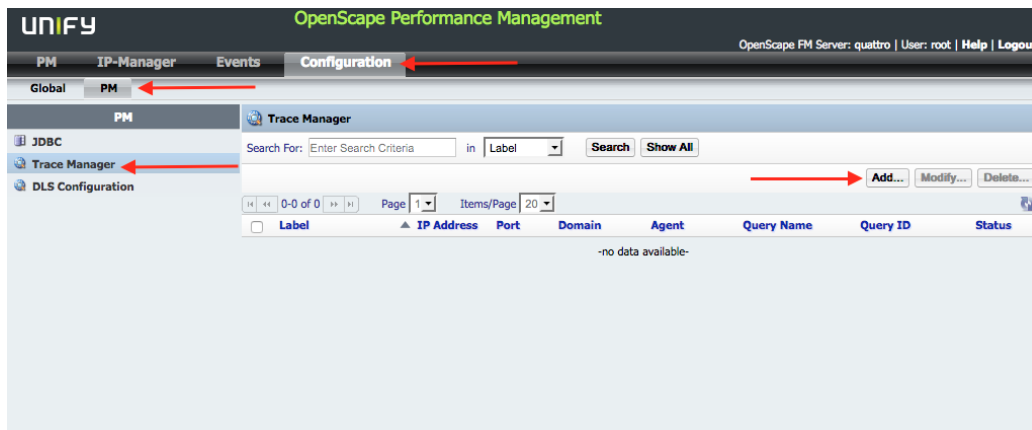

Figure 1

Configure the TM connection (By default, the query for new QoS data is performed every 5 minutes). The following parameters have to be specified (see Figure 2):

- Domain
  The domain specifies the SM agent which will perform the trace manager queries

- Label
  An arbitrary name for this trace manager

- Trace Manager
  IP address or host name of the trace manager

- Port
  Port of the web interface of the trace manager, usually 28081

- Query Name
  The name of the Trace Manager SQL query for the table "PerfData". Pre-defined query in TM is "QoS PerfData"

- CallID
  Query Name The name of the Trace Manager SQL query for the table "CallId". Pre-defined query in TM is "QoS CallID-PerfData"

- Call Association Query Name
  The name of the Trace Manager SQL query for the table "CallAssociations. Pre-defined query in TM is "QoS CallAssociations-PerfData"

- Limit
  The number of imported data sets per query will be limited to this number

- Import data since
  This date is used only used for the first query. In all subsequent queries, only the data since the last query will be fetched. This is a required field.

Figure 2

After pressing the save button, a new trace manager import monitor will be created on the selected agent/domain. This can take some time, so please be patient. All data sets since the date configured at "Import data since" will be queried. After this, the trace manager monitor retrieves the data since the last import every five minutes.

Note:

When a large number of endpoints should be monitored, Performance Management queries to the Trace Manager may take significant time. In this case, it is suggested to use "Daily" as the selected DB partition. Section 7.24.4 of

the OpenScape Voice V7, Trace Manager, Service Documentation contains information on how to change the DB partition

Defining import filters

If not all QoS data from the TM should be imported, filters for specific subscriber numbers can be defined. It is possible to define two different types of filters: An accept filter and an ignore filter.

Accept filter:

A regular expression which is applied to the local subscriber number (usually the field "DNA"). If it does not match, the data set is ignored. This has lower priority than the ignore filter. Make sure that no conflicting filters are defined.

Example: 0049.*

Description: Accepts only data for subscriber numbers starting with 0049

Ignore filter:

A regular expression which is applied to the local subscriber number (usually the field "DNA"). If it does match, the data set is ignored. This filter has priority over the accept filter. Make sure that no conflicting filters are defined.

Example: 0049.*

Description: Discards data for subscriber numbers starting with 0049

Note:

The filters use Java regular expressions. The syntax is described e.g. in the Java API documentation.

There are two ways how these filters can be defined: Via the Java client or by editing a configuration file. Both options are described in the following.

Defining filters via the Java client

Log in to the Java client and locate the system management agent on which the trace manager import monitor was defined. The agent corresponds to the domain which was selected during the creation of the TM connection. In this example, quattro.one.matera.com.
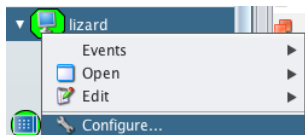
Figure 3

Below the SM agent IP node, locate the trace manager import monitor with the label defined during the creation of the monitor, in this example "lizard".
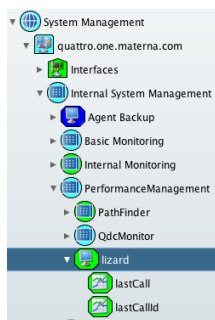
Right click on the trace manager import monitor symbol and select "Configure" from the popup menu


Navigate to the tab "Sensor". Here you can define the regular expression for acceptFilter and ignoreFilter like shown in the screen shot. E.g. select the line 12 (acceptFilter) and enter the regular expression "0049.*" in the text field at the right. Then, click the disk symbol. After clicking the "Ok" button at the bottom, the changes are applied and the trace manager import monitor will only accept QoS data records for subscriber numbers starting with "0049" (the SM agent will be restarted automatically).
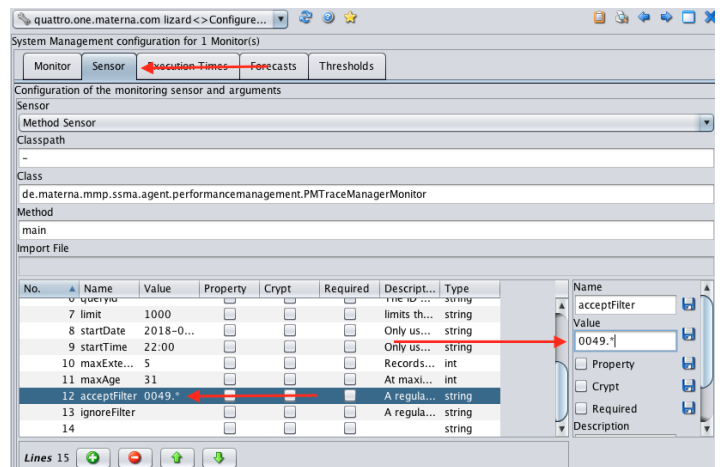

Defining filters via configuration file

Log in to the computer which runs the SM agent which was selected during the creation of the trace manager import monitor. In this example, it was "quattro.one.materna.com":
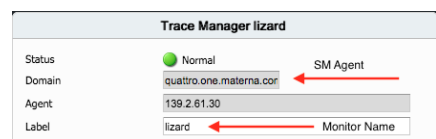
The configuration file is located in the agent's installation directory below ssma/conf/PerformanceManagement. If the OpenScape FM internal agent was used, this directory is located below the installation directory of the OpenScape FM server.

This directory contains a file named like the label (Monitor Name) which was used during the creation of the trace manager import monitor. In this example, the label was "lizard".
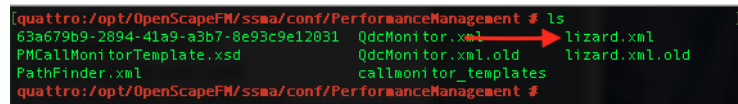
Open the file using your favourite text editor (make sure that encoding and line endings are not changed !) and locate e.g. the argument "acceptFilter". Here, you can enter the desired regular expression, e.g. 0049.* as shown in the screen shot:

```
<argument name="maxExtensionLength" required="false" type="int">5<comment>Records with call numbers of this length or s
</argument>
<argument name="maxAge" required="false" type="int">31<comment>At maximum, retrieve the data for the last maxAge days</
</argument>
<argument name="acceptFilter" required="false" type="string">0049.*<comment>A regular expression which is applied to th
            subscriber number. If it does not match, the data set
            is ignored. This has lower priority than the ignoreFilter.
            Make sure that no conflicting filters are defined.
            Example: 0066.*
            Description: Accepts only data for subscriber numbers
            starting with 0066</comment>
</argument>
```

With a filer expression like this, the trace manager import monitor will only accept QoS data records for subscriber numbers starting with "0049".

To make the changes take effect, the SM agent has to be restarted. This can be done via the Java client or by restarting the related service on OS level.

To restart the SM agent via the Java client, locate the related SM agent object and select "Restart Agent" from it's popup menu. *This is the preferred way if you have used the internal SM agent of the OpenScape FM server, because otherwise, you would have to restart the complete OpenScape FM server service.*
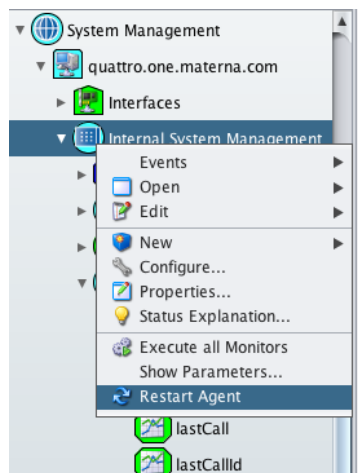
If you have configured the trace manager import monitor on an external SM agent, you can alternatively restart the related service on OS level. On Windows, this is the service "OpenScape System Management Agent" which can be restarted via the Windows services control.

On Linux, it is the service
`OpenScapeSystemManagementAgent`, which can be restarted like this:

`service OpenScapeSystemManagementAgent restart`

If this is not working, you can use the stop-/start scripts directly like this (assuming the default installation path):

`/opt/OpenScapeSystemManagementAgent/stopAgent`

`/opt/OpenScapeSystemManagementAgent/startAgent`

Trouble shooting

1) Connection to trace manager fails

If the status of a Monitor is not "Normal", left-click on it and look at the field "Message".

You see the URLs which are used to query the Trace Manager. To check if they are working, copy one of them in to the URL field of a browser and open it. The result should be some JSON text. If it is not working, check the file "trustedIP.txt" on the Trace Manager for necessary IP addresses. If the queries are working but the result is empty, check if the Trace Manager tables "PerfData", "CallID" and "CallAssociations" contain data for the relevant time interval.
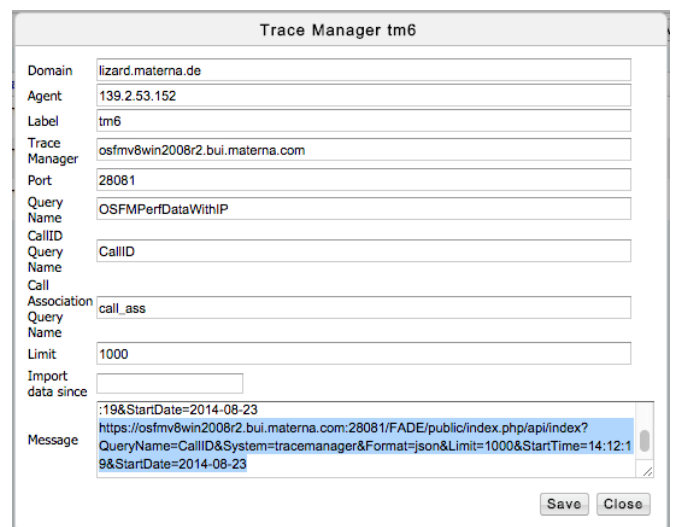
2) Connection to Trace Manager works, but no data is written into the database

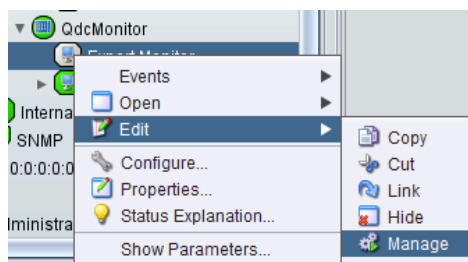Make sure that the following monitors are set to "managed":

Wrong (unmanaged)
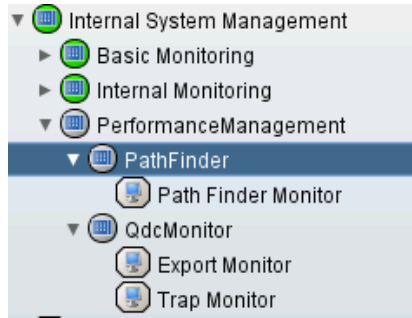
Correct (managed)

To set a monitor to the "managed" state, select "Edit->Manage" from it's popup menu:

If the menu item "Manage" is not available, invoke "Server->Administration->License Manager->License Information" from the main menu bar. If the menu item "Manage" is still not available, check if the Performance Management License is "OK":