



M4E SMPP Connection Details

This document provides detailed instructions on how to install and configure the SMPP service provider connection for SMS messaging in Ozeki NG - SMS Gateway software that serves as the M4E platform back end multiple connector component.

Video tutorial link:

http://ozekisms.com/video/SMPP_Configuration/SMPP_Confiuration.html

The SMPP protocol can be used to connect your computer directly to the Short Message Service Center (SMSC) of the service provider. This way you can send and receive SMS messages over the Internet or over a private IP network. You can install and configure this connection using the [graphical user interface](#) of Ozeki NG - SMS Gateway.

To start installing and configuring an SMPP connection, click the **Add** button in the top right-hand corner of the **Service providers** panel on the left of the **Management Console** interface. You can also add a service provider connection by clicking the **Add service provider** item in the **Service providers** menu.

After you have clicked one of these, the **Add service provider** panel will show up on the right of the interface. The panel contains a list of protocols you can install and use for communication with an SMS service provider.

To select the SMPP protocol, click the **Install** link in the respective entry in the list (Figure 1).

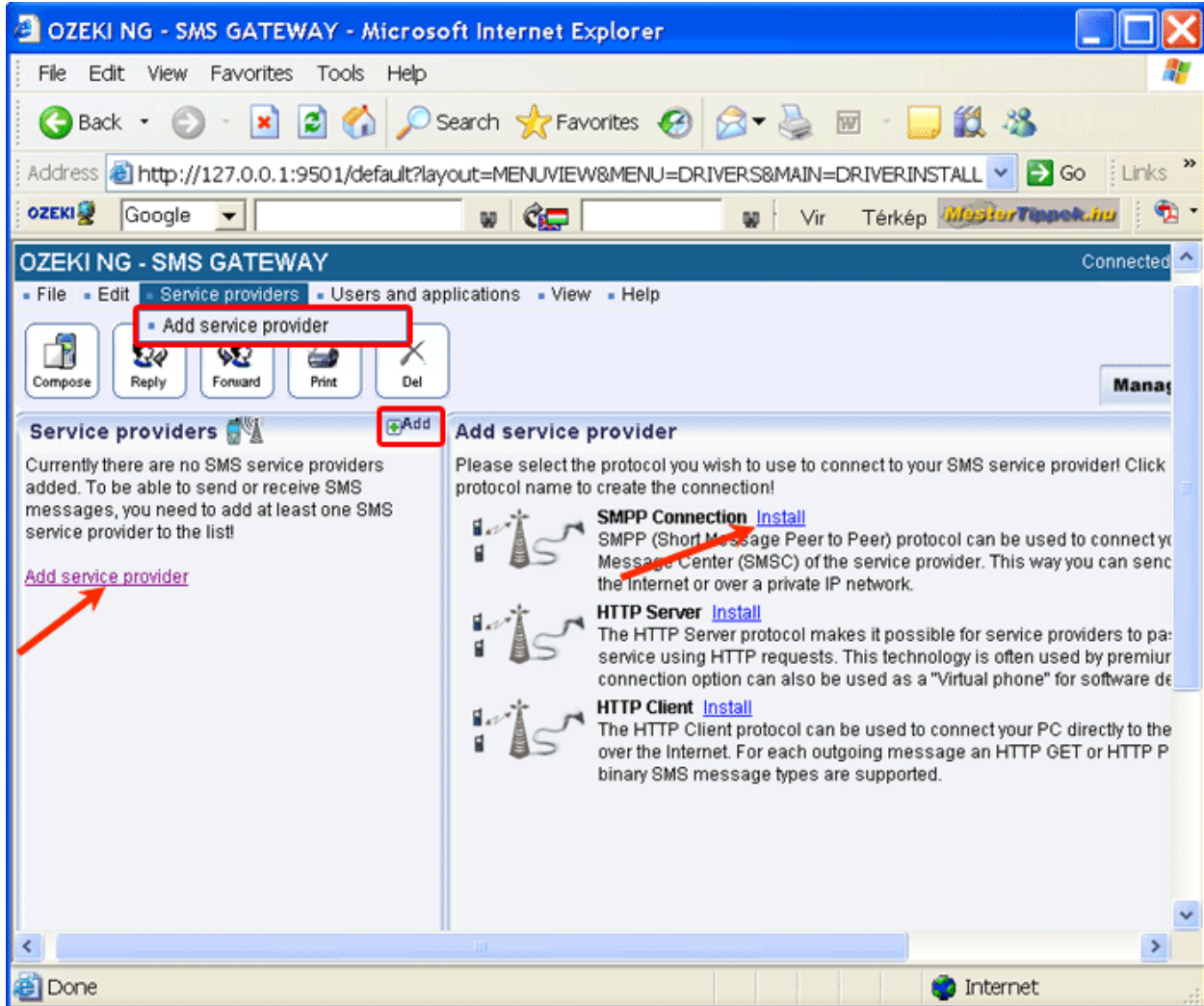


Figure 1 >> starting to install the SMPP connection

When you have installed the **SMPP Connection**, the **Configuration** panel will show up on the right of the interface. The first tab of the panel is the **SMPP settings** tab. First, specify the SMPP server settings. This information is provided by the GSM service provider whose service you have subscribed to. The connection parameters are the host name (sometimes only an IP address is given), the port number, a username and a password. Service providers often use the phone number of the service or the port number as the username. Enter the information in the respective edit boxes (Figure 2).

SMPP settings | Logging | Connection | Message submission | Message data | Encoding

Please specify the SMPP server settings. (This information is provided by the SMS service provider when you subscribe to the service.)

Host:

Port: Use source port:

Username:

Password:

(Optional, 0 means disabled.)

Please specify the telephone number and assign a service provider name to this connection.

Telephone number: overridable

Service provider name:

Connect automatically on startup.

OK Cancel

Figure 2 >> Specifying the server settings

Then, specify the telephone number assigned to this connection and the service provider connection name. To facilitate identification and to avoid confusion, you should name the connection after the GSM service provider. E.g., if you have set up an SMPP connection with MBLOX, it is advisable to name it "mblox". Also, note that different connections should be given different names. If you have different connections from the same service provider, you can use different but similar names for them, e.g.: "mblox1", "mblox2" (pattern). However, some load balancing solutions require an identical name for different connections. For details, visit the [Load Balancing](#) and the [Load Balancing for SMPP v3.3](#) page.

Enter the information in the respective edit boxes. Remember to enter the phone number in international format: starting with "+". You can check the **overridable** checkbox to the right of the **Telephone number** edit box. This ensures that you can replace the phone number specified in the **Telephone number** edit box with a different one to be displayed as the sender of an outgoing message. You can also replace the number with (alphanumeric) text consisting of a maximum of eleven (11) characters. Therefore, when a message is sent out, e.g. using the [Database user](#), you can specify any different phone number or a name to be displayed as the sender of the message.

Note that the phone number to be specified in the **Telephone number** edit box is a mandatory value. If you leave the edit box empty, the sending will be unsuccessful.

To configure logging, click the **Logging** tab in the **Configuration** panel.

The tab has a **Logging** and a **Log file settings** section. Here, you can choose whether to make the program write log entries about sent and received messages in human readable format and/or log low level communication. Choosing the latter option will make the program produce logfiles containing binary codes representing the communication data.

You should check at least the **Log sent and received messages in human readable format** checkbox, as logfiles can be useful in debugging communication problems (Figure 3).

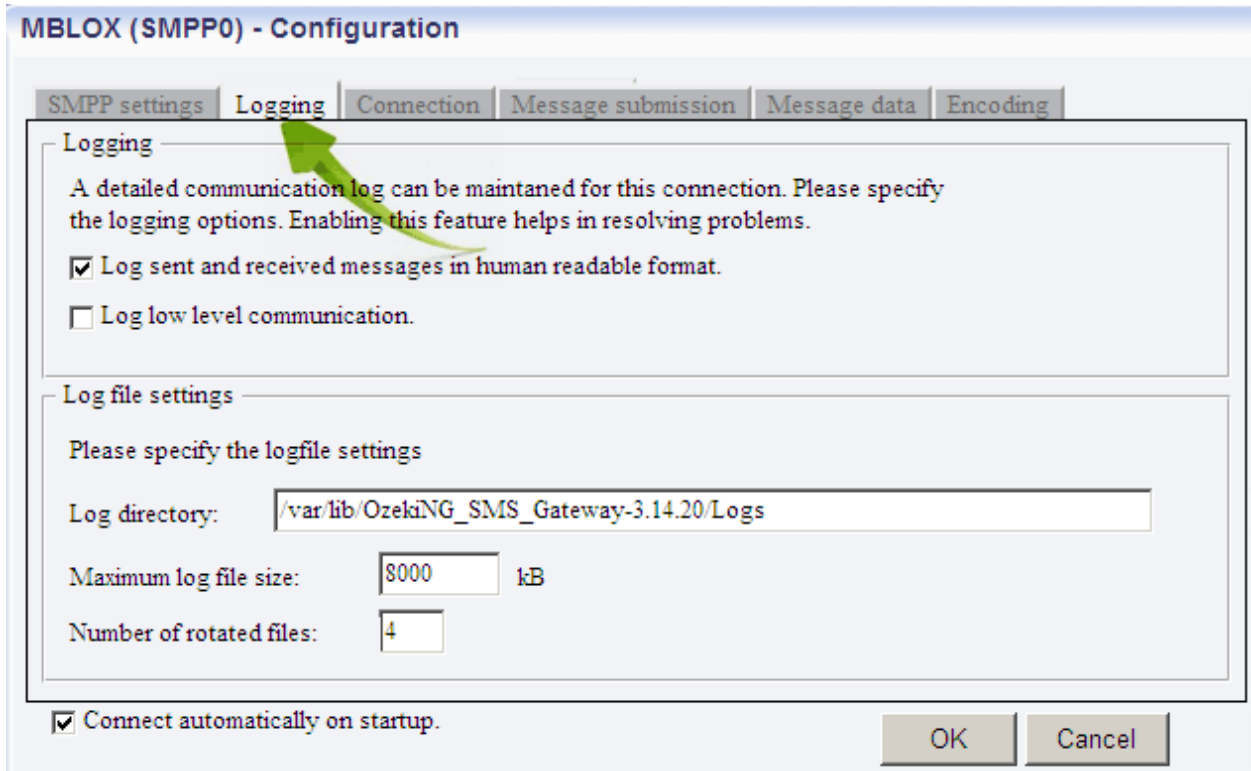


Figure 3 >> Logging options

In the **Log file settings** section of the tab, you can make specifications for the size and the number of available logfiles. Log rotation saves disk space, as it ensures that older (and probably no longer needed) logfiles will be automatically deleted from the log directory, which is specified in the **Log directory** text box. By default, the access path to the logfiles is /var/lib/OzekiNG_SMS_Gateway-3.14.20/Logs.

In the **Maximum log file size** text box you can specify the maximum size of a logfile. Once this size is reached, a new logfile will be created. Specify the number of kilobytes for the size of a logfile by entering a positive whole number. By default, the maximum logfile size is 8000 kB.

In the **Number of rotated files** text box, specify the maximum number of rotated logfiles that are saved. Specify this number by entering a positive whole number. By default, the number of logfiles that are saved is 4 (see Figure 3 above).

If you are content with the default specifications, leave the text boxes unchanged.

In the **Connection** tab of the **Configuration** panel, you can define detailed protocol-specific options and specify NPI and TON settings (in the left section) and you can make communication link management settings (in the right section).

By selecting either of the radio buttons (**v3.3** or **v3.4**), you can specify the protocol version.

You can specify the system type by entering its name in the **System type** text box. The system type is for assigning the protocol standard of the other side (SMSC). It is specified by the service provider.

To specify the bind mode, select one of the three radio buttons: **Transmitter**, **Receiver** or **Transceiver**.

The bind mode describes the way of communication between Ozeki NG - SMS Gateway and the SMS Center of a service provider.

Select **Transmitter** if you use this connection only for sending SMS messages.

Select **Receiver** if you use this connection only for receiving messages.

Select **Transceiver** if you use this connection for both sending and receiving messages.

In this section you can also find boxes for NPI and TON settings. NPI is short for Network Protocol Identification. TON is short for Type Of Number. In each of them, you can enter numbers. This information is provided by the GSM service provider (Figure 4).

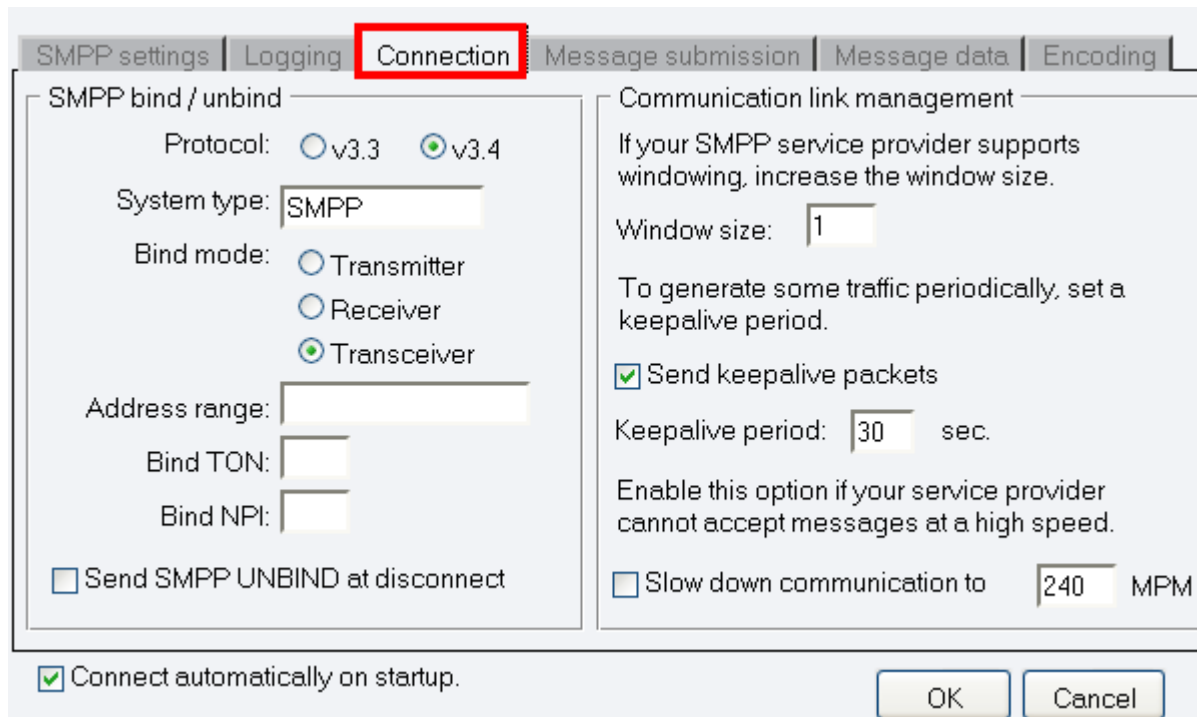


Figure 4 >> Connection tab

In the right section of this configuration panel you can manage communication links. At first, in "Windows size" line you can increase the window size, if your SMPP service provider supports windowing.

If you check the checkbox in the **Communication link management** section, you can make the program send keepalive packets to maintain connection. Proxy servers will drop a connection after a short period of time if there is no activity on it. Keepalive packets are sent during idle periods to keep the connection open.

In the **Keepalive period** edit box you can specify the maximum length of idle connection between the Ozeki NG - SMS Gateway and the SMSC. You can specify it by giving the number of seconds in numerical characters representing any positive whole number. If you are content with the default specification (30 seconds), leave this edit box unchanged.

You can also check the **Slow down communication to** checkbox (you can provide the exact time in MPM) if your service provider cannot accept messages at a high speed.

In **Message submission** tab there are two sections: **Delivery reports** and **Submit timeout handling**. In "Delivery reports" section you can enable **Request delivery reports** option. Delivery

reports give you message delivery status for submitted messages. They are returned by the service provider when a message arrives to the recipient handset. Then specify the date format used by your service provider in delivery reports in **Delivery date format** line.

In **Submit timeout handling** sector you can specify the preferred way to handle submit timeout. In the **Submit timeout** edit box you can specify the maximum waiting time for an SMS Center response confirming that your message has been successfully submitted. Successful submission means that the SMS Center has accepted the message for delivery. You can specify the waiting time by giving the number of seconds in numerical characters representing any positive whole number. If you are content with the default specification (60 seconds), leave this edit box unchanged.

You can choose how to consider a message you have sent if there is no response from the SMS Center after the specified length of time. Select one of the three radio buttons.

Select **Sent** to consider a message sent even if there is no response from the SMS Center.

Select **Not sent** to consider a message not sent if there is no response from the SMS Center.

Select **Retry later** to make the program try to send a message later if the SMS Center has not confirmed its status as sent. Then, the message will be placed last in the outgoing message queue and sent out again when it is its turn (Figure 5).

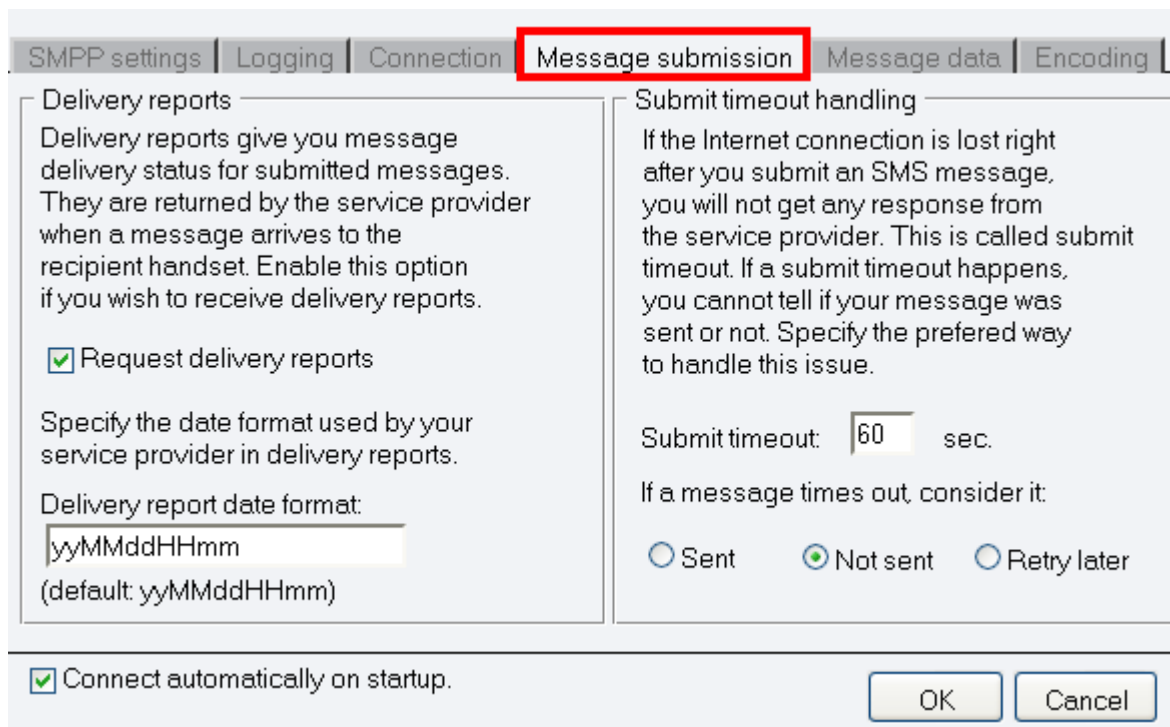


Figure 5 >> Message submission tab

In **Message data** tab you can see two sectors: "Character encoding of text messages" and "Message data transport" (Figure 6). First, you can specify the preferred character set (Default, ISO_8859_1, UCS2, GSM7bit) and the character encoding policy (Best match, Transform, Enforce).

Best match: Convert to preferred character set if lossless conversion is possible. (Character substitutions are not allowed.)

Transform: Convert to preferred character set if possible. (Character substitutions are allowed.)

Enforce: Always use the preferred charset. (Character substitutions and character losses are allowed.)

Then you can enable one of the following options if it is required: **Use GSM 7 bit packed encoding, Encode @ sign as iso 8859-1 character, Convert incoming GSM 7 to iso 8859-1**.

In "Message data transport" section you can enable segmentation and reassembly (SAR), to automatically split outgoing messages and reassemble incoming messages if needed as long messages should be sent through the mobile network in several parts.

As some service providers might ask you to use TLV fields instead of the standard SM field in this section you can select from these options:

Put UDH into TLV for binary SMS

Put UDH into TLV for text SMS

Put msg data into TLV instead of SM field

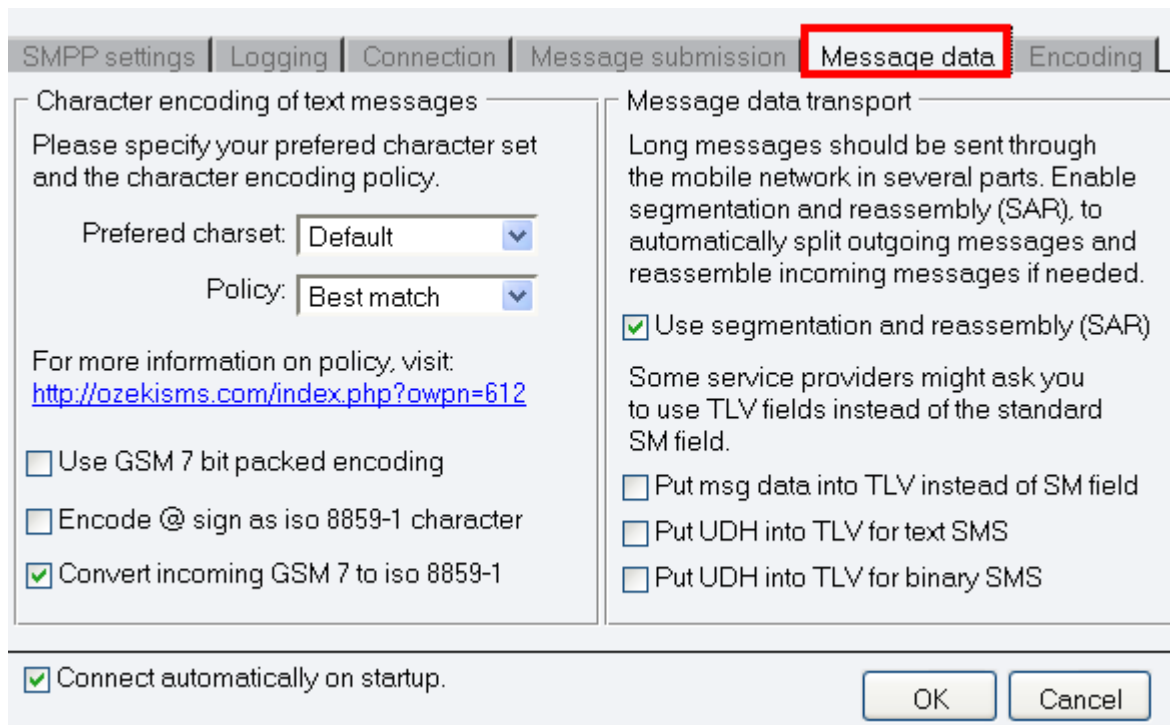


Figure 6 >> Message data tab

The last tab is **Encoding** in **Configuration** panel. There are the following sections: **ESM Class field, Number format encoding, DCS field, Service type**.

In **ESM Class field** you can enable these options:

Put Delivery Report Req. into ESM class

Put UDHI into ESM class for text SMS

Put UDHI into ESM class for binary SMS

In case your service provider ask you to set ESM class field to 00 for all messages, please make sure the following options are **NOT** checked.

In **Number format encoding** section you can specify TON and NPI numbers; in the other two section you can specify DCS that determines the charset, the message class and binary message encoding, and service type parameter of SUBMIT SM PDU (Figure 7).

SMPP settings | Logging | Connection | Message submission | Message data | **Encoding**

ESM Class field
Your service provider might ask you to set ESM class field to 00 for all messages. In this case make sure the following options are NOT checked.

- Put Delivery Report Req. into ESM class
- Put UDHI into ESM class for text SMS
- Put UDHI into ESM class for binary SMS

DCS field
DCS determines the charset, the message class and binary message encoding

Override DCS: (Hex char)

Number format encoding

Source TON: Source NPI:
Dest TON: Dest NPI:

Do not convert + sign to TON and NPI

Handle unspecified TON and NPI as:
 ▼

Service type
Service type parameter of SUBMIT SM PDU

Service Type: (Hex String)

Connect automatically on startup.

OK Cancel

Figure 7 >> Encoding tab

The **Configuration** panel for service provider connections contains a **Connect automatically on startup** checkbox (in the bottom left-hand corner). If it is checked, Ozeki NG - SMS Gateway will automatically initiate a connection with the SMS Center when the program has started. If this checkbox is not checked, the connection has to be initiated manually.

To initiate the connection manually, click the **Connect** link in the panel of the service provider connection (Figure 8).

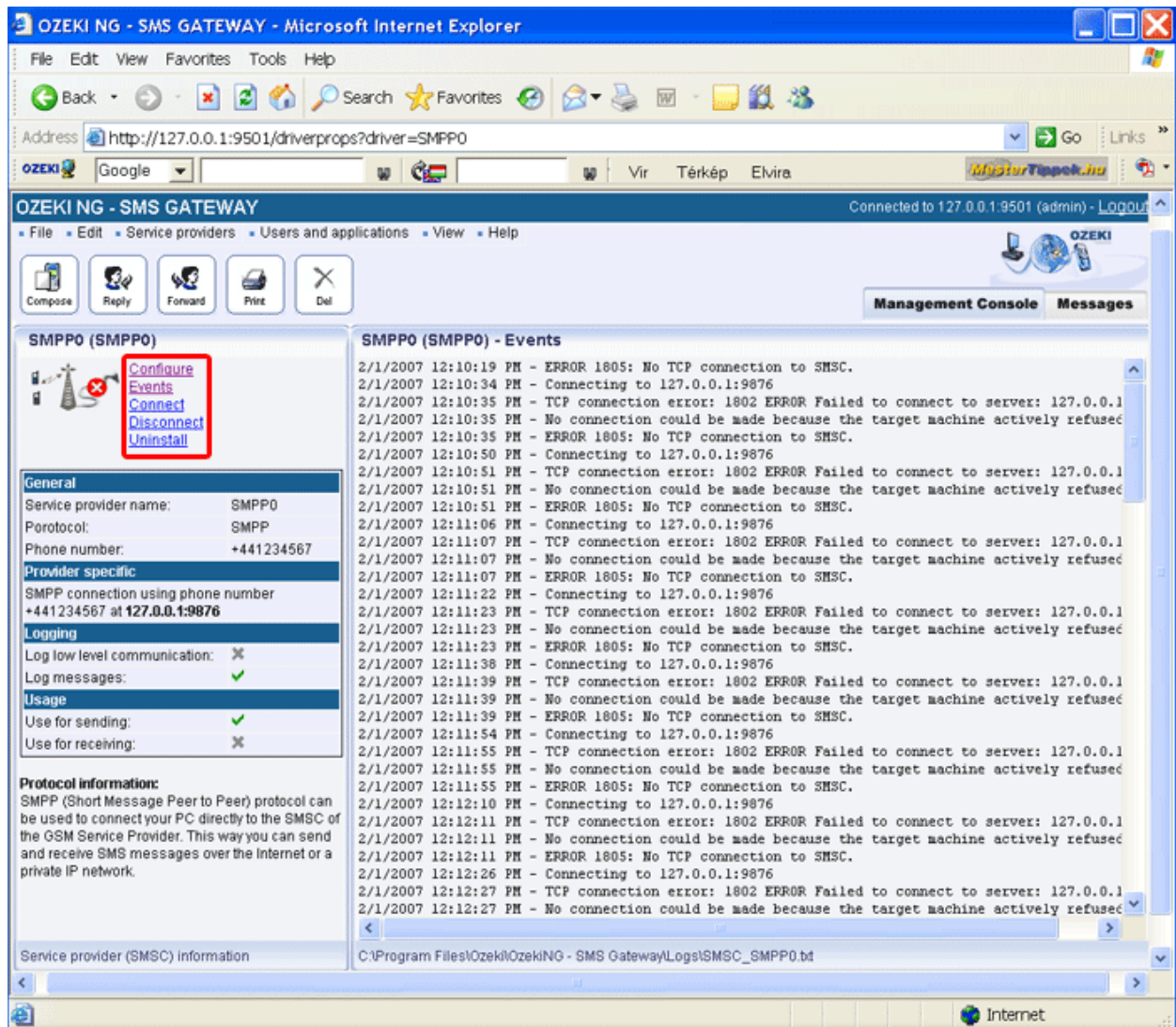


Figure 8 >> Links to operations

You can open the panel of a service provider connection by clicking its name in the **Service providers** panel in the **Management Console**.

The panel of a service provider connection consists of three sections.

In the upper section you can find the name of the service provider connection (with the name of its protocol in brackets).

You can see an icon showing if the service provider connection is connected. If it is not, the icon is marked with an "x".

To the right of the icon you can find links to perform different operations.

Configure: to configure or modify the configuration of an installed service provider connection. Clicking this link will take you back to the **Configuration** panel.

Events: to view the logging of the latest server events related to the service provider connection. Clicking it will bring up the **Events** panel containing the logging of the latest server events.

Connect: to connect the service provider connection with the SMS Center.

Disconnect: to disconnect the service provider connection from the SMS Center.
Uninstall: to uninstall the service provider connection.

In the middle section of the panel you can see some of the most important configuration information. The options that have been (re)activated during the configuration are marked with a tick. The options that have not been activated or those that have been deactivated during the configuration are marked with an "x".

In the lower section of the panel of the service provider connection you can read some information about its protocol.

END.