

MSGS User Guide

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About this manual

Typographical conventions

This manual distinguishes between different types of information using the following conventions:

- Terms taken from the interface itself, such as commands, appear in **bold**.
- Keys appear in small caps, for example: “Press the SHIFT key.”
- Numbered lists mean there is a procedure to follow.
- When the conjunction -or- appears next to a paragraph, it means there is the choice of another procedure for carrying out a given task.
- When a menu command contains submenus, the menu name followed by the command to select appear in bold. Thus, “Go to **File > Open**” means choose the **File** menu then the **Open** command.



This symbol highlights important information on how a particular command or procedure works.



Following this symbol, you will find hints and tips for optimizing tasks, speeding up commands, and so on.

About your product

Some of the functions described in this manual may not be available in your product.

For the complete list of specific features available in your software, refer to the specification sheet provided with the product.

CHAPTER 1

Introduction

Scope of the document

This document describes the Teklynx Messaging System (MSGS) software. The first part of the user guide defines the overview of MSGS. The other sections of the document provide usage information about the user interface elements.

MSGS is software implemented in Client-Server architecture. The client part is integrated into applications using MSGS. Depending on the method of integration the features and appearance of the client side of the software may be different than shown in this document. If finding deviations from the information of this document, see the documentation of the integrating application.

CHAPTER 2

MSGGS Overview

MSGGS Overview

MSGGS software provides tracing, logging and messaging services for applications integrating it.

MSGGS provides central, enterprise-wide administration support for applications. Applications using MSGGS are sending messages to the MSGGS server to keep a constant track of the state of the applications. The messages are structured to allow later processing.

The primary role of the MSGGS server is to collect, store and manage the messages sent by TEKLYNX applications. Messages stored in the server database can be retrieved for examination, filtered. Unneeded messages can be deleted.

MSGGS can also make complex processing of the incoming messages. Messages — fulfilling certain user defined filters — can trigger the execution of user defined actions.

MSGGS actions are performed by installable action handler modules. Besides the standard action handlers – distributed with MSGGS – custom action handlers can be developed.

Elements of MSGGS

MSGGS server consists of two main parts: the message handler and the action processor.

The message handler received incoming messages and stores them in the database. It is possible to retrieve messages, filter them, or delete some of them.

The action processor of MSGS watches messages arriving to the server. It matches them to the filters of user defined actions and triggers the execution of the action if the filter is true for the newly received message.

Most of the objects of the server are related to the action processor.

Messages

Handling messages is the primary usage of MSGS. Messages consist of a set of structured information.

Messages have the following properties:

Property	
Thread	Unique identifier of the message thread. Thread is a numerical value.
Index	Unique index of the message within the message thread. Index is a numerical value.
Category	Message category is the first level of message classification. Typical values are DIAGNOSTICS or NORMAL_OPERATION... Category is a text value. There are no predefined category values, the possible values are up to the TEKLYNX application.
Type	Message type indicates how severe the message is. Typical values are ERROR, WARNING or INFO... Type is a text value. There are no predefined type values. The possible values depend on the TEKLYNX application.
Level	Numerical value indicating how verbose the message is. The higher the level, the more verbose the message is.

Application	Identifier of the TEKLYNX application sending the message.
Workstation	Name of the workstation where the TEKLYNX application – the source of the message – is running.
User Name	Name of the user logged on when the message is sent.
Client Time	Time on the client computer when the message is sent.
Server Time	Time on the server computer when the message is received by the MSGS server.
Message Code	Technical identifier of the message. There are no predefined message codes, the possible values depend only on the TEKLYNX application.
Message Text	User-friendly text of the message.

Filters

Filters are object defined by MSGS users. Filters can be evaluated on an MSGS message. The value of the evaluation can be TRUE or FALSE.

There are two usages of filters: they can be used to filter the messages shown in message administration. Filters are also used to define actions. The filter of an action is evaluated for each incoming message. If the filter is TRUE, the action is triggered.

There are two types of filters:

- **Standard filters**

Standard filters consist of a series of conditions on message properties and message parameters. The conditions compare a message property or message parameter to a constant value. The conditions of the filter are combined with logical AND or OR operators.

Standard filters behave differently if there are conditions in it comparing message parameters. Such filters are slower to evaluate than pure message property comparing filters.

“Slow” filters can be used only to define actions. Pure message property filters can be used both to narrow the set or returned messages at message administration and for action definition.

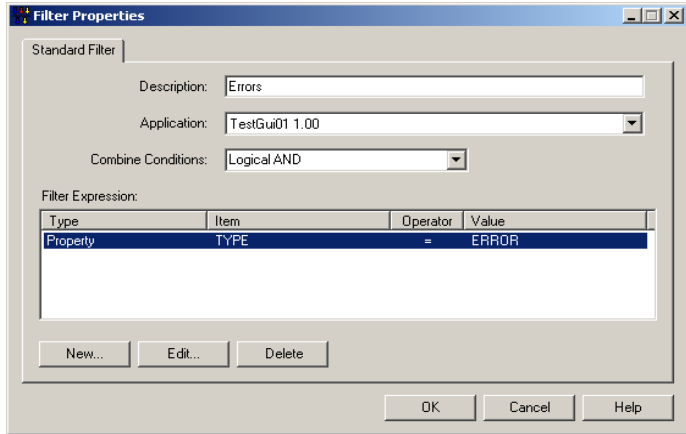


Figure 1 Sample standard filter

- **Custom filters**

Custom filters are .NET assemblies – called custom filter handlers – created with a development tools. They must support certain interfaces of MSGS.

The custom filter is evaluated by calling a method of the interface. The message to be filtered is passed as a parameter. Custom filters allow defining any complex filter logic by programming.

Custom filters are defined by assigning a filter name and parameters to an already installed custom filter handler.

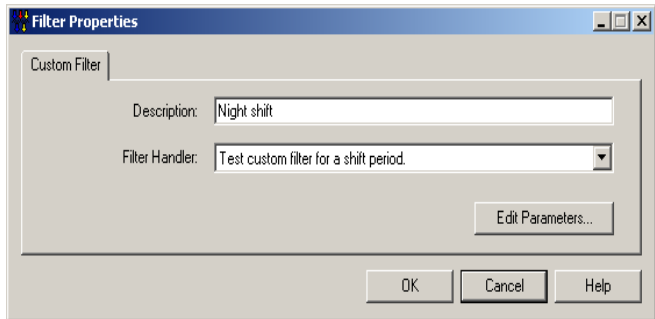


Figure 2 Sample custom filter

Actions

An action is a triplet of a filter, an action handler and action handler parameters. The filter specifies which messages (received by MSGS) trigger the action. The action handler is used to perform the action. Action handler parameters customize the performance of the action.

Actions are defined by using previously installed action handlers. Action handlers are .NET assemblies created with a development tool. Action handlers must support certain MSGS interfaces to be able to cooperate with MSGS.

There are several standard action handlers distributed with MSGS. Custom action handlers can also be implemented to fulfill special requirements of the user.

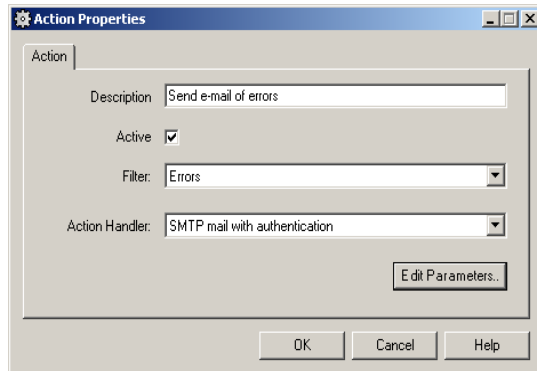


Figure 3 Sample action handler

Custom Code Modules

The previous sections already mentioned the two kinds of custom code modules: action handlers and custom filter handlers. They are .NET assemblies created with a development tool. There are certain interfaces required to be implemented by custom code modules.

Custom code modules are installed into the server. The server stores the binary form of the assembly in the MSGS database. Besides storing modules, it is also possible to configure the custom code and to define the default value of the handler parameters.

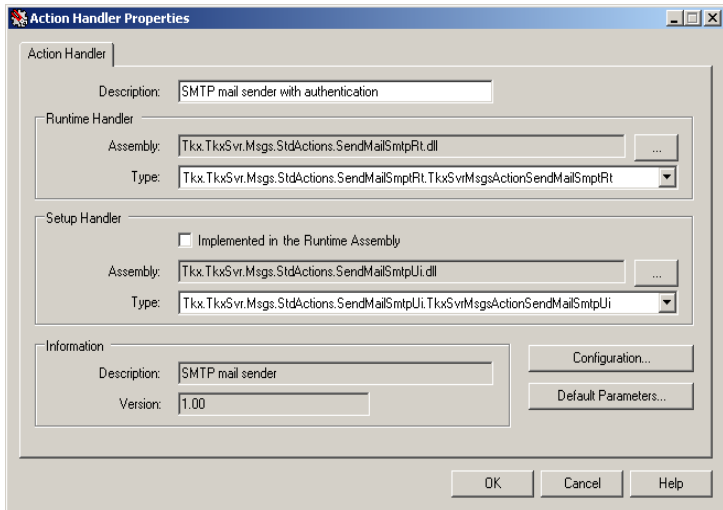


Figure 4 Sample custom code (actually action handler) installation

- **Custom filter handlers**

A custom filter handler consists of two parts: the run time and the setup handler. The run-time handler is running on the server and performs the real filtering work. The setup handler is executed on clients adjusting custom filters and custom filter handlers. It is responsible for providing a user interface for handler configuration and parameter setup.

Custom filter handlers are implemented in one to three assemblies. It is possible to compile the run time and setup handlers into the same assembly. If the handlers are separated, three assemblies are required: assembly of the run time handler, assembly of the setup handler and the satellite assembly of the setup handler.

A single custom filter handler can be installed several times with a different description. Each installed instance may have its own configuration and default set of parameters. Configuration provides common settings for all custom filters based on the installed filter handler. Not all custom filter handlers support configuration adjustments.

- **Action handlers**

An action handler consists of two parts: the run time and the setup handler. The run time handler is running on the server and performs the real work of the action. The setup handler is executed on clients adjusting actions and action handlers. It is responsible for providing a user interface for handler configuration and parameter setup.

Action handlers are implemented in one to three assemblies. It is possible to compile the run-time and setup handlers into the same assembly. If the handlers are separated, three assemblies are required: assembly of the run time handler, assembly of the setup handler and the satellite assembly of the setup handler.

A single action handler can be installed several times with a different description. Each installed instance may have its own configuration and default set of parameters. Configuration provides common settings for all actions based on the installed handler. Not all action handlers support configuration adjustments.

Registered applications

MSGGS server keeps track of each TEKLYNX application connecting to it.

Sessions

The MSGGS server maintains a record of each connection. There is a session object in the MSGGS database for each connection.

When the connection to the server terminates, the session object is deleted.

If the server detects no activity for a long period of time (defined by a configuration parameter) the server assumes the session to be dead and deletes it.

Standard action handlers

There is a set of standard action handler distributed with MSGGS. After installation of the server, they can be installed by the administrator of the system.

The standard action handlers are implemented and handled as any custom developed action handler, they have no privileged handling.

The following sections describe the standard action handlers. These action handlers can be found here:

C:\ProgramFiles\Teklynx\TkxSvrClients\ActionHandlers

- **Counter action handler**

The counter action handler allows defining counter actions. A counter action has a value storage and a counter period defined.

Each execution of the action increments the counter value by one. When the counter value reaches the counter interval, a new message (defined in the action) is triggered.

The counters are reset to zero after reaching the counter period value.

- **Maintenance purge action handler**

This action is designed to be executed regularly when the server is running. It cleans messages older than a parameter defined time period. Executing this message regularly can avoid the message database ever increasing.

- **SMTP mail sender action handler**

The SMTP mail sender action handler allows the system to send e-mail messages. The action can be configured to send notifications about MSGS messages to an e-mail address.

The action handler cooperates with UMSS if installed, and allows getting addressee information from UMSS database. It is also possible to setup the action to send a new message to the server when sending the mail succeeds and/or fails.

- **SMS through email gateway action handler**

This action handler sends SMS messages to mobile phones through an e-mail gateway. Although it would be possible to have the same effect by using the SMTP mail sender action handler, there are special features implemented in this handler specialized for SMS messages.

If UMSS is present, the action handler can get name and mobile phone number information from it.

- **Windows event-log writer action handler**

This action handler writes to the Windows event log. Parts of the MSGS message can be transferred to the event log entry.

The type of the event log entry can also be specified in the event parameters.

CHAPTER 3

Using MSGS

MSGS Messages

The MSGS server sends messages to itself. The following table lists the messages, their parameters and description.

Message code/Description	Category	Type	Level
MSG_SERVER_STARTED	NORMAL	INFO	1
Sent after the server is started up	Parameter name	Parameter description	
	SERVERNAME	Name of the server (MSGS)	
Message code/Description	Category	Type	Level
MSG_SERVER_STOPPED	NORMAL	INFO	1
Sent before the server is shut down	Parameter name	Parameter description	
	SERVERNAME	Name of the server (MSGS)	
Message code/Description	Category	Type	Level
MSG_APP_LOGON	NORMAL	INFO	2

Sent each time an application logs on to the server	Parameter name	Parameter description	
	APPLICATION	Name of the application	
	WORKSTATION	Name of the client workstation	
Message code/Description	Category	Type	Level
MSG_APP_LOGOFF	NORMAL	INFO	2
Sent each time an application logs off from the server	Parameter name	Parameter description	
	APPLICATION	Name of the application	
	WORKSTATION	Name of the client workstation	
Message code/Description	Category	Type	Level
MSG_APP_REGISTRATION	NORMAL	INFO	2
Sent when an application is registered on the server	Parameter name	Parameter description	
	APPLICATION	Name of the application	
	VERSION	Version of application	
	WORKSTATION	Name of the client workstation	
Message code/Description	Category	Type	Level
MSG_TIMER_DAILY	NORMAL	INFO	3
Sent at the beginning of each day	Parameter name	Parameter description	
	WEEKDAY	Numeric value of day in week (Sunday=0, ...)	

	DAYOFMONTH	Number of day of month (1..31)
	MONTH	Month number (1..12)

Message code/Description	Category	Type	Level
MSG_TIMER_HOURLY	NORMAL	INFO	3
Sent at the beginning of each hour	Parameter name	Parameter description	
	HOUR	Hour (0..23)	
	WEEKDAY	Numeric value of day in week (Sunday=0, ...)	
	DAYOFMONTH	Number of day of month (1..31)	
	MONTH	Month number (1..12)	
Message code/Description	Category	Type	Level
MSG_CUST_FILTER_HANDLER_LOAD_FAILED	NORMAL	ERROR	1
Sent when a custom filter handler cannot be loaded	Parameter name	Parameter description	
	HANDLER	Description of the handler	
Message code/Description	Category	Type	Level
MSG_CUST_FILTER_EXEC_FAILED	NORMAL	ERROR	1
Sent when a custom filter execution failed	Parameter name	Parameter description	
	FILTER	Description of the custom filter	

Message code/Description	Category	Type	Level
MSG_ACTION_HANDLER_LOAD_FAILED	NORMAL	ERROR	1
Sent when loading an action handler fails	Parameter name	Parameter description	
	HANDLER	Description of the handler	
Message code/Description	Category	Type	Level
MSG_ACTION_EXEC_FAILED	NORMAL	ERROR	1
Sent when a custom filter execution failed	Parameter name	Parameter description	
	ACTION	Description of the action	
Message code/Description	Category	Type	Level
MSG_UNHANDLED_SERVER_EXCEPTION	DIAGNOSTIC	ERROR	1
Sent when an unhandled exception happens in the server	Parameter name	Parameter description	

Server Management User Interfaces

Messages in MMC

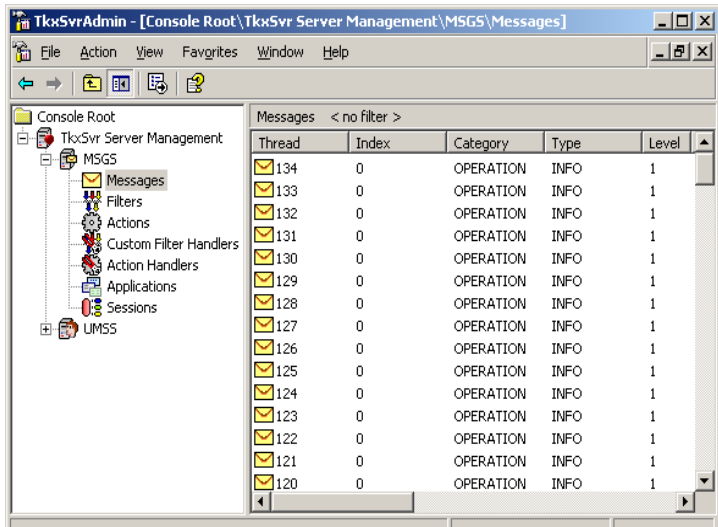


Figure 1 Sample of messages in MMC

This scope item of the MMC snap-in manages MSGS messages.

List of messages

Lists all messages complying with the selected filter. The list displays the thread and index ID of the message, the basic message properties (CATEGORY, TYPE, LEVEL and times), the technical and the user friendly message.

Filter

Use the **Select Filter** toolbar button or the **Select Message Filter** context menu item to change the current filter. The **Message Filter Selection** window is

- **Message filter selection in MMC**

opened.

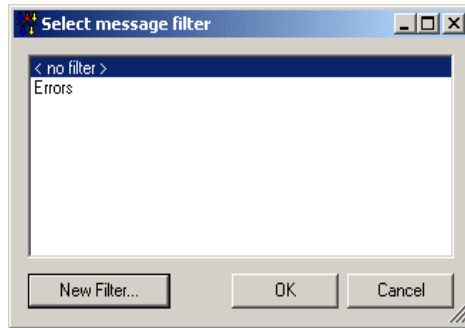


Figure 2 Message Selection window in MMC

The form allows selecting a message filter to reduce the number of messages shown in the message administration.

Note

Only a subset of standard filters can be selected. Custom filters or standard filter with conditions on message parameters cannot be used here.

Properties

Use the **Properties** toolbar button or context menu item to view the details of the selected message. The **Message Properties** property

- **Message Properties window**

window is opened.

The screenshot shows a window titled "Message Properties" with a "Message" tab. The window contains the following fields and controls:

- Thread: 112
- Index: 0
- Category: OPERATION
- Type: INFO
- Level: 1
- Application: MSGS
- Workstation: BEDIMFSC
- User Name: <none>
- Client Time: 2/13/2006 9:46:9
- Server Time: 2/13/2006 9:46:9
- Message Code: SERVER_STOPPED
- Message: Server 'Messaging System Server' stopped
- Parameters: A table with two columns, "Name" and "Value", which is currently empty.

At the bottom of the window, there are four navigation buttons: "Next", "Next in Thread", "Previous", and "Previous in Thread". At the very bottom, there are three buttons: "OK", "Cancel", and "Help".

Figure 3 Message Properties window

The **Message Properties** window shows all information about an MSGS message.

Delete

Use the **Delete** toolbar button or context menu item to delete the selected message(s) from MSGS database.

List of Filters

Select one of the already existing filters from the list.

New Filter

Press the **New Filter** button to create a new message filter. The empty Standard Filter Properties form is opened

Thread

The thread ID of the message. External (primary) MSGs messages are identified by a message thread ID. This ID is unique among message threads.

Index

Internal (secondary) messages - generated during the processing of an external message - get the same thread ID as the initial external message, plus a unique index value within the thread.

Category

Message category providing the first level of message classification.

Type

Message type indicating how severe the message is.

Level

Message level. The higher the message level, the more verbose the message is.

Application

Name of the application sending the message. Internal (secondary) messages of the message thread get the same value.

Workstation

Name of the workstation sending the message. Internal (secondary) messages of the message thread get the same value.

User Name

Name of the current user of the application sending the message. Internal (secondary) messages of the message thread get the same value.

Client Time

Date and time of the creation of the message on the client computer.

Server Time

Date and time when the MSGS server started processing the message.

Message Code

Technical identifier of the message.

Message

User-friendly message text.

Parameters

Freely definable message parameters. The TEKLYNX application can freely attach parameters to a message.

Next

Use the **Next** button to view the details of the next MSGS message from the list.

Previous

Use the **Previous** button to view the details of the previous MSGS message from the list.

Next in Thread

Use the **Next in Thread** button to view the details of the next MSGS message of the current message thread.

Previous in Thread

Use the **Previous in Thread** button to view the details of the previous MSGS message of the current message thread.

Filters in MMC

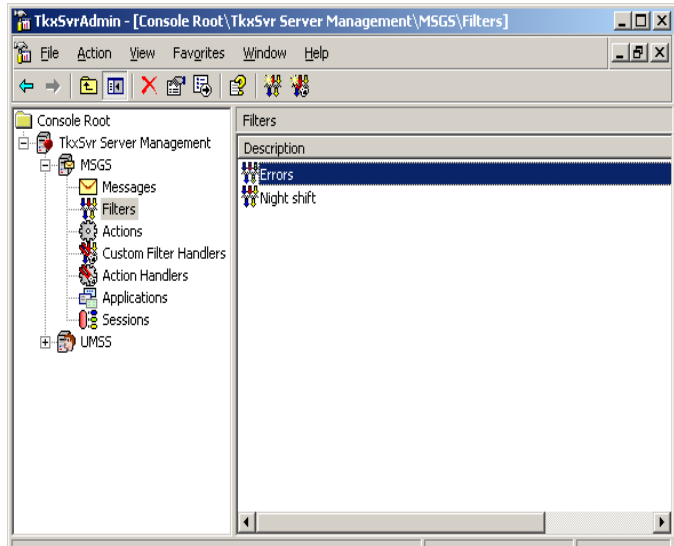


Figure 4 Sample of filters in MMC

This scope item of the MMC snap-in manages MSG5 filters.

List of filters

Provides a list of already created filters. The list displays the description and the type (standard or custom) of the filter.

New Standard Filter

Use the **New Standard Filter** toolbar button or context menu item to create a new standard filter. The **Standard Filter Properties** form is opened.

New Custom Filter

Use the **New Custom Filter** toolbar button or context menu item to create a new custom filter. The **Custom Filter Properties** form is opened.

Properties

Use the **Properties** toolbar button or context menu item to modify an already existing filter. Depending on the type of the selected filter, the **Standard Filter** tab of the **Filter Properties** window is opened.

- **Standard filter properties**

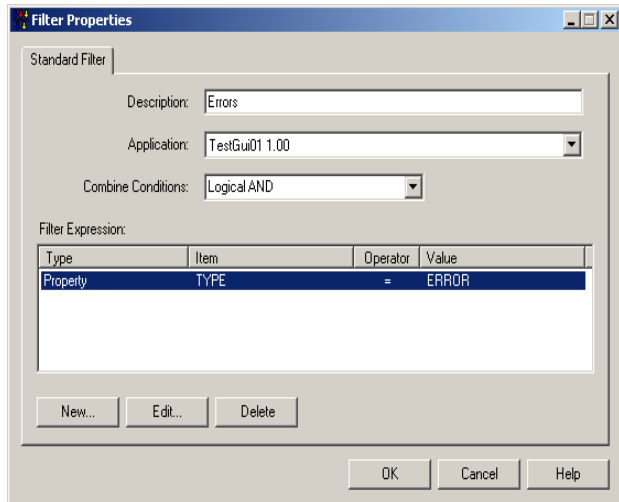


Figure 5 Standard Filter tab

The Standard Filter window allows you to setup a standard filter.

Delete

Use the **Delete** toolbar button or context menu item to delete the selected filter(s) from MSGS.

Description

Enter the description of the filter. The description must be unique within MSGS.

Application

Select one of the applications registered on the server. The selected application is the primary target of the filter. This

value has no effect on the functionality of the filter, but controls the design of conditions. The condition definition form offers message property values valid for the selected application.

Combine Conditions

Defines the logical operator used to combine conditions. Possible values:

- **Logical AND**

The filter result is TRUE only if all conditions evaluate as TRUE.

- **Logical OR**

The filter result is TRUE if any of the conditions evaluate as TRUE.

Filter expression

Lists conditions making up the filter.

New

Use the **New** button to add a condition to the filter. The Filter Condition window is opened.

- **Filter condition properties**

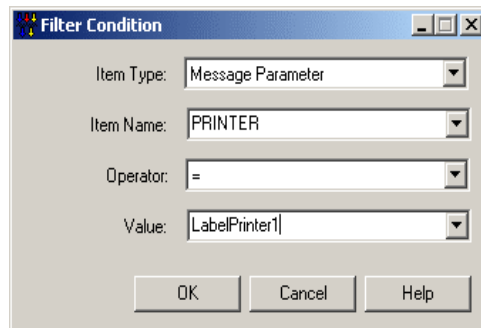


Figure 6 Filter Condition window

This window allows you to define a filter condition.

A filter condition consists of an item of a message, an operator, and a value.

Item Type

Type of condition item. Possible values:

- **Message Property**

The condition item is a predefined message property. (e.g. category, type, code, level...)

- **Message Parameter**

The condition item is a freely definable message parameter.

Item Name

Name of the condition item. If the item type is message property, the possible values are provided in the drop-down list. Message parameter names must be entered manually.

Operator

Operator of the condition. Possible values:

- =
Equal operator
- <>
Not equal operator
- <
Less than operator
- <=
Less or equal operator
- >
Greater operator
- >=
Greater or equal operator

Value

The condition item is compared to this value.

Hint:

Select the correct application in the Filter Properties

window (parent of this form) to have the lists filled with meaningful values.

Edit

Use the **Edit** button to modify the selected condition of the filter. The Filter Condition form is opened.

Delete

Use the **Delete** button to delete the selected filter condition(s).

- **Custom filter properties**

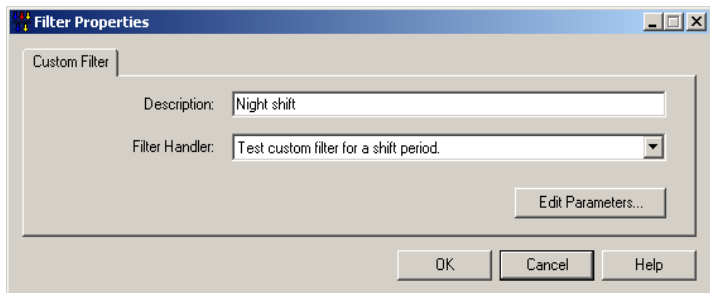


Figure 7 Custome Filter Properties tab

The property page allows you to set up a custom filter.

Description

Enter the description of the filter. The description must be unique within MSGS.

Filter Handler

Select one of the already installed custom filter handlers. When MSGS is evaluating the filter on a message, the run time part of the custom filter handler is called.

Edit Parameters

Click the **Edit Parameters** button to adjust parameters of the custom filter handler. The parameter adjustment form is

provided by the selected custom filter handler. The parameters are specific to the selected handler. If a new handler is selected, the parameters are reset.

Actions in MMC

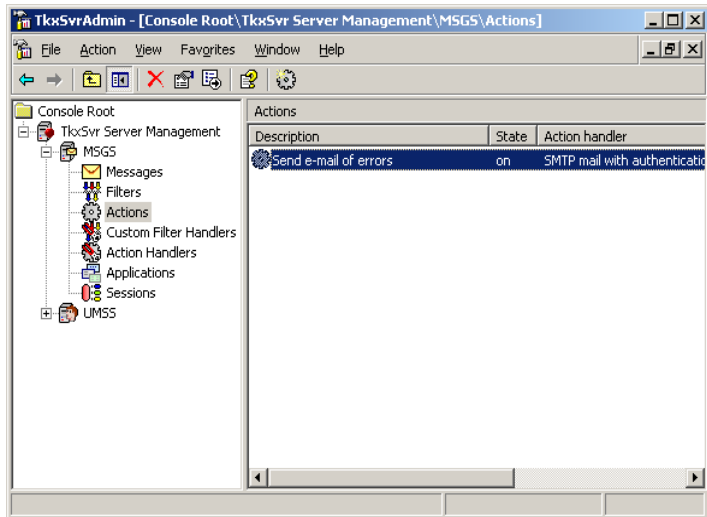


Figure 8 Sample actions in MMC

The Actions scope item of the MMC snap-in manages MSGS actions.

List of actions

Provides a list of already installed actions. The list displays the description, state, filter and action handler of actions.

New Action

Use the **New Action** toolbar button or context menu item to create a new action. The Action Properties form is opened.

Properties

Use the **Properties** toolbar button or context menu item to modify an existing action. The **Action Properties** window opens.

- **Action properties**

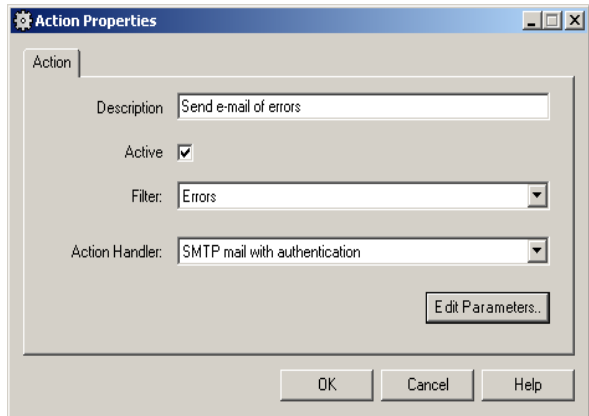


Figure 9 Action Properties window

The **Action Properties** window allows you to set up an MSGS action.

Delete

Use the **Delete** toolbar button or context menu item to delete the selected action(s).

Description

Specify the description of the action. The description must be unique within the MSGS database.

Active

Select this option to activate the actions. Only active actions are triggered by the server. This option allows temporarily disable certain actions, without needing to delete them.

Filter

Select one of the defined filters. The filter of an action is applied to all incoming messages of MSGS. If a message fulfills the filter of an action and the action is active, the action is triggered.

Action Handler

Select one of the already installed action handlers. The selected action handler is used to perform the triggered action. During execution, the action parameters are provided for the action handler.

Edit Parameters

Click the **Edit Parameters** button to open the action handler parameter adjustment form. The form opened is provided by the selected action handler. The edited parameters are stored with the action and are provided for the action handler in case of execution.

Custom filter handlers in MMC

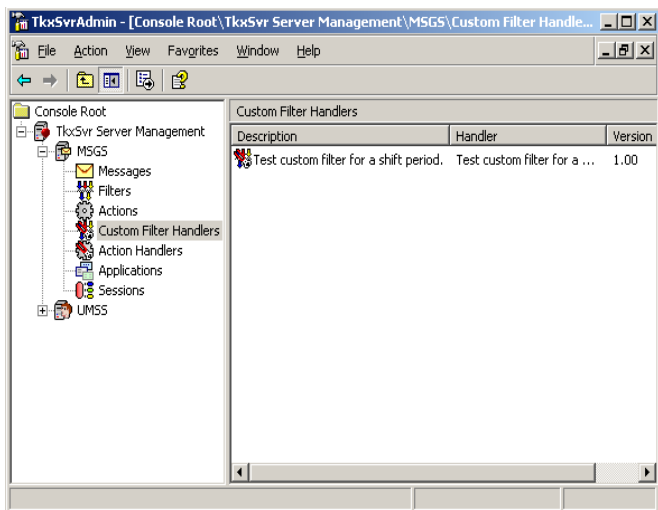


Figure 10 Sample custom filter handlers in MMC

This scope item of the MMC snap-in manages MSGS custom filter handlers.

List of custom filter handlers

Provides a list of already installed custom filter handlers. The list displays the description of the filter handler, the name of handler and the version number.

New custom filter handler

Use the **New Custom Filter Handler** toolbar button or context menu item to create a new filter handler. The **Custom Filter Handler Properties** window opens.

Properties

Use the **Properties** toolbar button or context menu item to change the installation of an existing custom filter handler.

The **Custom Filter Handler Properties** window opens

- **Custom filter handler properties**

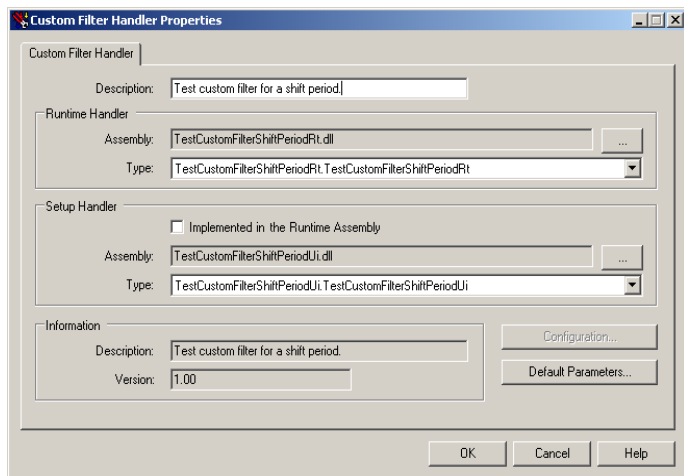


Figure 11 Custom Filter Handler Properties window

The **Custom Filter Handler Properties** window allows you to install or re-install a custom filter handler.

Delete

Use the **Delete** toolbar button or context menu item to uninstall the selected custom filter handler(s) from MSGS.

Description

Enter the unique description of the custom filter handler instance.

Runtime Handler

Select the custom filter runtime handler.

Assembly

File name of the custom filter runtime handler. The browse button allows you to select the file name.

Type

Lists the types of the custom filter runtime handlers implemented in the selected module. Select the type implementing the required handler.

Setup Handler

Select the custom filter setup handler.

Implemented in the Runtime Assembly

Select this option if all handlers are implemented in a single assembly.

Assembly

File name of the custom filter setup handler. The browse button allows you to select the file name.

Type

Lists the types of the custom filter setup handlers implemented in the selected module. Select the type implementing the required handler.

Information

Shows information on the currently selected custom filter handler.

Description

Description of the currently selected custom filter handler.

Version

Version of the currently selected custom filter handler.

Configuration

Click the **Configuration** button to open the configuration setup form of the custom filter handler. Not all custom filter handlers implement configuration adjustment.

Default Parameters

Click the Default Parameters button to open the parameter setup form of the custom filter handler to define default parameter values.

Action handlers in MMC

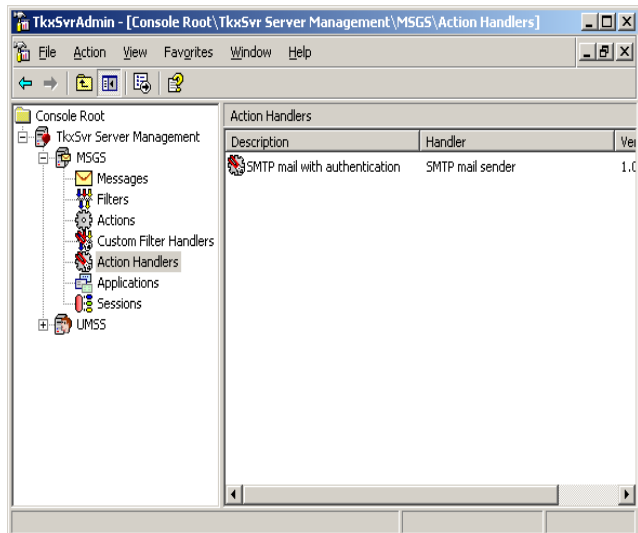


Figure 12 Sample of action handlers in MMC

The scope item of the MMC snap-in manages MSG5 action handlers.

List of action handlers

Provides a list of already installed action handlers. The list displays the description of the action handler, the name of handler and the version number.

New Action Handler

Use the **New Action Handler** toolbar button or context menu item to create a new handler. The **Action Handler Properties** window opens.

Properties

Use the **Properties** toolbar button or context menu item to change the installation of an existing action handler. The **Action Handler Properties** window opens.

- **Action handler properties window**

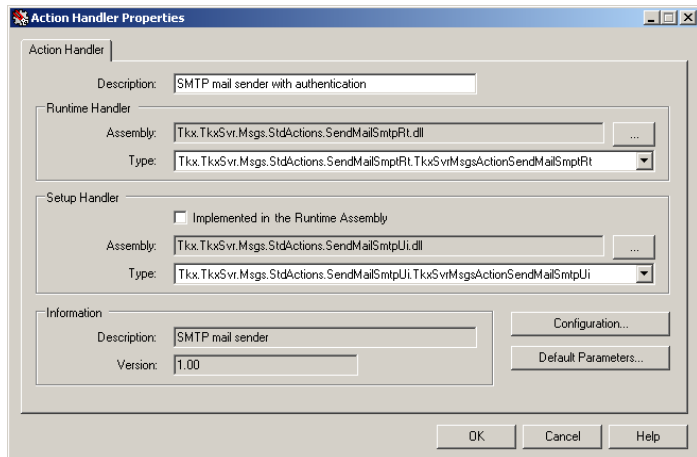


Figure 13 Action Handler Properties window

The **Action Handle Properties** window allows you to install or re-install an action handler.

Delete

Use the **Delete** toolbar button or context menu item to uninstall the selected action handler(s) from MSGS.

Description

Enter the unique description of the action handler instance.

Runtime Handler

Select the action runtime handler.

Assembly

File name of the action runtime handler. The browse button allows you to select the file name.

Type

Lists the types of the action runtime handlers implemented in the selected module. Select the type implementing the required handler.

Setup Handler

Select the action setup handler.

Implemented in the Runtime Assembly

Select this option if all the handlers are implemented in a single assembly.

Assembly

File name of the action setup handler. The browse button allows you to select the file name.

Type

Lists the types of the action setup handlers implemented in the selected module. Select the type implementing the required handler.

Information

Shows information on the currently selected action handler.

Description

Description of the currently selected action handler.

Version

Version of the currently selected action handler.

Configuration

Click the **Configuration** button to open the configuration setup form of the action handler. Not all action handlers implement configuration adjustment.

Default Parameters

Click the **Default Parameters** button to open the parameter setup form of the action handler to define default parameter values.

Registered applications in MMC

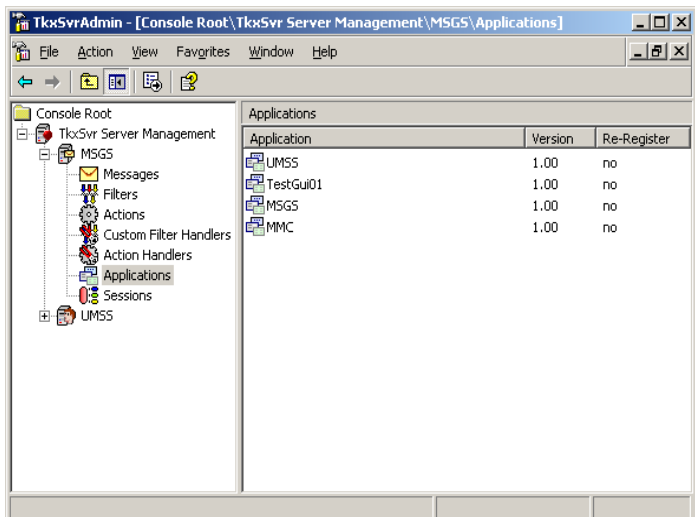


Figure 14 Sample of registered applications in MMC

The scope item of the MMC snap-in manages applications registered on MSG5.

List of applications

Provides a list of registered TEKLYNX applications. The list displays the name and version of the application. This list of applications can be used to view the versions of the installed TEKLYNX applications.

Sessions in MMC

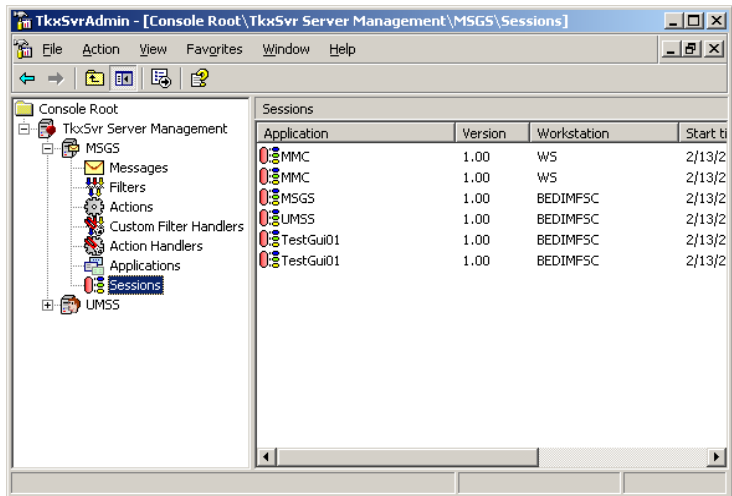


Figure 15 Sample of sessions in MMC

The scope item of the MMC snap-in manages MSG5 sessions.

List of session

Provides a list of sessions currently connected applications. The list displays the name and version of the connected application, the name of the workstation, the time when the session started and the time of the last activity. Every user session will be listed by workstation name.

Delete

Use the **Delete** toolbar button or the **Delete** menu item of the context menu to terminate a session. Terminating a session is the last chance action for a system administrator. It must be used with care.

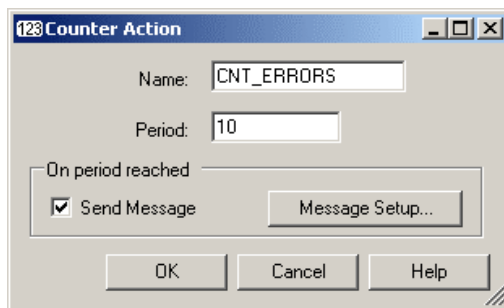
Note

MSGS maintains the time of the last action of connected applications. If an application does not make any activity on the MSGS server for a long period of time (defined in the server configuration), the server terminates the session of the application.

Standard action handler user interfaces

Counter action handler

- Action handler parameters



The screenshot shows a dialog box titled "123 Counter Action". It has a standard Windows-style title bar with minimize, maximize, and close buttons. The dialog contains the following elements:

- A "Name:" label followed by a text input field containing "CNT_ERRORS".
- A "Period:" label followed by a text input field containing "10".
- A section titled "On period reached" containing a checked checkbox labeled "Send Message" and a "Message Setup..." button.
- At the bottom, there are three buttons: "OK", "Cancel", and "Help".

Figure 16 Sample parameters of the counter action handler

The form allows setup the parameters of the counter action.

Name

Enter the name of the counter storage. Specify a unique counter name. The counter name-space is global in MSGS, but there is no check for it. Multiply using the same counter

name may result in improper functionality.

Period

Enter the counter period. Each time the action is performed, the counter value is incremented by one. When the counter value reaches the counter period, a secondary (internal) message is sent to MSGS. The counter period is reset to 0 automatically.

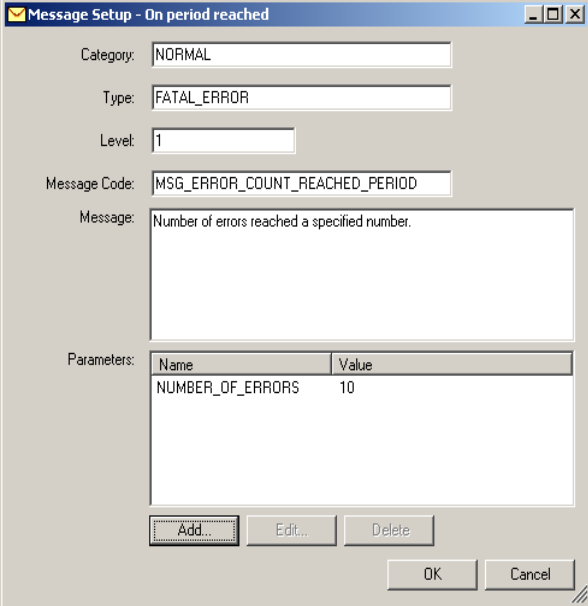
On period reached

Specify the message to be sent to MSGS when counter period is reached.

Message Setup

Click the **Message Setup** button to specify the message to be sent when the counter period is reached. The New Message Setup form is opened.

- **New message setup**



Message Setup - On period reached

Category: NORMAL

Type: FATAL_ERROR

Level: 1

Message Code: MSG_ERROR_COUNT_REACHED_PERIOD

Message: Number of errors reached a specified number.

Name	Value
NUMBER_OF_ERRORS	10

Add... Edit... Delete

OK Cancel

Figure 17 Sample of the setup of a new internal message

The form allows setup the properties and parameters of a message to be sent by an action handler to MSGS.

Category

Enter the CATEGORY property of the message to be sent.

Type

Enter the TYPE property of the message to be sent.

Level

Enter the LEVEL property of the message to be sent.

Message Code

Enter the technical message code of the message to be sent.

Message

Enter the user friendly message text of the message to be sent.

Message Parameters

Lists the already defined parameters of the message.

Add

Click the **Add** button to create a new message parameter.

Edit

Click the **Edit** button to modify an existing message parameter.

Delete

Click the **Delete** button to remove the selected parameter for the message.

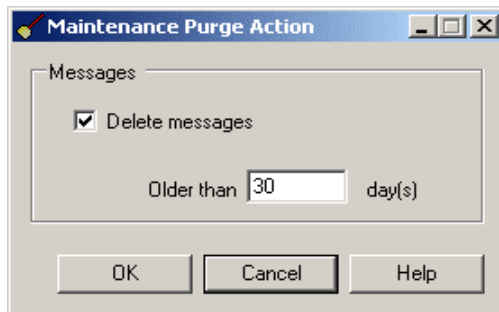
**Maintenance
purge action
handler
parameters**

Figure 18 Sample of maintenance purge parameter action setup

The form allows setup the parameters of the maintenance purge action.

Delete messages

Select this option to activate the deletion of old message.

Older than n days

Specify after how many days the messages are deleted.

SMTP e-mail sender action handler

- Action handler configuration



Figure 19 Sample configuration of the e-mail sender action handler

The action handler configuration defines the mail server used to send e-mail messages and the identity of the author of the mail messages.

Server name

Enter the name of the SMTP server to be used to send the e-mail message. SMTP Port name by default is 587.

Logon name

Enter the name of the user account used to logon to the SMTP server. If no logon name is specified, there will be no authentication.

Logon password

Enter the password to be used to logon to the SMTP server.

From (name)

Enter the name of the author of the mail messages sent by MSGS. If UMSS is also installed, the combobox is filled with user names.

From (address)

Enter the e-mail address of the author of the e-mail message sent by MSGS. If UMSS is also installed and the From (name) was selected from the combobox, this field is filled automatically.

- **Action handler parameters**

Figure 20 Sample of e-mail sender action handler parameters

The action parameters define the e-mail message self together with the identity of the addressee.

To (name)

Enter the name of the addressee of the mail message. If UMSS is also installed, the user can be selected from the combobox.

To (address)

Enter the e-mail address of the addressee of the mail message. If the name of the addressee was selected from the combobox and an e-mail address is specified for the selected user, this field is filled automatically.

Subject

Enter the subject of the mail message. Mnemonics can be used in this field.

Message Text

Enter the text of the message. Mnemonics can be used in this field.

On success

Select the Send Message option to send a secondary (internal) message to MSGS if the e-mail is sent successfully. Pressing the Message Setup button opens the New Message Setup form.

On failure

Select the Send Message option to send a secondary (internal) message to MSGS if the e-mail could not be sent. Pressing the Message Setup button opens the New Message Setup form.

Mnemonics

Certain fields allow entering mnemonics. Mnemonics are resolved during the processing of the message.

- **%CATEGORY%**

The CATEGORY property of the MSGS message being processed by the action.

- **%TYPE%**

The TYPE property of the MSGS message being processed by the action.

- **%LEVEL%**

The LEVEL property of the MSGS message being processed by the action.

- **%APPLICATION%**

The APPLICATION property of the MSGS message being processed by the action.

- **%WORKSTATION%**

The WORKSTATION property of the MSGS message being processed by the action.

- **%USERNAME%**

The USERNAME property of the MSGS message being processed by the action.

- **%MSGTEXT%**

The MSGTEXT property of the MSGS message being processed by the action. Available parameters list: FROMADDRESS, FROMUSERFIRSTNAME, FROMUSERLASTNAME, DESTUSERFIRSTNAME, DESTUSERLASTNAME, LABELNAME, SUBJECT, LASTVERSION, FROMNAME, TONAME.

SMS through e-mail action handler

- Action handler configuration

Send SMS through Gateway Action

Mail Server

Server name: smtp.xyz.com

Logon name: msgsmailaccount

Logon password: *****

Mail Author

From (name): MSGs

From (address): msgsg@xyz.com

SMS Message

Address template: %MOBILE%@xyzmsggateway.com

Max. characters: 160

OK Cancel Help

Figure 21 Sample configuration of the SMS sender action handler

The action handler configuration defines the mail server used to send e-mail messages to the SMS gateway and the identity of the author of the SMS message.

Server name

Enter the name of the SMTP server to be used to send the message.

Logon name

Enter the name of the user account used to logon to the SMTP server. If no logon name is specified, there will be no authentication.

Logon password

Enter the password to be used to logon to the SMTP server.

From (name)

Enter the name of the author of the messages sent by MSGS. If UMSS is also installed, the combobox is filled with user names.

From (address)

Enter the e-mail address of the author of the SMS message sent by MSGS. If UMSS is also installed and the From (name) was selected from the combobox, this field is filled automatically.

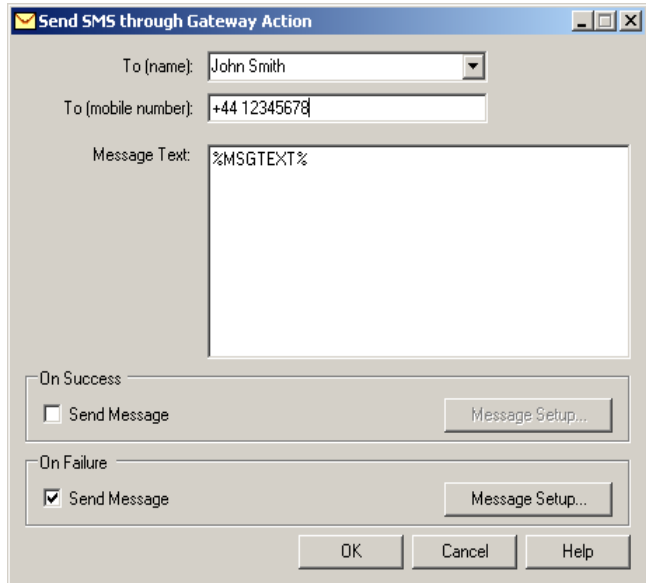
Address template

Specify a template to be evaluated as an e-mail address interpreted by the E-Mail-SMS gateway. The %MOBILE% mnemonic can be used as a placeholder of the mobile phone number of the addressee. The actual value entered in the action parameters is replacing the mnemonic at run time.

Max. characters

Length of the SMS message can be limited to a certain number of characters. This value specifies the limit applied by the action parameters form when entering the message text. This feature is active only if a constant message text is entered; using mnemonics in the message text inactivates it.

- **Action handler parameters**



The screenshot shows a dialog box titled "Send SMS through Gateway Action". It features a title bar with a mail icon and standard window controls. The main area contains three input fields: "To (name):" with a dropdown menu showing "John Smith", "To (mobile number):" with a text box containing "+44 12345678", and "Message Text:" with a large text area containing "%MSGTEXT%". Below these are two sections: "On Success" with a checkbox for "Send Message" (unchecked) and a "Message Setup..." button; and "On Failure" with a checkbox for "Send Message" (checked) and a "Message Setup..." button. At the bottom are "OK", "Cancel", and "Help" buttons.

Figure 22 Sample parameter setup of the SMS sender action handler

The action parameters define the SMS message to be sent and the identity of the addressee.

To (name)

Enter the name of the addressee of the SMS message. If UMSS is also installed, the user can be selected from the list.

To (mobile number)

Enter the mobile phone number of the addressee of the SMS message. If the name of the addressee was selected from the list and a mobile phone number is specified for the selected user, this field is filled automatically.

Message Text

Enter the text of the message. Mnemonics can be used in this field.

On success

Select the **Send Message** option to send a secondary (internal) message to MSGS if the SMS is sent successfully. Pressing the Message Setup button opens the **New Message Setup** window.

On failure

Select the **Send Message** option to send a secondary (internal) message to MSGS if the SMS could not be sent. Pressing the **Message Setup** button opens the **New Message Setup** window.

Mnemonics

Certain fields allow you to enter mnemonics. Mnemonics are resolved during the processing of the message.

- **%CATEGORY%**

The CATEGORY property of the MSGS message being processed by the action.

- **%TYPE%**

The TYPE property of the MSGS message being processed by the action.

- **%LEVEL%**

The LEVEL property of the MSGS message being processed by the action.

- **%APPLICATION%**

The APPLICATION property of the MSGS message being processed by the action.

- **%WORKSTATION%**

The WORKSTATION property of the MSGS message being processed by the action.

- **%USERNAME%**

The USERNAME property of the MSGS message being processed by the action.

- **%MSGTEXT%**

The MSGTEXT property of the MSGS message being processed by the action.

Windows event log writer parameters

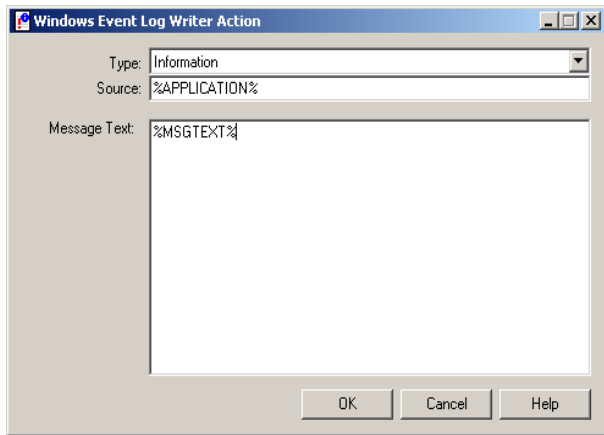


Figure 23 Windows Event Log Writer Action window

This window allows setup the parameters of the Windows event log writer action.

Type

Select one of the Windows event log entry types.

Source

Specify the source of the Windows event-log entry. Mnemonics can be used in this field.

Message Text

Enter the message text of the Windows event-log entry. Mnemonics can be used in this field.

Mnemonics

Certain fields allow entering mnemonics. Mnemonics are resolved during the processing of the message.

- **%CATEGORY%**

The CATEGORY property of the MSGS message being processed by the action.

- **%TYPE%**

The TYPE property of the MSGS message being processed by the action.

- **%LEVEL%**

The LEVEL property of the MSGS message being processed by the action.

- **%APPLICATION%**

The APPLICATION property of the MSGS message being processed by the action.

- **%WORKSTATION%**

The WORKSTATION property of the MSGS message being processed by the action.

- **%USERNAME%**

The USERNAME property of the MSGS message being processed by the action.

- **%MSGTEXT%**

The MSGTEXT property of the MSGS message being processed by the action.