



How to manage SPAZIO networks with IBM/Tivoli management products

PRIMEUR provides a standard solution for managing SPAZIO networks that is smoothly integrated to IBM Tivoli products (NetView/TEC, TBSM)

Data moving is one of the technological elements on which corporate businesses depend. SPAZIO is PRIMEUR middleware that provides data moving capabilities within heterogeneous environments. SPAZIO, as any other middleware, needs to be highly available and performing to guarantee the required level of service. PRIMEUR provides a solution for monitoring SPAZIO networks, based on SNMP Agents. These Agents are designed to interoperate with IBM/Tivoli products, such as NetView, TEC and TBSM.

SPAZIO Management

The architecture of the solutions for monitoring SPAZIO networks are based on SNMP Agents. These Agents are able to interoperate with SNMP Manager, such as IBM Tivoli NetView, and with other management platforms, such as IBM Tivoli Enterprise Console (TEC) and IBM Tivoli Business System Manager (TBSM).

SPAZIO SNMP Agents

SPAZIO SNMP Agents that monitor a SPAZIO node according to a specified

configuration and send asynchronous events to Management platforms. SPAZIO SNMP Agents have privileged access to internal SPAZIO data structures and events to monitors SPAZIO resources. According to the SNMP paradigm, these resources are modelled by a specific MIB (Management Information Base). In order to guarantee interoperability, PRIMEUR is officially registered with the relevant Internet entity (IANA: <http://www.iana.org>) with the private enterprise number 2404. For example, SPAZIO MIB includes variables, which represent the status and characteristics of SPAZIO, and tables that represent the status and characteristics of Queue Managers and tables that represent the contents of the SPAZIO queues.

The SNMP Agent allows you to retrieve (*get* operation) the values of the variables/tables representing the status of all SPAZIO components or the value of SPAZIO parameters. It also allows you to set (*set*) the value of some of these variables, that is, to modify the status of components or the values of SPAZIO parameters.

Moreover, the SNMP Agent is able to send out unsolicited notifications (*trap*) concerning

changes in the status of the crucial SPAZIO components, or when limits are exceeded for certain parameters. A detailed description of SPAZIO Agents features are described in a specific brochure for SPAZIO SNMP Management that is available on PRIMEUR website. In the following, we present those specific components that provide smooth integration of SPAZIO SNMP Agents to IBM/Tivoli products are described.

SPAZIO SNMP Manager for NetView

SPAZIO SNMP Agents can interoperate via SNMP protocol with any SNMP Manager. In particular, for some market platforms, such as IBM Tivoli NetView, PRIMEUR has designed a specific component, called SPAZIO SNMP Manager. The following figure shows the resulting architecture.

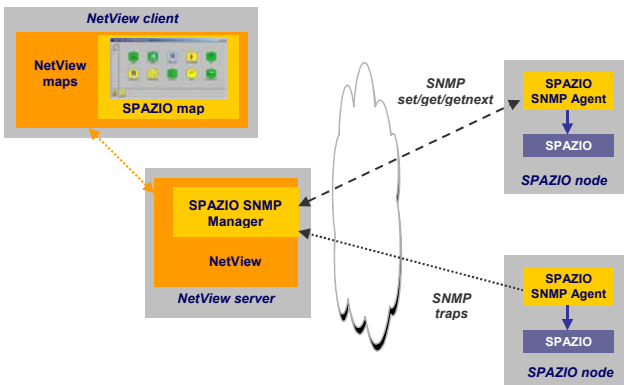


Fig. 1: SPAZIO SNMP Management

SPAZIO SNMP Manager allows you to view the SPAZIO nodes managed in the standard look and feel of SNMP Manager Graphical User Interfaces (GUI). SPAZIO nodes and their main components appear as icons at various levels of the hierarchy containing the *maps*. The first level of the hierarchy shows

the nodes of the SPAZIO SNMP network (see figure 2 – this and the following figures refer to the Manager for NetView).



Fig. 2: SPAZIO node and components

Further levels in the hierarchy show the SPAZIO components and important parameters. The colour of the icons indicates the status of the respective components. The mechanism provided by the platforms for propagating the status (colour) in the hierarchy allows notification at the SPAZIO node level of alarm situations, and a rapid search down the hierarchy to isolate the component where the alarm was signalled.

For each SPAZIO object represented in the Manager maps, a specific viewing and modification menu is available. For example, it is possible to view the files/messages contained in a local queue, or the files/messages waiting to be transmitted in all remote queues. Alternatively, it is possible to activate or deactivate from the Manager an entire SPAZIO node or individual components such as Queue Managers, communication lines, transport protocols. Moreover, all events notified by the SNMP Agents can be seen in the Manager Event Viewer window. Suitable actions for recovering anomalous situations can be associated to events notified to the Manager.

SPAZIO Management - Integration to Tivoli Enterprise Console (TEC)

SPAZIO SNMP Agents can be integrated to IBM Tivoli Enterprise Console (TEC), by means of a TEC SNMP Adapter, that provides secure transport provided by the Tivoli framework services. The following figure shows the resulting architecture of SPAZIO Management – Integration to Tivoli Enterprise Console (TEC).

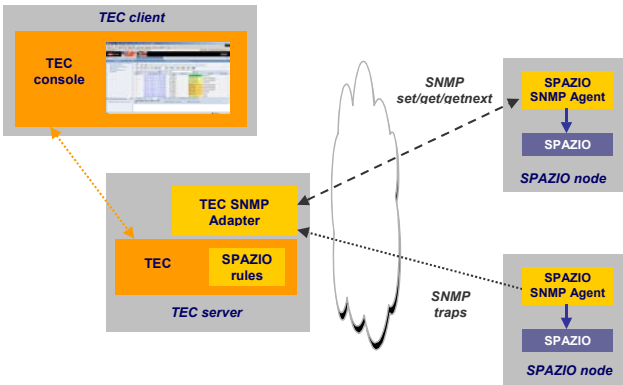


Fig. 4: SPAZIO Management – Integration to TEC

This module allows you to view events related to the status of SPAZIO components from a TEC console.

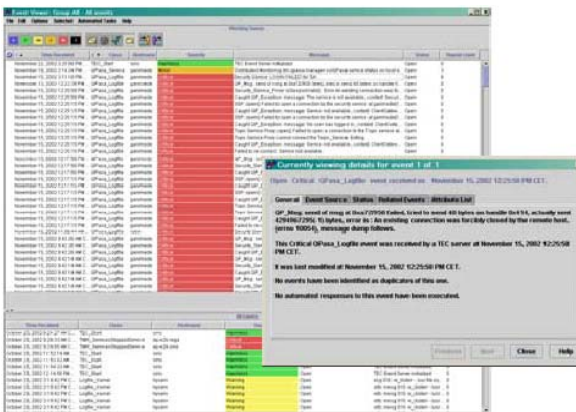


Fig. 5: SPAZIO events in TEC

Moreover, from the TEC console you can execute actions on SPAZIO components (e.g. for recovering anomalous situations).

SPAZIO Management – Integration to TEC provides the following objects:

- TEC Adapter configuration for traps sent by the SPAZIO Agents (i.e. standard CDS and OID files);
- Standard BAROC TEC description file for SPAZIO events classes, that allows SPAZIO events to be recognized by the TEC on reception;
- specific TEC rules for managing SPAZIO events, that filter duplicate events out, correlate “up” and “down” events, close received events on SPAZIO components when SPAZIO goes “down” and send pop-up window to the all defined operator TEC consoles;
- standard Tivoli tasks and jobs for executing actions on SPAZIO components.

SPAZIO Management – Integration to TEC can be installed as a standard Tivoli product. The installation procedure can be defined to either create a new TEC rule base or to modify an existing one and then load the class definitions and rule set.

SPAZIO Management – Integration to TEC is currently available for versions 3.8 and 3.9.

SPAZIO Management - Integration to Tivoli Business System Manager (TBSM)

SPAZIO SNMP Agents can be integrated to IBM Tivoli Business Systems Manager (TBSM). The following figure shows the resulting architecture of the module called

SPAZIO Management – Integration to Tivoli Business Systems Manager (TBSM).

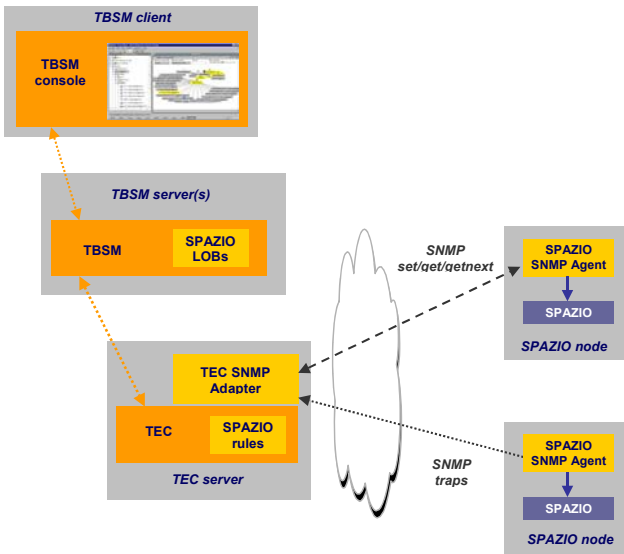


Fig.6: SPAZIO Management - Integration to TBSM

This module allows you to view the status of SPAZIO components from the TBSM console. Logically structured Lines of Business (LOBs) are automatically created as events arrive from SPAZIO agents.

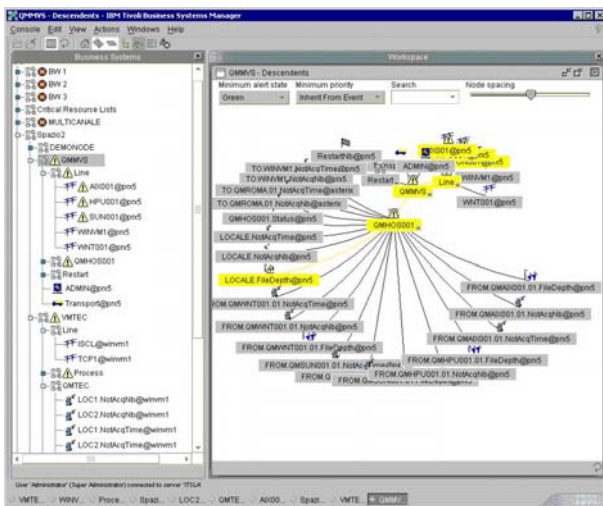


Fig. 7: SPAZIO LOBs in TBSM Console

Moreover, from the TBSM console you can execute actions on SPAZIO components (e.g. for recovering anomalous situations).

SPAZIO Management – Integration to TBSM includes SPAZIO Management – Integration to TEC and the following additional objects:

- TBSM LOB configuration for dynamically creating SPAZIO LOBs and automatically positioning SPAZIO components on the right LOB;
- Menus of operational and informational tasks that can be launched from the TBSM console on SPAZIO components.

SPAZIO Management – Integration to TBSM is available for versions 2.1.1 and 3.1.

IBM certification

SPAZIO SNMP Management for Tivoli has been certified by IBM as “Ready for Tivoli”.

