

Migrating MD110/Mitel TSW to MiVoice MX-ONE 6.3

INSTALLATION INSTRUCTIONS



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GENERAL

This document includes all the tasks necessary to migrate an MD110/Mitel TSW system to MX-ONE 6.3. This requires taking down the target system for a short period of time. With the system down, changing the firmware and hardware can be accomplished quickly and efficiently. The prepared reload directory is then connected, loaded on to the new system so that call processing is achieved in a relatively short time and with minimal disturbance for the customer.

In case the migration cannot be done at one time for all extensions in the system, but has to be done stepwise, for example in very large systems or networks, that can be done. See Operational Directions *SMOOTH MIGRATION*.

1.1

SCOPE

This document describes the hardware and software migration from MD110/Mitel TSW to MX-ONE 6.3. Older system as BCx on MD110, where HW is re-used, cannot be migrated directly to MX-ONE 6.3. These old systems have to be SW updated in two steps as shown in the Figure 1.

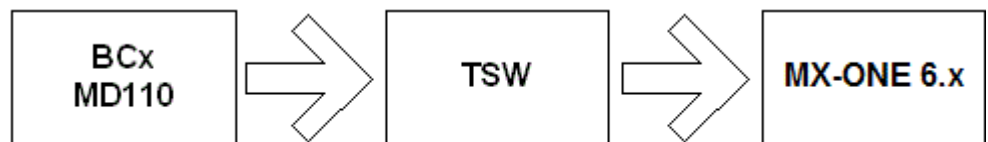


Figure 1: Step of the migration

1.2

TARGET GROUP

This document has been designed to provide an experienced technician with the information necessary to complete a migration of an MD110/Mitel TSW to MX-ONE 6.3.

1.3

PREREQUISITES

It is required that the hardware of the target system is upgraded before software migration, as described in this document.

- The MD110/Mitel TSW must be in the Stackable or later building practice. For example see Figure 2, Figure 3 and Figure 4.
- Installation instructions for *UPGRADING OF TELEPHONE EXCHANGE ASB 501 04*.
- Operational directions for *SMOOTH MIGRATION (if a stepwise migration has to be done)*.
- Installation instructions for *REPLACING, EXPANDING AND MIXING EQUIPMENT IN PREVIOUS CABINETS*.
- Installation description for *MX-ONE SITE PLANNING*.
- The Mitel ASU Lite, ASU or Mitel ASU-II processor board can not be placed in the Stackable. For installation in Stackable, the Mitel ASU Lite, ASU or Mitel ASU-II needs to be mounted in a 1U-chassis and mounted at the bottom of the Stackable.

Note: Only stackable or later HW can be used in MX-ONE 6.3.

Note: There is no support for HW introduced prior to the Stackable building practice.
– do not use such HW with MX-ONE 6.3.

Therefore, the following guidelines shall be applied when migrating to MX-ONE 6.3:

- Pre-stackable HW is not permitted in MX-ONE 6.3. Move extensions on this old HW to more modern HW. For example see Figure 2, Figure 3 and Figure 4.
- Almost all MD110 hardware is now service stopped according to previously published Phase Out News documents, including the Stackable hardware.
- However, the major part of the Service Stopped HW can still be used in Mitel TSW and MX-ONE. Note that pre-stackable HW will not work in MX-ONE 6.3. Mitel will no longer maintain or repair the board HW and FW itself, although the Mitel TSW and MX-ONE system SW will continue to support the boards in an upgrade or migration scenario. Mitel will not take responsibility for any HW or FW related faults on these boards. Only system SW related faults will be taken into account for these boards.
- Although some of the old MD110 boards can still be used in Mitel TSW and MX-ONE, it is strongly recommended to use only the hardware and Software specified for that release when upgrading/migrating to Mitel TSW/MX-ONE, to ensure full functionality, performance, reliability and stability.

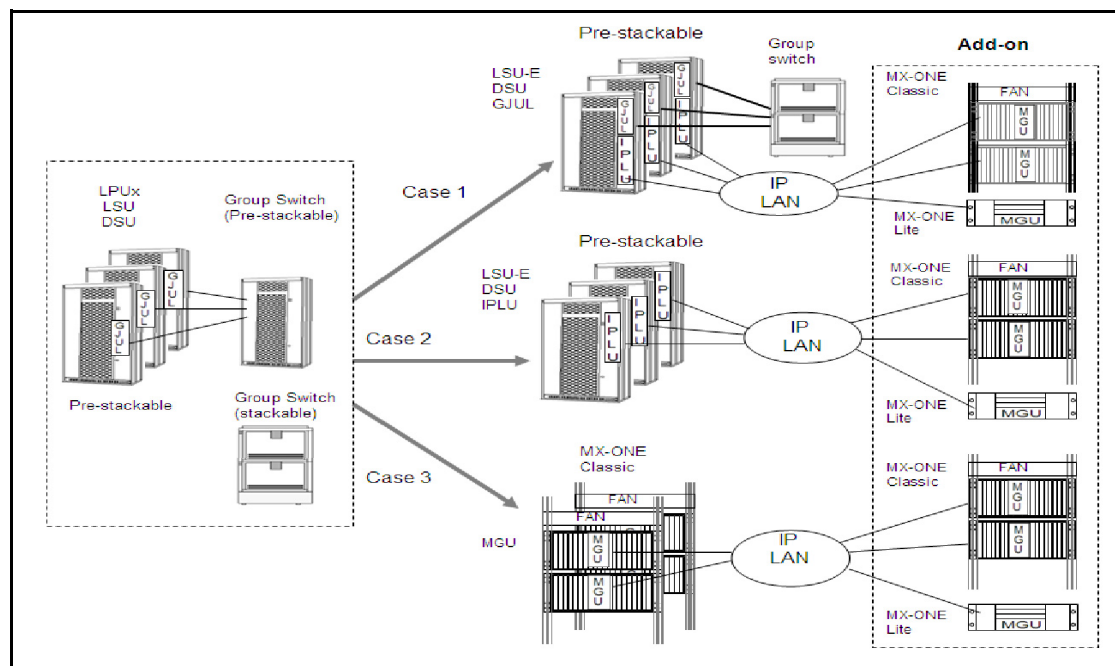


Figure 2: Migrating pre-stackable building practice to MX-ONE 6.3

- The migrated system and add-on are all MX-ONE Classic and/or MX-ONE Lite, operating in media over IP.
- For systems with DECT, see Installation Instruction, Cordless Phones.

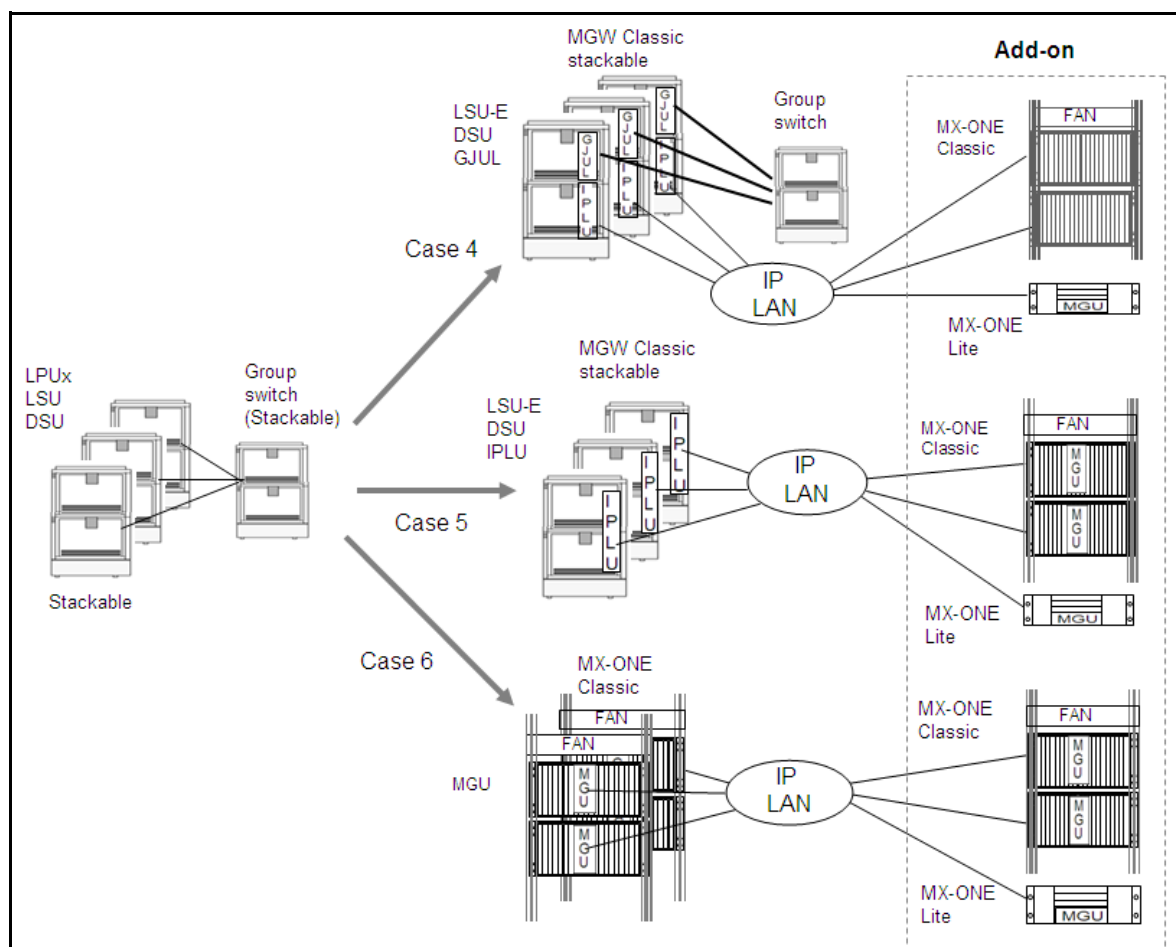


Figure 3: Migrating Stackable building practice to MX-ONE 6.3

Case 4. This migration scenario is not future proof and not recommended for MX-ONE 6.3 migration and customers must choose this at own risk.

- Not future proof and no expansion of the Group Switch is possible.

Add-on

- Add-on is only possible with MX-ONE Classic and/or MX-ONE Lite.
- Only media over IP communications is supported between MX-ONE GW Classic Stackable and add-on MX-ONE Classic/MX-ONE Lite.
- IPLU boards must be equipped in each MX-ONE GW Classic Stackable to support media over IP.
- For systems with DECT, see Installation Instruction, Cordless Phones.

Case 5. This migration scenario is not future proof and not recommended for MX-ONE 6.3 migration and customers must choose this at own risk.

Add-on

- Add-on is only possible with MX-ONE Classic and/or MX-ONE Lite.
- Only media over IP communications is supported for the migrated system (MX-ONE GW Classic Stackable) and MX-ONE Classic/MX-ONE Lite.
- IPLU boards must be equipped in each MX-ONE GW Classic Stackable to replace the GJUL board and to support media over IP.
- For systems with DECT, see Installation Instruction, Cordless Phones.

Case 6. This is a future proof scenario and strongly recommended.

- The migrated system and add-on are all MX-ONE Classic and/or MX-ONE Lite, operating in media over IP.
- For systems with DECT, see Installation Instruction, Cordless Phones.

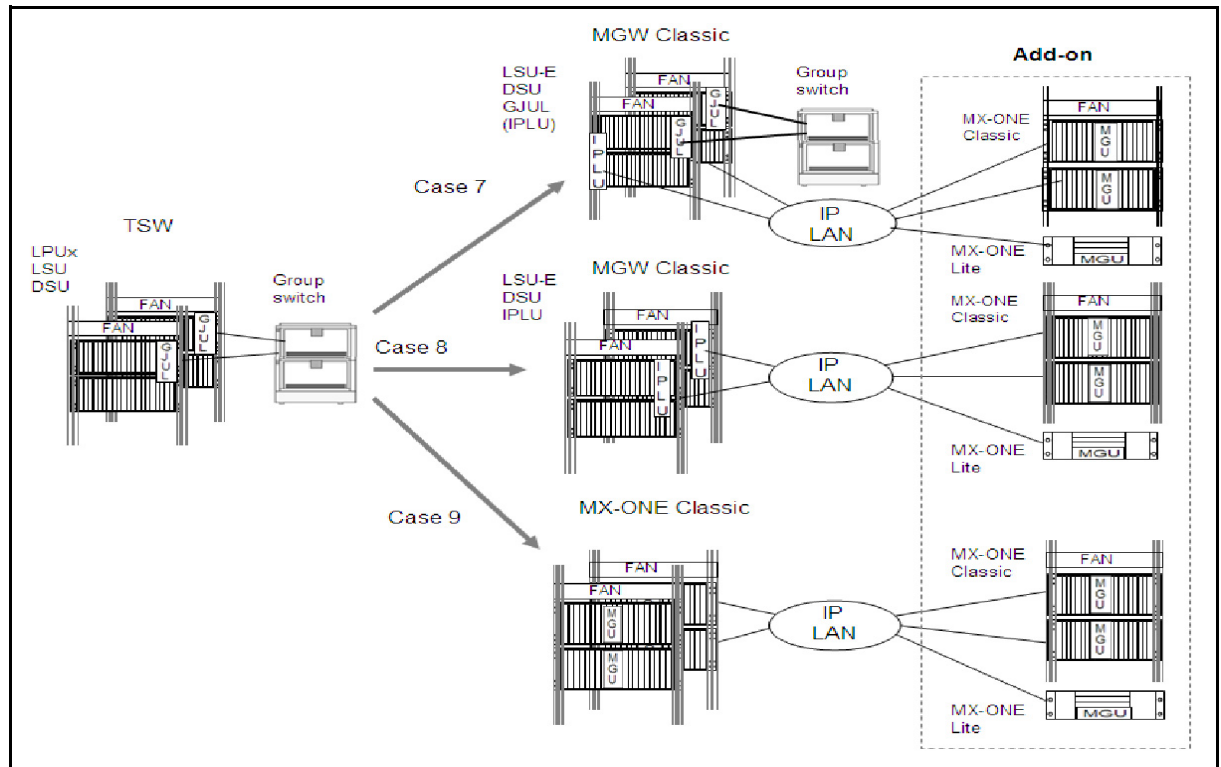


Figure 4: Migrating BYB501 building practice to MX-ONE 6.3

- The migrated system and add-on are all MX-ONE Classic and/or MX-ONE Lite, operating in media over IP.
- For systems with DECT, see Installation Instruction, Cordless Phones.

1.4

TOOLS

1.4.1

DOCUMENTATION

Related documentation can be found in the CPI-libraries

- EN/LZN 748 0005/2 for ASB50104 (TSW)
- EN/LZN 748 0016/3 for ASP11301 (MX-ONE)

1.4.2

TOOLS FOR UPGRADING SOFTWARE

The following tools are needed for the migration:

- Recovery Image (on USB) aimed for the MX-ONE 6.3 system
- WinSCP (ftp-software)
- PC-Regen in SAM toolbox 7.x

- SolveIT/Mitel Plan for licensing
- puTTY (ssh-program)

2 PLANNING

2.1 CREATING THE MIGRATION PLAN

The first step is to create a Migration Plan and collect all necessary data from the present system. The Migration Plan should include, at a minimum, the following five sections:

- General Information
- Schedule
- Support Plan
- Cut over Plan
- Fall back Plan

2.1.1 GENERAL INFORMATION

- Name and place of the target site
- Current revision level of the hardware and software
- Hardware and software that is to be installed
- New features that will be implemented
- Any unique problems presented by the target system

2.1.2 SCHEDULE

Graphic or textual schedule showing the general flow of the planned migration activities. List of critical dates, including start date, equipment delivery date, cut over date, acceptance date, and a fall back time schedule.

2.1.3 SUPPORT PLAN

A support plan consists of the following subsections:

Migration Team

- Name of the project leader and assigned tasks.
- Names of migration team members and their assigned tasks.

Special Equipment and Features

- List of unique problems or situations that require special attention during either the preparation or on-site phases of the migration, such as modification of an interface to accommodate customer-owned peripheral equipment.

Hardware Changes

- List of the planned hardware changes.
- List of all hardware units (for example, boards, cables, PROMs), including spares, by order number.
- The list should state which hardware units go into which Servers (LIMs) and indicate the on-site delivery dates of all hardware, including system documentation.

Software Changes

- List all the target system's new software and regenerated data that will be loaded separately into the target system.
- List plans and any special concerns for loading and dumping until the system is functional. For example, reconfiguration of the system backup, configuration of the safety backup.

Preparation

- Date when the target system data will be frozen and extracted in preparation for regeneration. List possible consequences to the customer data base.
- List how changes to the system that occur between extraction and migration should be handled.

System Generation

- List where and by whom the regeneration of system data will be accomplished.
- List the place, organization, simulator system and programs that will be used to accomplish the new generation software.
- List the commands that must be entered from the site, after the system is functional, in order to fully accomplish the migration.

2.1.4

CUT OVER PLAN

The cut over plan is an hour-by-hour schedule for last minute preparations and on-site migration activities that includes:

- Timing and instructions for gathering materials
- Time necessary to travel to the site and remote sites
- Communications protocol between migration team members
- All of the tactical aspects of the last stages of the migration
- A list of all verification tests that must take place and be passed before the migration is considered as successful

2.1.5

FALL BACK PLAN

The fall back plan is an hour-by-hour schedule of instructions that are to be followed if the migration has not succeeded by a scheduled deadline. This deadline is a specific time by which the migrated system must be tested and verified. This deadline must also include enough time to return the system to the status that it was in prior to the migration.

tion, providing that the migration is not successful. Above all, the customer must have an operational system for normal business hours. This requires a plan that not only includes activities that are to take place during fall back, but also activities in advanced preparation for a fall back even if a fall back does not become necessary. Such preparations include:

- Labeling extracted boards, PROMs and the last system dump
- Preparing a list of verification tests that must be run on the reinstalled previous system before it can once again be considered fully operational

3

PROCEDURE

3.1

MIGRATION PROCEDURE OVERVIEW

An MD110/Mitel TSW system with a single control system will be migrated to an MX-ONE 6.3 system without redundancy. For more information, see the installation instruction for *INSTALLING AND CONFIGURING MIVOICE MX-ONE*.

A system with duplicated control system is migrated to system with server redundancy. For further information, see the description for *MX-ONE*, chapter *REDUNDANCY*.

To migrate MD110/Mitel TSW to MX-ONE 6.3 perform the following steps:

1. Prepare MX-ONE Telephony Switch for migration to MX-ONE Service Node
2. Extract Data from MD110/Mitel TSW System
3. Regenerate Data Designated for MX-ONE 6.3 System
4. Replace Hardware
5. Install the MX-ONE 6.3 System
6. Load Data to the MX-ONE 6.3 System

Note: If smooth/stepwise Migration is done, only the moving extensions shall be initiated.

7. Finalize the MX-ONE 6.3 System Configuration
8. Upgrade CMG if applicable
9. Test the new System

3.2

PREPARE MD110/MITEL TSW FOR MIGRATION TO MIVOICE MX-ONE 6.3

3.2.1

UPGRADE FIRMWARE

Upgrade all Phones to the latest Firmware

- See the appropriate document in the CPI library, see 1.4.1 Documentation on page 7

Note: To be able to load firmware on a phone it must be idle and unblocked, otherwise the phone will not be upgraded.

Upgrade all Boards to the latest Firmware

- See the Operational Directions for *CONFIGURATION OF BOARD LEVEL SOFTWARE, DOWNLOADING* in the CPI library, see 1.4.1 Documentation on page 7.

Note: ELU32-boards cannot be used in MX-ONE 6.x and must be replaced by IPLU boards. Applies for Stackable (Pre LBP22).

Upgrade DSU Board PROM

- Extract the DSU board.
- Extract the PROM with a PROM extraction tool.

- Insert the new PROM on the DSU board.
- Insert the DSU board back into the sub-rack.

Note: LSU is replaced by LSU-E, when used in dual sub-rack Servers (LIMs) or in single sub-rack Servers (LIMs) prior to LBP22.

3.2.2 MGU/MGU2 IN LBP22 (MIVOICE MX-ONE CLASSIC)

The only upgrade for a Server (LIM) in a single sub-rack LBP22 is to replace LSU and DSUs with the MGU/MGU2 board. Note that IPLU boards cannot be used together with the MGU/MGU2 board in the same sub-rack.

3.2.3 MECHANICS

Change Fronts on New Boards (only for Stackable)

- Remove the screws (B) using a Torx T8 screwdriver.
- Remove the front (A).
- Place the support front (C) in position (valid for LSU-E and IPLU).
- Fasten the two screws (B) to the front.

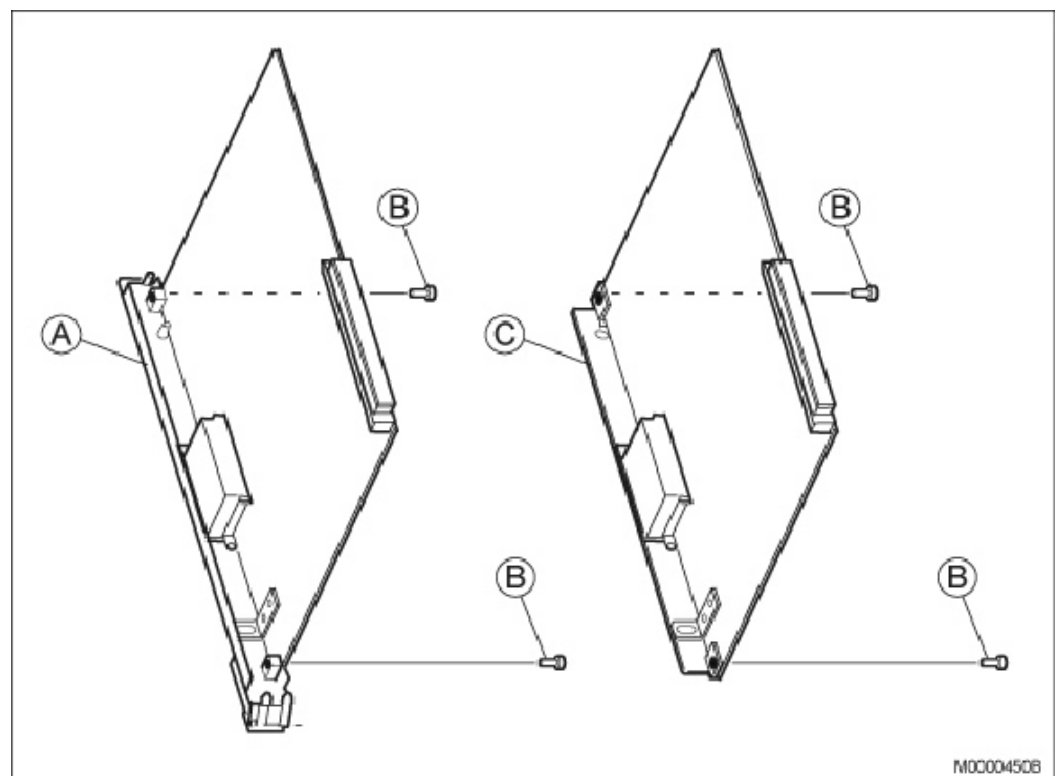


Figure 5: Changing Board Fronts

3.2.4 BOARD PLACEMENT

Plan the Placing of New Boards and Cables

Plan the placing of the new boards. Consider this while planning:

- The ELU32 board will be replaced by an IPLU board but the IPLU board needs 32 time slots.
- IPLU boards can only be used with LSU-E and DSU, not with MGU/MGU2.
- It is recommended to place the LSU-E at the previous LSU position.
- The LSU-E and the DSU with new front connectors needs new cables.
- The Mitel ASU Lite, ASU or Mitel ASU-II can only be placed in 19 inch building practice. In older building practice it shall be mounted in a separate 1U chassis.

3.2.5

IPLU RESOURCE OPTIMIZATION

For Customers Who Keep the Group Switch when Migrating.

Under certain conditions the number of Servers (LIMs) that must have IPLU boards installed, can be reduced to only one Server. This measure has to be based on actual traffic demand, so the needed support for IP resources must not exceed the capacity of this Server. All IP resources and trunks must also be connected to the same Server.

If redundancy is required, it is recommended that the Server is equipped with two IPLU boards, which in turn must be connected to different LANs. That is, when a network redundancy solution has to be used.

Redundancy is strongly recommended because single hardware faults or blocking of one IPLU board can result in lost calls unless the recommendation is followed.

3.2.6

PREPARE NETWORK

Plan the New IP- and DNS-addresses

Plan the new IP network. Consider the following:

- Some boards with IP-addresses will be removed and the addresses are reusable.
- Set a unique DNS address for each Mitel ASU Lite, ASU or Mitel ASU-II.

When upgrading for server redundancy

Server redundant networks are built in clusters of up to 10 Servers that are served by a standby server. Common applications, located as hardware in different Servers, are divided about equally between the two LANs.

The Servers (LIMs) should be assigned both normal and alias IP addresses to enable the standby server to take over the operation and addresses of a failing Server. For further information on server redundancy, see the installation instructions for *INSTALLING AND CONFIGURING MIVOICE MX-ONE*, section *Redundancy Considerations*.

3.2.7

GROUP SWITCH

If the MD110/Mitel TSW contains a group switch

- If the group switch is to be kept, leave it as it is until the whole system is migrated.

Note: A group switch can only interface to a Server with a single media gateway.

For more information see 3.8 Manually Finalize the MiVoice MX-ONE 6.3 System Configuration on page 23.

- If the group switch is to be removed, plan to replace the GJUL4 boards with IPLU boards. The IPLU boards need to be located at 32 time slots positions. The

MGU/MGU2 can only be placed in the 19 inch building practice, the 1U, or the 3U-chassis. Replacement is not one-to-one.

3.2.8

SET IP EXTENSION PIN CODES

In MD110/Mitel TSW the password for the IP extensions was initiated in the IPEXI command. In MX-ONE 6.3 a PIN is used instead, which is the same as the Regional (Individual) Authorization Code (RAC). The reason for doing this change is to make it possible for the end-user to change his PIN.

The Regional Authorization Code is initiated by using the command *auth_code_init*. Set the parameter **-code** to a valid value and set **-cil** to the directory number, which is also set in **-dir**. RAC is limited to use only (1 to 7) digits.

The matrix below shows the combinations of passwords, Regional Authorization code and what to use when registering the telephone after the migration.

Table 1 Log on possibilities

Password (in IPEXI) in the old system exists	RAC exists in the old system	Login after the upgrade with the PIN	Automatic log on for the terminals
Yes	Yes	Equal to the RAC	NO The user has to log on manually with the PIN (equal to the RAC in the old system). The terminals will log on automatically only if the password and RAC were equal in the old system.
Yes (only digits)	No	Equal to the Password	YES
Yes (contains other characters than digits)	No	Default PIN (0000000)	NO
No	Yes	Equal to the RAC	NO
No	No		YES

To make it possible for the IP terminals to be logged on automatically after the migration, follow the procedure:

1. Ensure that the passwords (initiated with IPEXI) conform to the new format, that is, with only (1 to 7) digits.
2. If the passwords have to be changed, do the changes in the old system.
3. The terminals shall be registered with the changed password. Log off and log on the terminals with the changed password. It is at this stage that the password or PIN is stored in the telephone.
4. Update the fw in the terminals to the version which supports PIN instead of password.
5. If RAC is used for the IP extensions in the old system, inform the end-users that they have to use their RAC as PIN when register the telephones after the upgrade.
6. Upgrade the telephony system.

7. Make sure that all the telephones are registered to the telephony system. Use MX-ONE Service Node Manager, IP Phone Administrator.

As an alternative to that the end-user log on with the changed password or PIN, the system administrator can log on to the telephone through the web interface and enter the changed PIN manually.

3.3 EXTRACT DATA FROM MD110/MITEL TSW SYSTEM

Use PC-Regen from the Service Assistance Manager for MD110/TSW to prepare the extraction of current exchange data from the MD110/TSW system.

Read out the alarms and blocking information.

3.4 REGENERATE DATA DESIGNATED FOR MIVOICE MX-ONE 6.3 SYSTEM

1. Click **Regeneration** in the PC-Regen for MX-ONE main window.
2. Click **Start** in the **Regeneration** window.
3. Wait while data is generated.
4. Click **Done** in the **Regeneration** window when data is successfully regenerated.
5. Save the PC-Regen data file.

3.5 REPLACED HARDWARE

3.5.1 REPLACEMENTS

- Remove the following hardware:

- NIU/NIU2
- HDU
- AAU
- IPU
- ICU/ICU2
- SIU
- DLU-20

Remove according to the following instructions, see the operational directions for *REPLACING BOARDS IN MX-ONE MEDIA GATEWAYS*.

- Change the following hardware:

- Replace the LPU5.

LPU5 can be replaced by an Mitel ASU Lite, ASU or Mitel ASU-II board in 1U chassis, which in the Stackable building practice requires mechanical support. For details, see 3.5.2 Mitel ASU Lite, ASU or Mitel ASU-II in Stackable on page 17.

LPU5 can also be replaced by a Standard Server, e.g. a DL360 or LR320. For details, see the installation instructions for *INSTALLING MIVOICE MX-ONE*.

- Replace LSU by MGU2 in LBP22 or LSU-E in stackable.
- Replace ELU32 by IPLU (this is not a 1:1 replacement)

Note: For Servers using LBP22 the LSU and the two DSUs are replaced by an MGU/MGU2 board, which incorporated the IPLU function. No IPLU board can be present

- Replace VRU/TLU by VSU
- Replace V.24 by Ethernet
- Replace old cables by new ones

For changing boards, see the operational directions for *REPLACING BOARDS IN MX-ONE MEDIA GATEWAY*.

3.5.2

MITEL ASU LITE, ASU OR MITEL ASU-II IN STACKABLE

The Stackable building practice has a shelf with a slanted plate under each magazine for directing the cooling air. Preferably at the lowest position in the cabinet the slanted plate can be changed to a flat plate, upon an Mitel ASU-Lite, ASU or Mitel ASU-II in a 1U chassis can be mounted.

Use the following mounting set to install the 1U chassis in the Stackable cabinet:

Table 2 Mounting Set for 1 U chassis

NMT 144 271 Mounting set			
Pos.	Title/Function	Product Number	Quantity
A	BOTTOM PLATE Server-Stackable	SXA 112 2373/1	1
B	SCREW MRT-LME M 4X12 ST FZG	03/SBA 121 040/0120	4
C	NUT M6M M 4 ST 8 FZB	SMB 146 040/78	4
D	SCREW MRT-LME M 6X16 ST FZB	78/SBA 121 060/0160	4
	DESIGNATION/Installation Server Plate	SVA 103 306/1	1

To install the 1U chassis in the cabinet, perform the following steps:

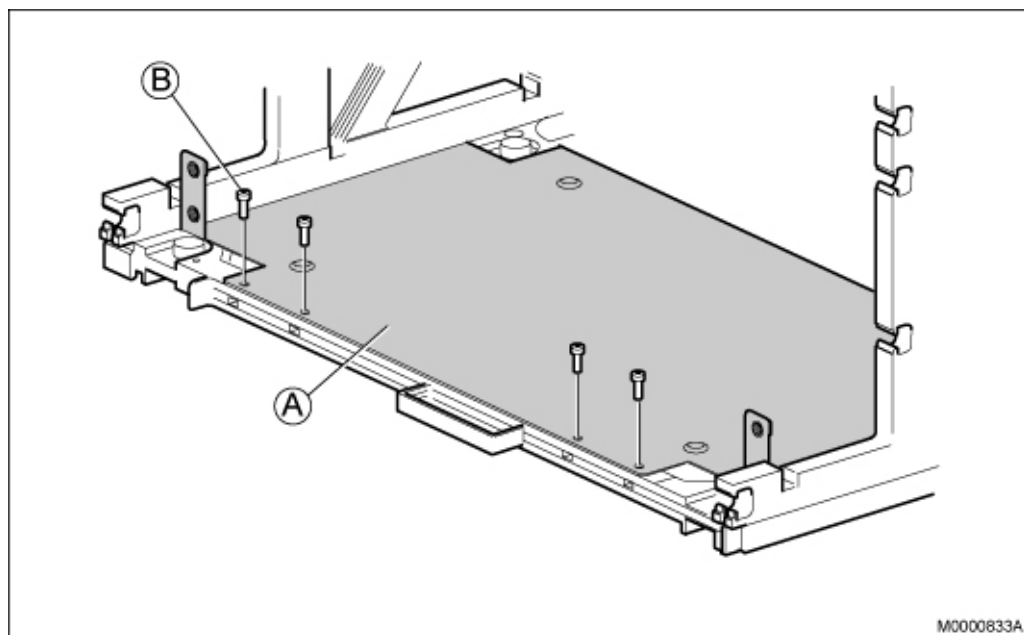


Figure 6: Mount Bottom Plate

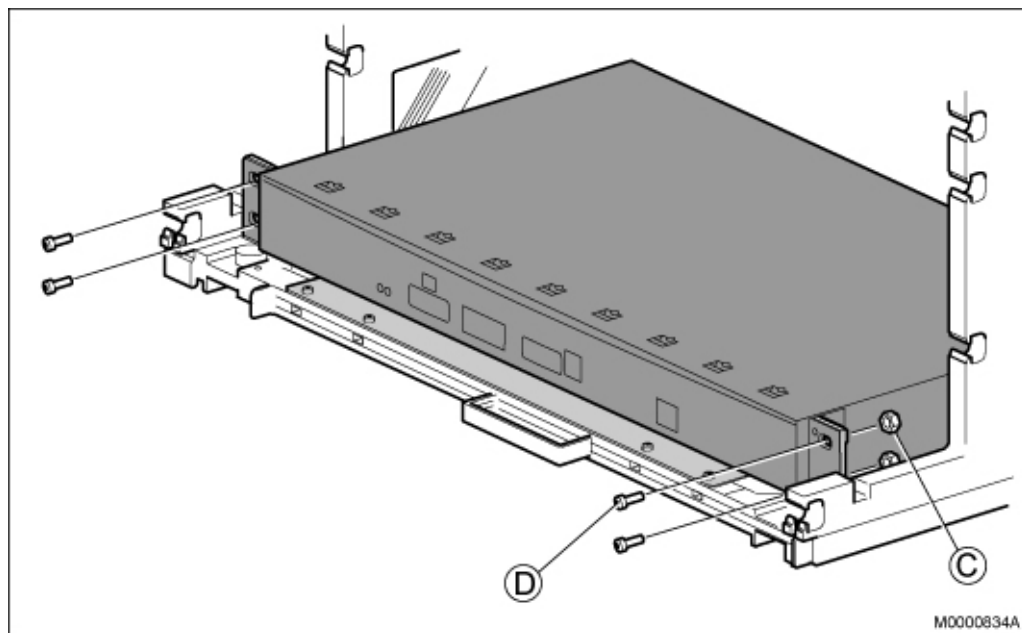


Figure 7: Mount Server

1. Remove the four screws (B) holding the slanted plate and replace it with the bottom plate (A). Fasten the four screws (B) in the front to secure the plate.
2. Place the server on the plate. Fasten the 4 screws (D) to the bottom plate mounting brackets with the nuts (C).

3.6

INSTALL THE MIVoice MX-ONE 6.3 SYSTEM

For each MX-ONE Service Node, perform the following steps:

1. Connect the USB device (containing the recovery image) to the USB port on the ASU, Mitel ASU-II, or Mitel ASU Lite.
2. Boot the server from the USB recovery image.
3. Follow the instructions on the screen. Select **Installation** from the menu.

Note: If no boot choice selection is made the default installation type is executed, for example, boot from hard disk.

The installation starts installing the LINUX operating system. The estimated time is shown on the right side of the screen. It is approximately 20 - 25 minutes.

4. When the installation is complete the system will automatically reboot.
5. Select **Yes** when the following message is displayed: *Welcome to MX-ONE. You have to configure your system before starting the MX-ONE. Do you want to configure your server now?*
6. Continue with installation and configuration of the system, see the installing instructions for *INSTALLING AND CONFIGURING MIVOICE MX-ONE*.

3.7

LOAD DATA TO THE MIVOICE MX-ONE 6.3 SYSTEM

As an example of time to load customer data, tests have shown that the following setup takes approximately 8 minutes to execute on Mitel ASU-Lite:

- 3 Servers (LIMs)
- 130 Analog extensions
- 190 Digital extensions
- 40 IP extensions
- 200 Cordless extensions
- 20 ISDN extensions
- 70 mobile extensions
- 100 PEN
- 40 ACD Agents
- 255 external lines

Prepare the MiVoice MX-ONE 6.3 Data

1. Zip the target folder in *C:\Program Files\Aastra\Service Assistant Manager\PC-Regen\source* and name it *Target.zip*.
2. Transfer the Target.zip file to the MX-ONE 6.3 system.
3. Connect to the MX-ONE 6.3 system (secure shell, SSH).
4. Log on to the system with user name and password.
5. Unzip the Target.zip file. Example: `<user>@linux:~>unzip Target.zip`
6. Go to the Target directory. Example: `<user>@linux:~>cd Target`
7. Convert the files to Unix format. Example:
Target>dos2unix *

The following list shows the MML commands, that will be automatically executed to regenerate data:

Commands
AC: ACBGI, ACFUI, ACGMI, ACGRI, ACPAC, ACTNI
AD: ADCOI, ADINI
AS: ASPAC
CB: CBELI, CBGMI
CH: CHCMI, CHGMI
CS: CSTLI
EX: EXCCS, EXTEI
GD: GDNDI
GH: GHGMI, GHGRI
GP: GPAGI, GPGMI, GPGRI
IC: ICFUC, ICMWC
IS: ISEPI, ISFUI
IT: ITNUI
KS: KSADC, KSANI, KSCHC, KSEXI, KSFKC, KSMDI
LC: LCDDI, LCLDI, LCOPI, LCTDI
MT: MTSLI, MTSRI, MTSSI, MTSTI
NC: NCCOI, NCGMI, NCGRI, NCICI, NCNOI, NCSGI
NS: NSCOI
OP: OPADC, OPCEI, OPCGS, OPCOI, OPCTS, OPDNC, OPERI, OPISS, OPNEI, OPRSC
PA: PAALI, PACHI, PAGII, PASAI
PL: PLLNI
RA: RACEI, RADNI, RADSI, RAEQI, RAGAI, RAGMI, RAGPI, RAMDI
RI: RIANI
RO: ROAPI, ROCAI, ROCDI, RODAI, RODDI, RODII, RODNI, ROECI, ROEQI, RONDII, RORII, RORNI, ROVNI
SE: SEMII
SP: SPEXI
TR: TRDPI, TRRSI
VM: VMFUI, VMGEI, VMPOI

Note: The old CP, ROELx, SU, SY, and TC commands have been replaced by unix style commands (route_data_common, global_traffic_data and traffic_matrix).

The list below is showing automatically generated Unix-style commands:

Commands
<i>account_code_init</i>
<i>alarm_action</i>
<i>alarm_input</i>
<i>alarm_output</i>
<i>auth_code_init</i>
<i>board_config</i>
<i>callinfo_condcode_set</i>

Commands
<i>call_list</i>
<i>call_list_profile</i>
<i>csta</i>
<i>dect_cfp, dect_extension, dect_rfp, dect_system_id</i>
<i>diversion</i>
<i>diversion_common</i>
<i>diversion_system</i>
<i>exchange_info</i>
<i>extension</i>
<i>extension_key</i>
<i>extension_profile</i>
<i>extension_text</i>
<i>global_traffic_data</i> (new)
<i>ip_extension</i>
<i>ip_gatekeeper</i>
<i>media_gateway_config</i>
<i>media_gateway_interface</i>
<i>name</i>
<i>number_conversion_initiate</i>
<i>number_data_initiate</i>
<i>number_initiate</i>
<i>parallel_ringing</i>
<i>remote_extension</i>
<i>route_data_common</i> (new)
<i>sec_policy</i>
<i>sip_domain</i>
<i>sip_route</i>
<i>sms_client_initiate</i>
<i>sms_server_initiate</i>
<i>traffic_matrix</i> (new)
<i>trsp_connection</i>
<i>trsp_synchronization</i>

Note: If Smooth/stepwise Migration is done, not all, but only the extensions moving in this step shall be initiated in the new system. Then the smooth migration measures are repeated for groups of extensions, until all are moved, and the old system can be shut down. See Operational Directions for SMOOTH MIGRATION.

Manual handling

The following commands require manual input by the operator.

Commands Not Regenerated	Corresponding File Name
alarm_cfg	alarm_cfg

license_reread	license_reread
----------------	----------------

The following steps shows functions, that also should be generated manually.

1. Check and load the optional units (*pu_add*).
2. If used, configure Group Switch connections settings (transparent, number of channels).
3. Configure synchronization for all Servers (LIMs).
4. Configure IP-addresses for IPLUs
5. Configure information computer.
6. Reconfigure IP domains.
7. Reconfigure IP Route settings, if needed.
8. Reconfigure settings for IP-phones, if needed.
9. Configure Call Logging.
10. Configure Alarm functions.
11. Configure Traffic Measurement.

Manually Configure IP Addresses

- Configure IP addresses for the Media Gateway and IP addresses for IPLU board. Use the command *media_gateway_interface*.

```
media_gateway_interface -mgw 1a -ip 130.100.206.62 -gw 130.100.206.1 -mask 255.255.255.0
```

```
media_gateway_interface -mgw2a-ip 130.100.206.64 -gw 130.100.206.1 -mask 255.255.255.0
```

```
media_gateway_interface -bpos 003A-0-00 -ip 130.100.206.66 -gw 130.100.206.1 -mask 255.255.255.0
```

In the example above, the two first rows show how to set up Server1 and Server2 in the Media Gateway. The third row handles the IPLU-board on position 003A-0-00.

Manually Configure Information Computer

Configure the information computer. Use the command *ICFUI*.

```
ICFUI:IFCIND=1,DFMT=5,UPDFCN=YES,FILLER=32,lim=1,  
ip=130.100.10.40,rport=2555;
```

```
ICFUI:ICFIND=2,DFMT=5,UPDFCN=YES,FILLER=64,lim=1,  
ip=130.100.8.110,rport=800;
```

Note that EMFUI, Electronic Mail function, is not supported in MX-ONE.

Reconfigure IP Route Settings if needed

If needed, reconfigure the IP Route Settings, see the operational directions for *IP NETWORKING*, *RI*.

Reconfigure Gateway Settings if needed

If gateway settings have changed, the configuration file for the IP phones needs to be adjusted, see the description for *CONFIGURATION FILE FOR DBC 42X*.

Start Loading the Telephony Data to the MiVoice MX-ONE 6.3 System

1. Start loading data to the MX-ONE 6.3 system. Example:

```
<user>@linux:~/Target>source REGENCMD.TXT | tee TSlog.txt
```
2. Wait until the prompt reappears.

3. Check if the data was setup correctly.
4. Perform a data backup.

3.8

MANUALLY FINALIZE THE MIVOICE MX-ONE 6.3 SYSTEM CONFIGURATION

Configure Call Logging

To configure the call information logging, see the operational directions for *CALL INFORMATION LOGGING*, CL.

Configure Group Switch

If used, configure the group switch:

Make sure that the system has three clock controlling Servers (LIMs).

Key the command *pcm_config -scan* to find all pcm lines and to configure the group switch.

For more information on how to configure a group switch, see the operational instructions for *GROUP SWITCH*, GS.

3.9

UPGRADE CMG IF APPLICABLE

If necessary, perform an upgrade on the CMG software.

4

TEST THE NEW SYSTEM

This section reviews how to perform a comprehensive test of the target system to check that the system is functioning properly. This requires that a series of diagnostic tests has been run on various elements within the system. It is recommended to run a few sample tests in all areas before testing in depth in any one area. This way, if a certain area of the system is non-functional, then fault resolution can begin as soon as possible.

The following tests must be executed:

- Test the stability of the New System
- Check the restart status
- Test the Call information Logging functions
- Test the IP extension registration
- Test the Extension-to-Extension Calling
- Test from the PBX operator console
- Test the trunk calls
- Test the site specific facilities
- Test the MX-ONE 6.3 System functionality (small test)
- Check the redundancy configuration
- Check the fault signals
- Make a final check of faulty devices and alarms.

4.1

TEST THE STABILITY OF THE NEW SYSTEM

The stability of the new system can be determined according to whether there are reloads in progress or whether the PCM lines are disturbance marked.

4.2

CHECK THE RESTART STATUS

1. Check the restart status. Key the command *status -system*.
If the response is Reload is executing or Restart is executing, one or more of the Servers is reloading or restarting.
2. Determine which Server is reloading or restarting. Key the command *alarm* to print (list) alarms in the alarm log and fault locate the problem.

4.3

TEST THE CALL INFORMATION LOGGING FUNCTIONS

1. Check that the CIL function is initiated. Key the commands:
callinfo_condcode_print, *callinfo_mask_print*, *callinfo_limit_print*, *callinfo_status_print*.

2. Verify that the devices that supply information to the CIL equipment are sending data over initiated and operating links.

4.4 TEST THAT IP EXTENSIONS ARE REGISTERED TO SYSTEM

Test that the IP extensions have registered to the MX-ONE. Use the command *ip_extension*.

For more information, see 3.2.8 Set IP Extension PIN Codes on page 15.

4.5 TEST EXTENSION-TO-EXTENSION CALLING

Testing the ability of the system to process and connect extension-to-extension calls consists of actually making calls from extension-to-extension within the system. It is recommended to test at least one extension from every Server (LIM) and all critical extensions. It is also recommended to test extension related features such as diversion, call-back, call waiting, transfer and so on.

4.6 TEST FROM THE PBX OPERATOR CONSOLE

Testing the ability of the PBX operator console consists of actually making calls to test functionality. Testing should include:

- Extension-to-operator calls
- Operator-to-extension calls
- Trunk-to operator calls
- Operator-to-trunk calls
- Extended and re-routed calls

The PBX operator console is also used to test the Least Cost Routing (LCR) function because the console will display the trunk route on which the call is extended when an external number is dialed. Compare the displayed trunk to the LCR table. To print a listing of the LCR tables, key the command *LCDDP*.

4.7 TEST TRUNK CALLS

Testing the ability of the system to process trunk calls consists of actually making outgoing and incoming trunk calls to and from various extensions. It is advisable to verify network calls if the exchange is set up to handle them.

4.8 TEST THE SITE-SPECIFIC FACILITIES

Site-specific facilities to be tested include:

- Application Link
- Automatic Call Distribution

- Direct Inward System Access, DISA
- Mobility
- Paging
- Recorded Voice Announcement
- Voice Mail system

4.9 TEST THE MIVOICE MX-ONE 6.3 FUNCTIONALITY

With the migration to MX-ONE 6.3, it is important to note that numerous functional changes could have been made. The product revision information describes the changes in functionality, hardware, software and commands if necessary and will be helpful during the final stages of system testing.

4.10 CHECK SERVER REDUNDANCY

Use the command *mxone_data -p* to view the Server (LIM) configuration. For each cluster Server, it will show the host name, the “original” and the alias IP addresses. For the Standby Server the IP address will be shown.

Verify the data to the intended network configuration.

4.11 CHECK THE FAULT SIGNALS

Check the fault signals according to fault tracing info *MIVOICE MX-ONE FAULT LOCATION*.

4.12 FINAL CHECK OF FAULTY DEVICES

1. Print a report of blocked and faulty devices. Key the command *block_list*.
2. Compare this report with the report generated with the same command before taking the system down. If there is no significant difference in the two printouts, then the system devices are operating on the same level as before the migration. If there are significantly more blocked or faulty devices recorded now than there were before the migration, fault locate the problem.
3. Check the Alarm log. Key the command *alarm-p* to print (list) alarms in the alarm log
4. Erase the alarms from the Alarm Log. Key the command *alarm -eto erase (reset) alarms in the alarm log*

5 HANDLING OF LICENSES

The number of licenses in the new license file is generated automatically from Mitel's database in the SLS. The ordering company has only to enter the number of Servers into the ordering tool Mitel Plan when the order for the migration is sent to Mitel.

6

FALL BACK

In the event that the migration to MX-ONE 6.3 is not successful, it is important to return the target system to the operational condition that it was in before the migration procedure. This should be accomplished as quickly as possible to ensure that the customers service is not interrupted for a longer period of time than was scheduled.

6.1

THE FALL BACK PROCEDURE

The basic fall back procedures are:

1. Remove the non-backward compatible hardware and reinstall the hardware from the previous installation.
2. Reconnect the previous I/O system and Reload Volume.
3. Reload the system with the previous installation.
4. Check the alarm log and test the system to confirm proper operability under the previous release.