

# Surveillance Observation and Monitoring, ZO

INSTALLATION INSTRUCTION



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# 1

## GENERAL

This document describes the installation of the SOM functionality in the MX-ONE.

The SOM comprises functions for observing traffic to or from certain objects for surveillance purposes. These objects can be individual extensions, group numbers, or destinations in a private or public network.

### 1.1 SPACE REQUIREMENTS

#### 1.1.1 HW REQUIREMENTS

MX-ONE Classic gateways (with MGU plus additional line boards) are required for the SOM application.

TCP/IP interface or two V.24 ports for the data link are required. It is recommended that the V.24 ports are mounted in the same LIM that contains the SOM common program units. If the data link shall be multiplexed into a trunk line group, an ELU board with digital connection individuals is needed. Trunk line boards, ISDN PRA, intended for the SOM functionality are also needed. The SOM can handle up to 8 trunk line boards, with a maximum of 3 boards per LIM.

**Note:** Because the Mitel ASU Lite, ASU and Mitel ASU-II boards have no serial ports and two V.24 ports are required for SOM, two USB-to-serial converters are required if the LIM is ASU-based. Install the USB converter driver on the /dev/ttyUSB0 device.

#### 1.1.2 SW REQUIREMENTS

The SOM consists of common and regional program units.

The common program units are to be loaded in the same LIM (server), the SOM main LIM. In a multi-LIM system it is to be preferred that this LIM is not the same as the ordinary I/O LIM. An exception from this is the handler, ZOHH. For best performance this program unit shall be loaded in the ordinary I/O LIM. The size of the handler is less than 20 kb and the size of the rest of the common program units are less than 800 kb.

The regional program units are to be loaded in all LIMs in the system and the file size is less than 600 kb.

The SOM function is licensed. One license per LIM (server) is needed.

## 2 TOOLS

A PC-client terminal is needed for configuration of the exchange.

## 3 PREPARATIONS

Ensure that all requirements mentioned in section Space requirements are fulfilled.

**Note:** Customers with existing older SOM installations should first upgrade the MX-ONE to MX-ONE 5.0, see the installation instruction for *UPGRADING MX-ONE 3.X, 4.X TO MX-ONE 5.0*.

Then install the license files, see the operational directions for ADMINISTRATOR USER'S GUIDE, section License Handling.

After that, execute the SOM commands.

## 4 MOUNTING

### 4.1 PROGRAM UNITS

The following program units shall be loaded with the standard MX-ONE:

Common program units in the SOM Main LIM, LIM 1

- ZODBM
- ZOMM
- ZOILP
- ZOIDEF
- ZODTP
- ZOHC

Regional program units in all LIMs in the system

- TCP
- ZOTCP
- ZODBR
- ZOMR
- TLP99

**Note:** Program unit TLP99 only needs to be loaded in LIMs equipped with trunk line boards (ISDN PRA) intended for the SOM functionality.

The SOM handler unit in the system's ordinary I/O LIM ZOHH

### 4.2 PROGRAM LOADING ORDER

The SOM program units must be loaded in a specified order to not result in history logs.

Use the *pu\_add* command and load the program units in the following order (starting with ZODBM):

- ZODBM
- ZOMM
- ZOTCP
- ZOILP
- ZOIDEF
- ZODTP
- ZODBR
- ZOMR
- ZOHC
- TLP99
- ZOHH

## 5

## CABLING

### 5.1

### DATA LINK

The data link is connected to MX-ONE through two V.24 ports or TCP/IP interface, USB ports or TCP/IP interface and divided into two data channels, the Control Channel CCL, and the Event Channel, ECL.

These two data channels are connected to a data communication equipment (DCE), for instance ordinary modems, for transfer of data to and from the SCC. Communication over the interface is asynchronous, full duplex.

The data link can be carried to the SCC via separate lines or multiplexed into two MTLs and carried over the same PCM-interface as the speech channels. When the data link is multiplexed into two MTLs an ELU33 board is used to connect the communication equipment to the MX-ONE .

If the data link is setup through two V.24 ports, the Control Channel CCL uses COM1 (/dev/ttyS0) and Event Channel ECL uses COM2 (/dev/ttyS1).

If the data link is setup through one V.24 port and one USB port, the Control Channel CCL uses COM1 (/dev/ttyS0) and Event Channel ECL uses USB0 (/dev/USB0).

**Note:** The following is valid only from 4.1 SP3.

If the data link is setup through two USB ports, the Control Channel CCL uses USB0 (/dev/USB0) and Event Channel ECL uses USB2 (/dev/USB1).

#### 5.1.1

#### CONNECTION BETWEEN SERVER AND MDF

The MX-ONE Service Node will be connected to a modem with a cable RPM 130 011/1 plus an adapter, RPT 247 903/1, which converts from female 9 pole to male 25 pole. The modems are then connected to the MDF with an ordinary telephone cable via a telephone jack.

#### 5.1.2

#### CONNECTION BETWEEN MDF AND ELU33

The ELU33 board will be connected to the MDF with a cable TSR 910 1054/16M or TSR 910 1054/32M.

### 5.2

### MONITORING TRUNK LINES

The digital trunk lines are used to carry speech information between MX-ONE and the SCC. These trunk lines are defined as Monitoring Trunk Lines, MTLs, and tied to the SOM application by means of MML-commands.

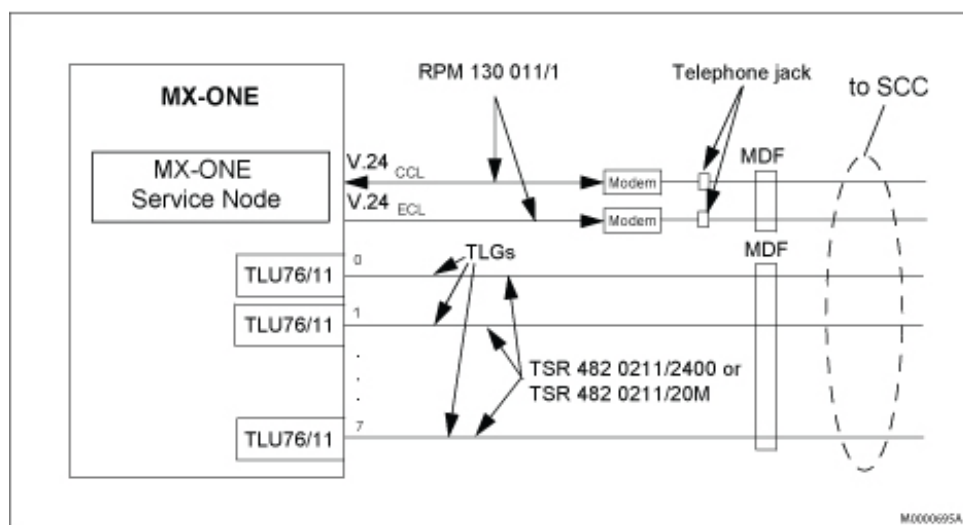
#### 5.2.1

#### CONNECTION BETWEEN TLU AND MDF

The TLU76/11 boards can be connected to an MDF if a cable TSR 482 0211/2400 or TSR 482 0211/20M is used.

## 5.3

## EXAMPLE CONNECTIONS BETWEEN MIVOICE MX-ONE AND SCC



**Figure 1: Interfaces between MX-ONE, modem and SCC**

The data link is connected to the SCC with ordinary modems via a public or private network.

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# POST INSTALLATION MEASURES

Verify the function. Check that the correct programs are loaded. Use the command *pu\_info*.

Make a system dump.