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# HP Service Quality Management Solution V3.2



## TeMIP Service Adapter Installation and Configuration Guide

**Edition: 1.0**

**For Microsoft Windows and Linux Operating System**

**Jun 2014**

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# Preface

This document provides reference information to help deploy and configure the HP SQM Solution TeMIP Service Adapter.

The HP SQM Solution TeMIP Service Adapter is a mandatory software component to make SQM-TeMIP integration work properly.

This document only describes the TeMIP Service Adapter. Please refer to TeMIP Service Console related documents for more information.

## Intended Audience

This document is intended for Solution Architects, SQM-TeMIP Solution deployment team and SQM-TeMIP Solution administrators.

## Software version

Name	Version	Operating System	Description
<i>TeMIP Service Adapter</i>	3.2	Windows 2003 R2 SP2 Standard/Enterprise Servers; Windows 2008 SP2 Standard/Enterprise Servers; Windows 2008 R2 SP1 Standard/Enterprise Servers (64 bit); Red Hat Enterprise Linux AS/ES 5.3 and later minor versions (64 bit)	SQM Service Adapter for TeMIP

## Abbreviations and Acronyms

The following table defines abbreviations and acronyms used in this document.

Abbreviation or acronym	Meaning
<i>BSM</i>	HP Business Service Management
<i>BSMC</i>	BSM Connector
<i>BSM Entity Loader</i>	HP TeMIP to BSM Entity Loader
<i>BAF</i>	HP TeMIP to BSM Alarm Forwarder

<b>CMDB</b>	Configuration Management DataBase
<b>KPI</b>	Key Performance Indicator
<b>HI</b>	Health Indicator
<b>SA</b>	Service Adapter
<b>MA</b>	Monitoring Adapter
<b>SiS</b>	HP SiteScope
<b>SQM</b>	HP Service Quality Manager
<b>SMF</b>	Service Management Foundation
<b>TeMIP</b>	HP Telecommunication Management Platform
<b>TSC</b>	HP TeMIP Service Console

## Associated documents

The following documents contain useful reference information:

- *HP BSM Connector Deployment Guide*
- *HP BSM Using BSM Connector*
- *HP SQM Solution V3.2 TeMIP Service Adapter Release Notes*
- *HP TeMIP Service Console V6.4 Release Notes*
- *HP TeMIP Service Console V6.4 Installation Guide*

The HP SQM Solution documents are available at:

<http://support.openview.hp.com/selfsolve/manuals>

## Support

You can visit the HP Software support web site at:

<http://support.openview.hp.com/support.jsp>

This Web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online software support provides customer self-solving capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- Submit enhancement requests online
- Download software patches
- Submit and track progress on support cases
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

# Chapter 1

## Introduction

### 1.1 TeMIP Service Adapter Overview

HP SQM-TeMIP integration is a HP TeMIP and HP BSM based solution for monitoring the health of network links, service platforms and the services carried over the resources.

Using the data collected and published by the TeMIP (alarms), TeMIP Service Console continuously correlates them to maintain an up-to-date consolidated view of the operational state of all circuits and services that exist in the network. TSC send samples to TeMIP Service Adapter; TeMIP Service Adapter processes the received samples and generates Legacy Events or OMi Events to BSM.

To learn more about TSC, please read the *“The TeMIP Service Console Installation & Configuration Guide”*.

Below figure shows the overview of the SQM-TeMIP integration:

#### Note

TeMIP BSM Alarm Forwarder is a component of TSC: it collects TeMIP alarm and translates to TeMIP Service Adapter.

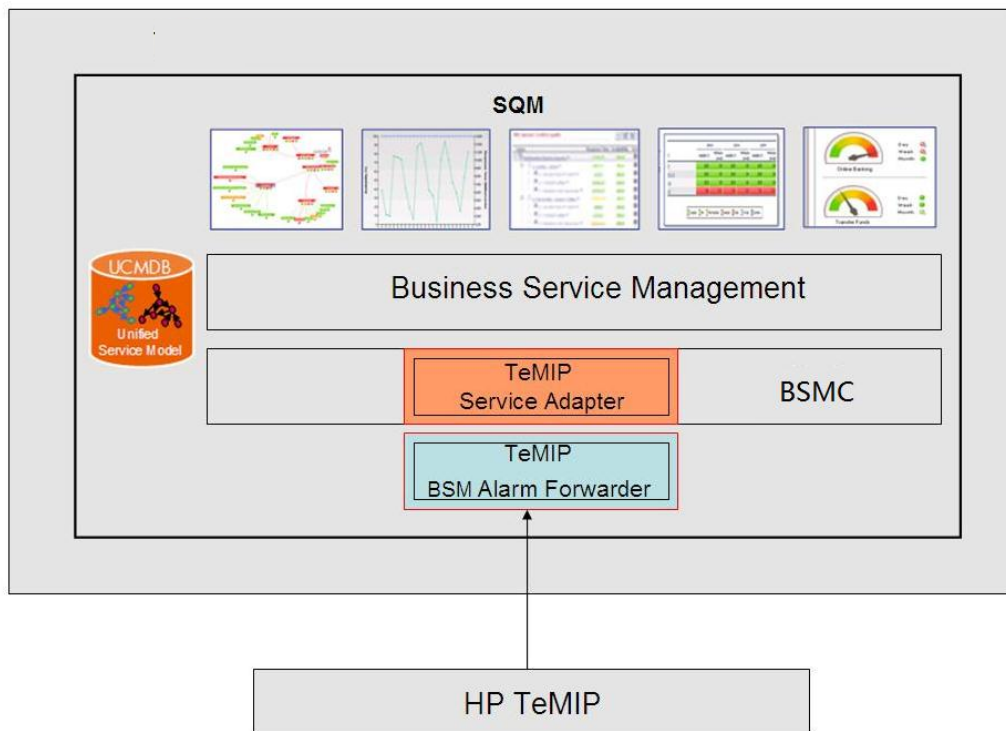


Figure 1 - TeMIP Service Adapter overview

The TeMIP Service Adapter is installed on BSM Connector server. The TeMIP Service Adapter is made of the following component:

- The TeMIP Monitoring Adapter

The TeMIP Service Adapters receive the normalized sample data from the TeMIP BSM Alarm Forwarder and published the data into BSM. These data will be used by BSM logic engine to calculate states for targeted CIs and impacted services.

## 1.2 Data Collection

The TeMIP Service Adapter collects the events sent by BAF and converts the events into BSM samples which are used to calculate HI and KPI status. The events are processed as soon as they arrive.

The TeMIP Service Adapter is delivered with a list of policies; each policy is responsible for collecting data for a special type HI/KPI. These HI/KPIs are pre-defined in the BSM and below is a list of the HI/KPIs based on the events sent by the BAF:

**Table 1 - List of HI/KPIs related to the TeMIP**

His/KPIs	Description
Communication Status	based on TeMIP Communications Alarm severity
Environmental Status	based on Environmental Alarm severity
Equipment Status	based on Equipment Alarm severity
Processing Error Status	based on Processing Error Alarm severity
Quality Of Service Status	based on Quality Of Service Alarm severity
Fault Status	based on any listed alarm severity

The mapping between the TeMIP events severity and the HI state used in TeMIP Service Adapter is as following table:

**Table 2 – Mapping of event severity and HI status**

Event severity	HI status
Critical	Critical
Major	Major
Minor	Minor
Warning	Warning
Indeterminate	Warning
Clear	OK
Unknown	No data

## 1.3 Code Signing

Below mentioned procedure\* allows you to assess the integrity of the delivered Product before installing it, by verifying the signature of the software packages.

Pick the signature (.sig) file shipped along with the product and use following GPG command  
`gpg --verify <product.sig> <product>`

Example: `gpg --verify SQMSolTEMV320RevA.zip.sig SQMSolTEMV320RevA.zip`

## Note: Look for the comments shown below in the command output

Good signature from "Hewlett-Packard Company (HP Code signing Service)"

## Note

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If you are not familiar with signature verification using GPG and intended to verify HP Product signature, follow the steps given below.

1. Check whether gnupg gpg is installed on the system. If no, install gnupg gpg
2. Configure GPG for accepting HP signature. The steps are the following:
  - a. Log as root on your system
  - b. Get the hpPublicKey from following location:

<https://h20392.www2.hp.com/portal/swdepot/displayProductInfo.do?productNumber=HPLinuxCodeSigning> and save it as hpPublicKey.pub

Note that the hpPublicKey file will be located in the root's home directory.

- c. Follow the instruction found at above URL in the "Verification using GPG" section.

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*\*HP strongly recommends using signature verification on its products, but there is no obligation. Customers will have the choice of running this verification or not as per their IT Policies.*



# Chapter 2

## Using TeMIP Service Adapter

This chapter describes how to use the TeMIP Service Adapter.

### 2.1 Pre-requisites

This section describes the software, hardware and configuration pre-requisites which need to be validated and implemented before start using the TeMIP Service Adapter.

#### 2.1.1 Hardware pre-requisites

The TeMIP Service Adapter should be unzipped and imported on the same server as BSMC.

The Server used to install BSMC and use TeMIP Service Adapter should have the following hardware requirements:

**Table 3 - Hardware pre-requisites**

Hardware element	Required capacity
Processor	800 MHZ or higher
Physical memory	1 GB minimum (2 GB+ recommended)
Hard disk	2 GB or more (10 GB+ recommended)

The requirements above are needed by BSMC and TeMIP Service Adapter and they must be added to the hardware requirements of the other softwares hosted by the Windows server.

#### 2.1.2 Software pre-requisites

The TeMIP Service Adapter has the following software requirements that must be **installed, configured and successfully started** before deploying the TeMIP Service Adapter:

**Table 4 – Software pre-requisites for windows**

Software	Version
Microsoft Windows (a)	➤ Microsoft Windows 2003 SP2

	Standard/Enterprise Edition x86 ➤ Microsoft Windows Server 2003 R2 SP2 Enterprise Edition x86 ➤ Microsoft Windows Server 2008 R2 SP1, SP2 Standard/Enterprise Edition ➤ Microsoft Windows Server 2003 SP2 Standard/Enterprise Edition ➤ Microsoft Windows Server 2003 R2 SP2 Enterprise Edition ➤ Microsoft Windows Server 2008 SP1, SP2 Standard/Enterprise Edition ➤ Microsoft Windows Server 2008 R2 SP1 Standard/Enterprise/Datacenter Edition
HP Business Service Management	9.23
HP BSM Connector	9.23
HP SQM Solution Service Management Foundation	3.2
HP TeMIP Service Console	6.4
Java Run Time Environment (b)	1.6 Update 14 (or higher)

**Table 5 – Software pre-requisites for Linux**

Software	Version
Linux	Red Hat ES/AS Linux 5.2, 5.4 32-bit Red Hat ES/AS Linux 5.5, 5.6, 5.7, 5.8 32/64-bit Red Hat ES/AS Linux 6.0, 6.2 64-bit
HP Business Service Management	9.23
HP BSM Connector	9.23
HP SQM Solution Service Management Foundation	3.2
HP TeMIP Service Console	6.4
Java Run Time Environment (b)	1.6 Update 14 (or higher)

(a): the OS requirement is from BSMC

(b): JRE is required by HP TeMIP Service Console if you install TSC on the same server.

**IMPORTANT NOTE:** when you install BSMC on windows 2008 server, You have to turn off the UAC(User Access Control) policy. Otherwise it will forbid installer to access some files which may result the failure of installation.

### 2.1.3 Configuration pre-requisites

The TeMIP Service Adapter has the following configuration requirements that must be done before activating the TeMIP Service Adapter for the first time:

Table 6 - Configuration pre-requisites

Configuration domain	Needed configuration
BSM and BSMC	The connection between BSM and BSMC has been successfully created as described in HP BSM Using BSM Connector document; and BSMC is accessible to BSM.

## 2.2 The TeMIP Service Adapter deployment

### 2.2.1 Steps to deploy the TeMIP Service Adapter

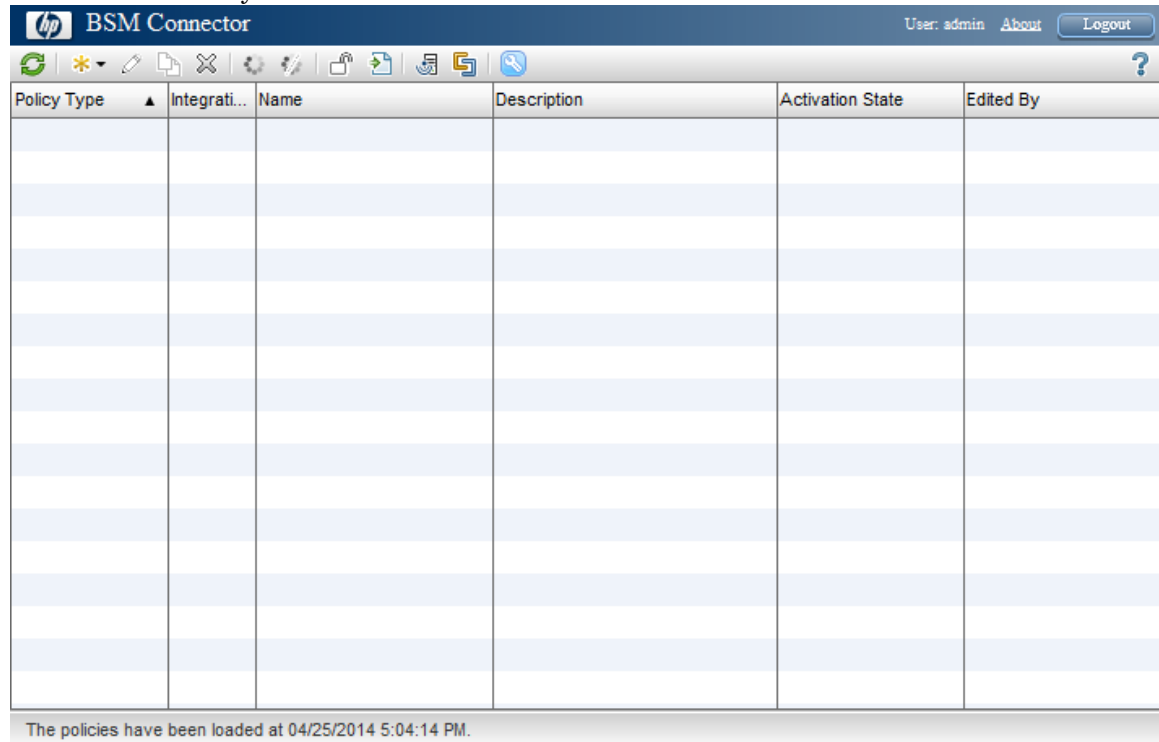
1. Download then unzip the TeMIP Service Adapter zip file, E.g. unzip it to desktop:

- SQMSolTeMIPV320RevA.zip

2. Start BSMC user interface, open a Web browser at the following URL:

https://<BSM Connector system>:30000/bsmconnector/

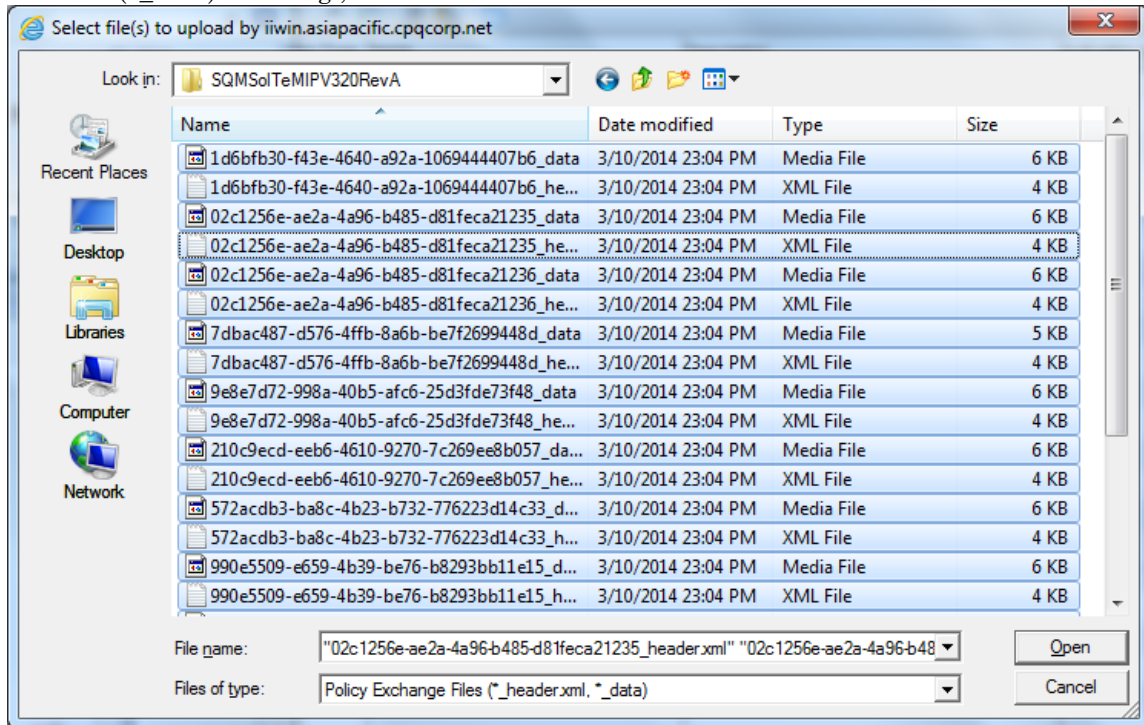
<BSM Connector system> is localhost or the hostname of the BSM Connector server.



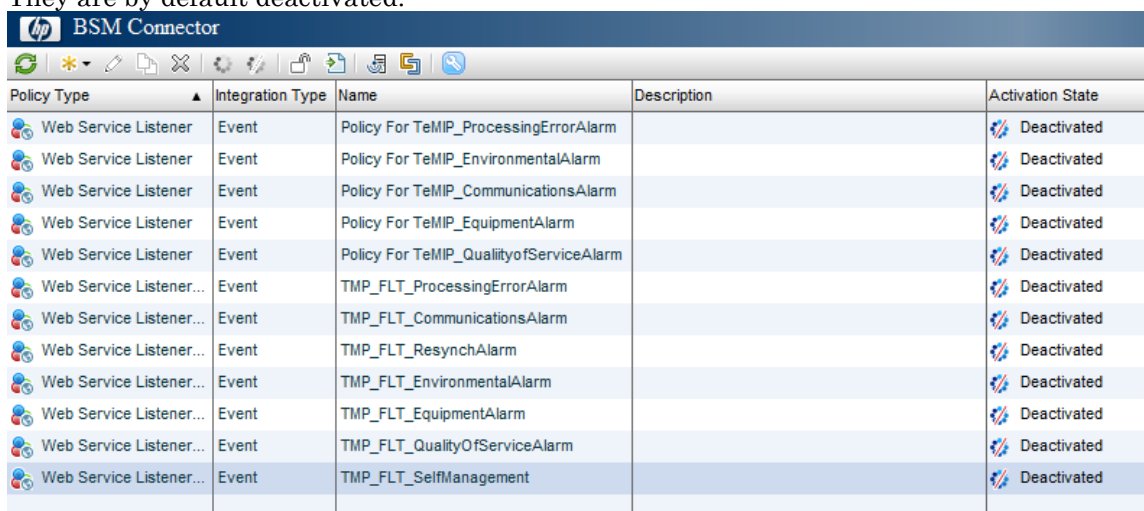
3. Click in the toolbar. A file selection dialog box opens.



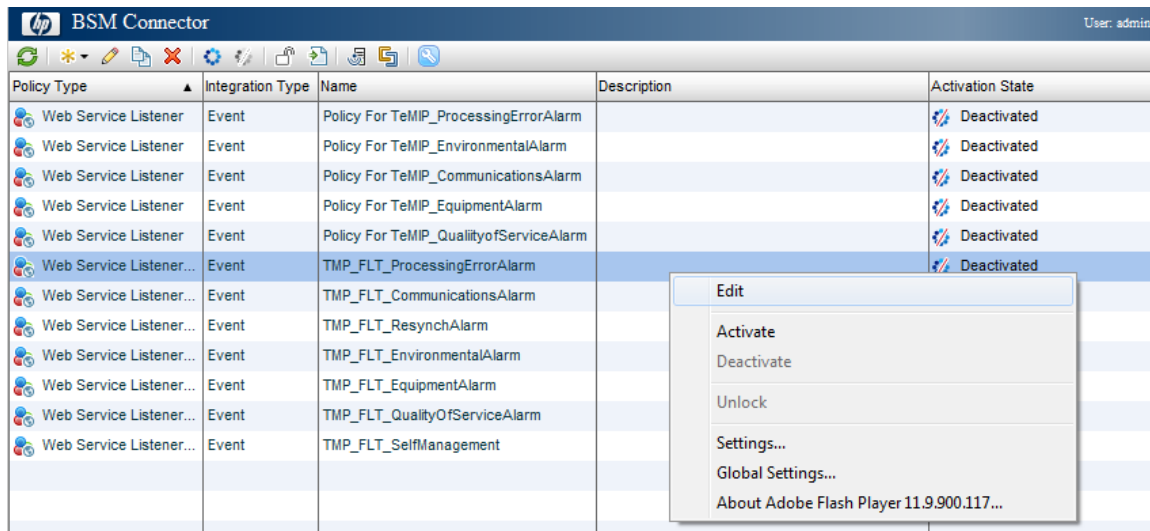
4. Navigate to the policy files and, for each policy, select both the header (\*\_header.xml) and the data (\*\_data) files. E.g., select all.



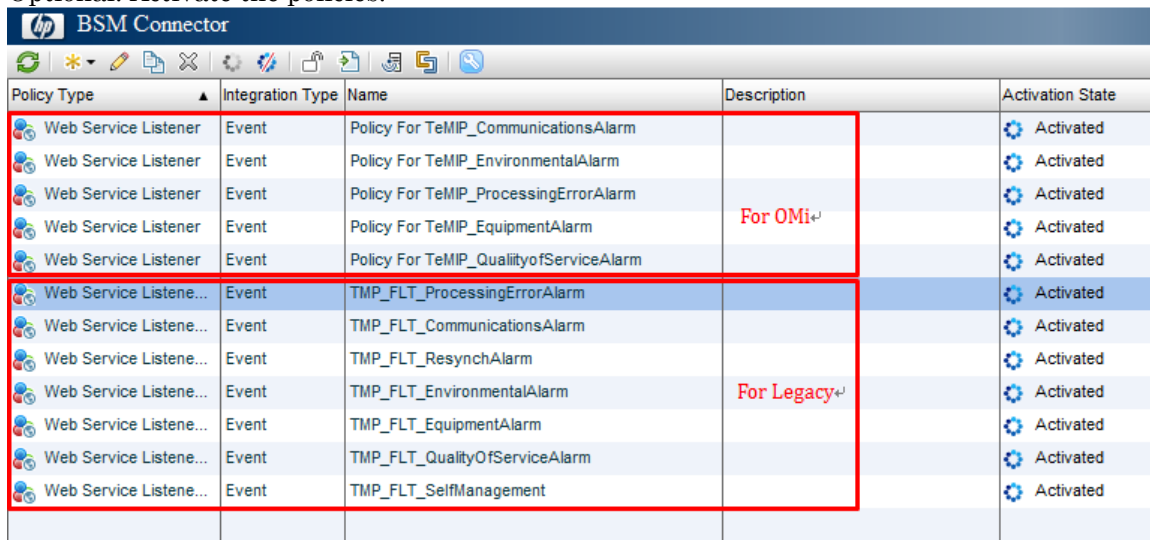
5. Click Open to start the import process.  
If the same policies already exist in BSM Connector, you are asked whether you would like to replace them with the newly imported policies.  
The imported policies appear in the list of policies in the BSM Connector user interface. They are by default deactivated.



6. If necessary, edit the imported policies and adapt their contents to the new BSM Connector server. For example, configure a remote server in log file policies or replace placeholder information with real data in database policies.



7. Optional: Activate the policies.



BSM Connector stores policies in the following folders:

- Windows: %OvDataDir%\datafiles\policymanagement\store
- Linux: /var/opt/OV/datafiles/policymanagement/store

If necessary, you can download from these policies from BSMC server.

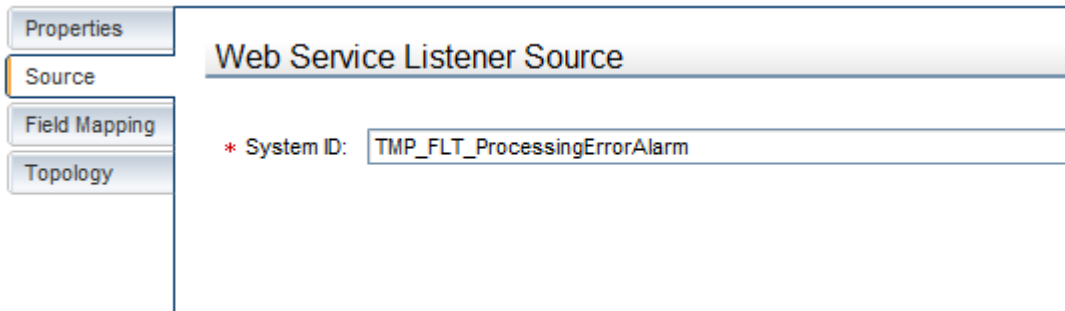
## 2.2.2 Deploy Verification

After deploying the TeMIP Service Adapter, the following policies should be created in BSMC:

- One policy group(7 policies) for Legacy: “TEMIP\_FAULT”

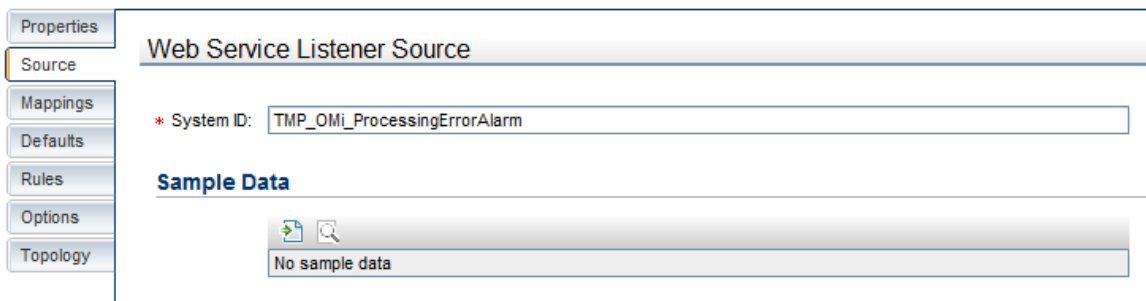
Policy	Function
TMP_FLT_CommunicationsAlarm	This policy maps the alarms of type “Communications” to the KPI “Communication Status”
TMP_FLT_EnvironmentalAlarm	This policy maps the alarms of type “Environment” to the KPI “Environmental Status”

TMP_FLT_EquipmentAlarm	This policy maps the alarms of type “Equipment” to the KPI “Equipment Status”
TMP_FLT_ProcessingErrorAlarm	This policy maps the alarms of type “Processing” to the KPI “Processing Status”
TMP_FLT_QualityOfServiceAlarm	This policy maps the alarms of type “Quality Of Service” to the KPI “Quality Of Service Status”
TMP_FLT_ResynchAlarm	This policy maps the re-synchronization events to the TeMIP KPIs
TMP_FLT_SelfManagement	This policy maps TSC self-management events to SelfManagement KPI “Fault Status”



- Another policy group(5 policies) for OMi:

Policy	Function
TMP_OMi_CommunicationsAlarm	This policy maps the alarms of type “Communications” to the KPI “Communication Status”
TMP_OMi_EnvironmentalAlarm	This policy maps the alarms of type “Environment” to the KPI “Environmental Status”
TMP_OMi_EquipmentAlarm	This policy maps the alarms of type “Equipment” to the KPI “Equipment Status”
TMP_OMi_ProcessingErrorAlarm	This policy maps the alarms of type “Processing” to the KPI “Processing Status”
TMP_OMi_QualityOfServiceAlarm	This policy maps the alarms of type “Quality Of Service” to the KPI “Quality Of Service Status”



Note: In OMi mode, it doesn't contain the self-management policy, so in BSM it won't generate the “TeMIP Self Management” instance.

## 2.2.3 Steps to customize the TeMIP Service Adapter Policy

BSMC topology script can update/create BSM CI according to the received event's attributes.

We take following script example to illustrate how to customize it.

1. Choose the policy that need to create CI in BSM by event's attribute. Edit the policy.
2. Click the panel "Topology", choose Template to "Custom", and fill the following content

```
import logger
import common_lib
import modeling

# Java imports
from java.lang import *
from java.util import *
from appilog.common.system.types.vectors import ObjectStateHolderVector
from appilog.common.system.types import ObjectStateHolder
from appilog.common.system.types import AttributeStateHolder
from appilog.common.system.types.vectors import StringVector
from com.hp.ucmdb.discovery.library.scope import DomainScopeManager
from java.util import HashMap

def DiscoveryMain(Framework):
    global OSHVResult
    OSHVResult = ObjectStateHolderVector()
    # Default TargetName is the last part of ManagedObject, E.g. demo_box10
    # or .demo_box10, but it also can be configure to extract from other alarm's attr.
    TargetName = Framework.getDestinationAttribute("target_name")

    # Owner stored the event's ManagedObject attr value, E.g. BOX demo_box10
    Owner = Framework.getDestinationAttribute("owner")

    # Following are example you can get other field:
    # Instance = Framework.getDestinationAttribute("instance")
    # Att2 = Framework.getDestinationAttribute("att2")
    # Att3 = Framework.getDestinationAttribute("att3")
    # Att4 = Framework.getDestinationAttribute("att4")
    # Att5 = Framework.getDestinationAttribute("att5")

    # The "temip_managed_object" means CI Type value. You also can get the value from
    # the parameter att2/att3/att4/att5 and configure the parameter source in TSC.
    ci = ObjectStateHolder("temip_managed_object")
    # ci = ObjectStateHolder(Att2)

    # "sid_object_identifier" is the CI's id.
    ci.setAttribute("sid_object_identifier", TargetName)
    # The field "temip_managed_object" refer to drilldown function. If you change other
    # field to store alarms MO, you need change actions parameter.
    ci.setAttribute("temip_managed_object", Owner)
    # The field "temip_operation_context" refer to drilldown function, if no value it will
    # impact "DisplayAlarmsHistory".
    ci.setAttribute("temip_operation_context", ".demo_oper")
```

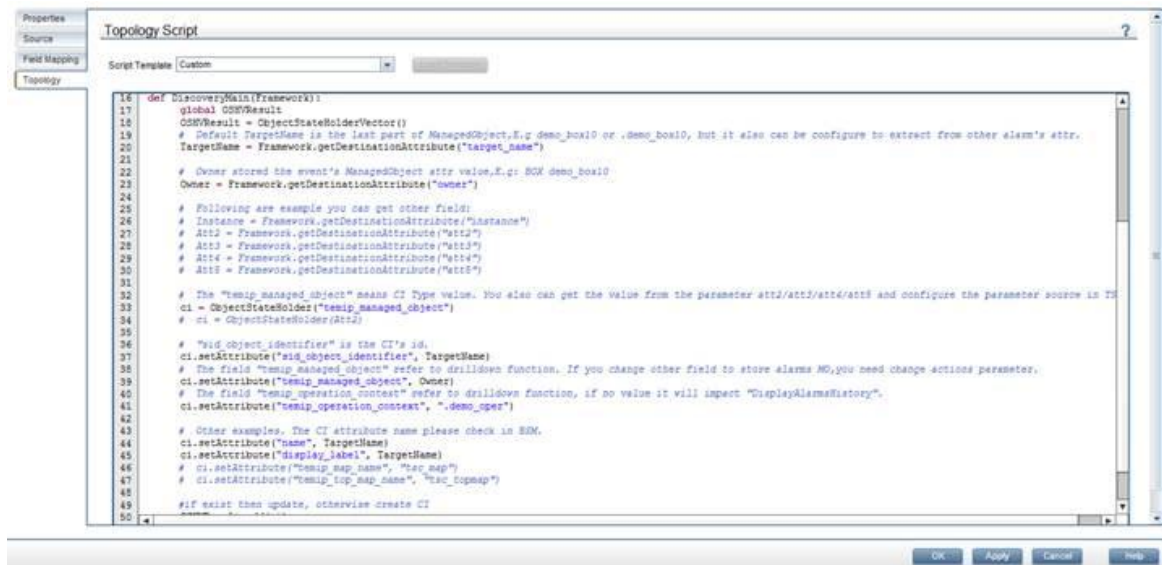
```

# Other examples. The CI attribute name, please check in BSM.
    ci.setAttribute("name", TargetName)
    ci.setAttribute("display_label", TargetName)
# ci.setAttribute("temp_map_name", "tsc_map")
# ci.setAttribute("temp_top_map_name", "tsc_topmap")

#if exist then update, otherwise create CI
    OSHVResult.add(ci)
    logger.info("End to run BSMC topology script.")
return OSHVResult

```

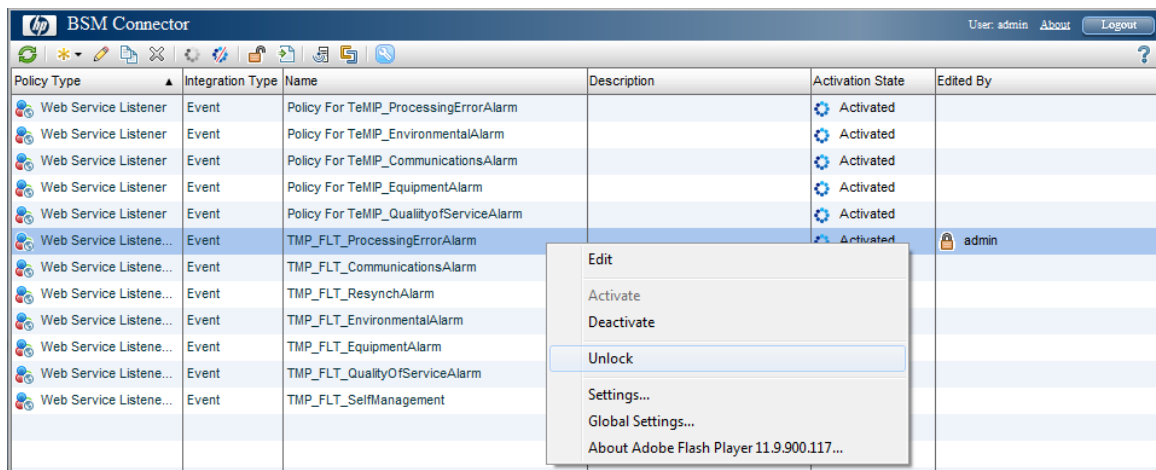
E.g.:



3. Click "Apply" to save it then click "Cancel" to close this page.
4. You need reactive the policy after any edited.

## 2.2.4 Steps to un-deploy the TeMIP Service Adapter Policy

1. Login BSMC user interface
2. Make sure the policy is unlock, otherwise unlock it





3. Click the policy that not in use, set the status as deactivated. Then the policy won't work.
4. You also can choose to deactivated then delete it needed.

The screenshot shows the BSM Connector application window. At the top, there is a title bar with the HP logo and the text "BSM Connector". Below the title bar is a toolbar with various icons for navigation and actions. The main area contains a table with the following columns: "Policy Type", "Integration Type", "Name", "Description", "Activation State", and "Edited By".

Policy Type	Integration Type	Name	Description	Activation State	Edited By
Web Se...	Event	TMP_FLT_ResynchAlarm		Activated	
Web Se...	Event	TMP_FLT_QualityOfServiceAlarm		Activated	
Web Se...	Event	TMP_FLT_ProcessingErrorAlarm		Activated	
Web Se...	Event	TMP_FLT_EquipmentAlarm		Activated	
Web Se...	Event	TMP_FLT_EnvironmentalAlarm		Activated	
Web Se...	Event	TMP_FLT_CommunicationsAlarm		Activated	
Web Se...	Event	Policy For TeMIP_QualityofServiceAlarm		Activated	
Web Se...	Event	Policy For TeMIP_ProcessingErrorAlarm		Activated	
Web Se...	Event	Policy For TeMIP_EquipmentAlarm		Activated	
Web Se...	Event	Policy For TeMIP_EnvironmentalAlarm		Deactivated	

Overlaid on the bottom of the table is a dialog box titled "Policy For TeMIP\_EnvironmentalAlarm - Delete Policy". The dialog contains a question mark icon and the text: "Are you sure you want to delete the policy with name 'Policy For TeMIP\_EnvironmentalAlarm'?". At the bottom of the dialog are two buttons: "Yes" and "No".

## Chapter 3

# TeMIP Service Adapter Configuration

The configuration file of TSC sets the configuration for the TeMIP BSM Alarm Forwarder and BSMC information. There is no other configuration file for TeMIP SA.

Refer to “*HP TeMIP Service Console Installation & Configuration Guide*” document for detailed information about the configuration.

# Chapter 4

## TeMIP Service Adapter operation

This chapter describes how to operate the TeMIP Service Adapter.

As TeMIP Service Adapter is a subset of TSC, for more TSC operation including the TeMIP BSM Alarm Forwarder please refer to TSC documents.

### 4.1 Active/Deactivated Service Adapter

The TeMIP Service Adapter is hosted by BSMC and it is therefore operated (active, deactivated, edit...) as part of the overall BSMC module.

- Refer to “*HP BSMC Using BSM Connector*” document for detailed information about BSMC operation.