

# Smooth Migration

OPERATIONAL DIRECTIONS



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## 1

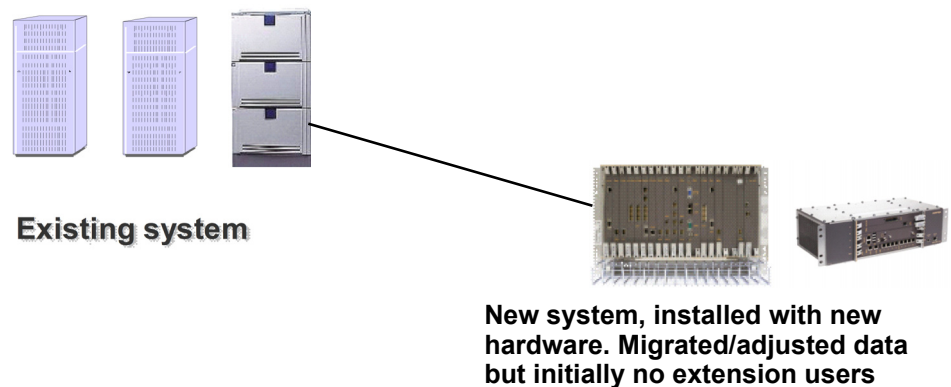
## GENERAL

The Smooth Migration or stepwise migration feature can be used for customers who want to migrate a large system (or 'merge' a network of systems) and at the same time do a complete hardware refresh, e.g. when moving from Mitel TSW/MD110(s) to a new MiVoice MX-ONE Service Node.

The smooth migration provides a method to migrate/upgrade by moving smaller groups of users in controlled steps instead of a Big Bang method from the old system to the new MX-ONE system. The function was available from MX-ONE 5.0 SP1.

Furthermore, most of the manual labor can be done during office hours.

We recommend that the customer at the same time replaces analog and digital hand-sets, as such a change avoids re-cabling in the MDF for moving users.



**Figure 1: Smooth migration from an MD110/TSW system to an MX-ONE. Here a simple replacement of HW, without any merge of several old systems or change of the number of extensions.**

## 2 PREREQUISITES

The new system shall be installed using standard procedures except that no user data is entered, i.e. all extensions are initially vacant in the new system.

That means, the installation and planning of the new system shall have been done, in accordance with the installation instruction MIGRATING MD110/TSW to MIVoice MX-ONE 6.x.

## 3 TOOLS

I/O terminal.

## 4 REFERENCES

In these operational directions references are made to the following documents:

<b>Installation instructions:</b>	Migrating MD110/TSW to MX-ONE 6.x
<b>Operational directions:</b>	Administration of routes Least cost routing Numbering Route data
<b>Command descriptions:</b>	Technical Reference Guide, unix commands Number analysis  Technical Reference Guide, MML commands Least cost routing (and PNR), LC Route data, RO

## 5 PROCEDURE

### 5.1 THE SMOOTH MIGRATION METHOD

The feature allows the customer to move from a single system or a complete network of systems, to a completely new single MX-ONE Service Node system (or several).

The feature is supported for migration from a single MD110 BC11, BC12 and Mitel TSW systems, or from a network with a mixture of these releases.

**Note:** Upgrade scenarios are supported with releases after MX-ONE 5.0 SP1.

### 5.2 HOW DOES IT WORK

The smooth migration feature allows the new and the old system(s) to be operational during the transition period and simply move groups of users at a time.

The smooth migration feature changes the type of number from extension (EX) to external destination (ED) if a dialed extension number is found to be vacant. The call will then proceed to PNR, Private Network Routing and is routed to the other system over a tie-line.

The functionality in the MX-ONE Service Node is controlled by the command `number_vacant_conversion_initiate`.

Special patches are needed for MD110 BC11, BC12 and Mitel TSW systems. For further information, refer to the Release Notes available at the Mitel Knowledge Base.

The new system is installed using standard procedures, except that no user data is entered, i.e. all extensions and extension groups are initially vacant in the new system.

The systems are connected with intelligent tie-lines in order to provide a reasonable level of functionality between users in the different systems.

There are of course lots of possible scenarios, depending for example on the private network topology, if merge of several old systems into one larger new system is done, the mix of extension types, if there is a geographical move or not, and many other aspects, so a special planning is required from case to case. These operational directions can only give a brief example.

### 5.3 SPECIAL CONSIDERATIONS

Special consideration needs to be taken for e.g. IP extensions, DECT telephones and base stations, mobile extensions, operators, trunks and applications, which are not handled by the smooth migration feature.

#### 5.3.1 DECT

For traditional DECT, all radio base stations within a complete hand-over area have to be connected to either the new or the old system. Users which (for a certain time) need to roam between old and new systems can be left initiated in both systems, but their personal number profile must be edited to include own number prefixed with the route access code(s) used.

## 5.3.2

## IP EXTENSIONS

For IP extensions, it is important to consider the possible user scenarios as e.g. the configuration files in the terminals will have to be able to find both old and new systems if users are roaming and try to log on to any physical IP telephone.

For H.323 and SIP terminals, the configuration files must be updated when a user moves, i.e. complete domains need to be moved together. Roaming between terminals can only be achieved if the terminal's configuration file directs the log-on request to the system where the user is active.

As an alternative, users needing roaming can be left initiated in both systems if the call list (Personal Number list) is edited to include own terminal prefixed with the route access code for the interconnecting tie-line.

## 5.3.3

## MOBILE/REMOTE EXTENSIONS

For Mobile extensions the smooth migration procedures can be used, but some coordination with the network provider(s) is required, in order to have the appropriate trunk resources in each system.

If possible, it is recommended to move all mobile extensions at the same time, in order to minimize the time that duplicate public routes would be required.

**Note:** All users of one R1 number must (usually) be moved at the same time, since most network operators do not allow the same R1 number in several PBX systems.

## 5.3.4

## OPERATORS

Recommended procedure is to define some systems which have or will have operators as a Centralized operator site during migration.

The systems (both old and new) can also have local operators, and in some cases of bigger private networks it may be necessary, since the Centralized operator functionality is limited to a maximum of three central operators.

## 5.3.5

## TRUNKS

For existing and new systems, own extension number range must be added in PNR to achieve routing of calls that are addressing the now vacant extensions. Existing tie-lines interconnecting the affected systems are left untouched assuming that PNR has been used for routing in the private network.

External/public trunks, e.g. PSTN/ISDN are moved as appropriate for the assumed traffic load in order to minimize tie-line utilization for incoming and outgoing trunks. Trunks that only support outgoing traffic, can be active in both systems in order to minimize this traffic, as MX-ONE will use own outgoing trunks. In this case, alternative routing over the tie-line is recommended for the public destination.

Traffic distribution for incoming trunks is outside MX-ONE's control. If all users in a full DID range have moved, the PSTN/ISDN should be capable of routing calls to the correct system, so coordination with the network operator is needed for the timing and execution of this change.

The temporary tie-line routes between the old and the new system must be dimensioned in relation to the number of moved extensions, so the expected traffic capacity can be handled by the tie-lines.

### 5.3.6

## SPECIFIC SERVICE LIMITATIONS

Certain end user procedures (prefix procedures of the type \*FC\*D#, or equivalent) which are only supported in a stand-alone system, may have limited or blocked functionality during the migration period, unless all involved extension users are located and active in the same system, i.e. all migrated to the new system, or all still in the existing/old system. Examples are procedures for Diversion, Follow-me, and Personal Number.

### 5.3.7

## APPLICATIONS

Voice mail systems and other applications using hunt groups and extensions can use the smooth migration feature, but may have limited functionality during the migration period, unless both the old and new systems are appropriately configured for the applications in question.

CSTA dependent applications will need CSTA access from all systems for their respective users. This may not always be possible or feasible during the migration period.

## 6

## EXECUTION

## 6.1

## STEPWISE MIGRATION OF EXTENSIONS

System dumps must be done during the migration at suitable times, when part of the extensions have been moved.

## 6.1.1

## INITIATION OF STEPWISE MIGRATION OF EXTENSIONS

**Execution**

Item	Measure	Comments
1	Install the new system using standard procedure, except that no extension user data is entered, i.e. all extension and extension group numbers are initially vacant.	See INSTALLING MIVoice MX-ONE.
2	Add the special migration patches in the old system(s), i.e. in the BC11, BC12 or Mitel TSW.	The patches are available at Knowledge Base.
3	Initiate tie-line route(s) between old and new system in the new system. The route(s) shall support network services. The loop avoidance feature is used for the tie-lines to prevent never-ending loops for really vacant numbers. Enter the command RODDI, parameter ADC, in the new and old system.	For tie-lines between new and old systems. See ROUTE DATA command description.
4	All concerned extension number ranges must be programmed (command LCDDI, PNR-table) in the old AND new system to route calls to vacant extensions to the "other" system(s) as the feature will change the number type for a vacant extension to ED (external destination) and attempt to find the correct routing info in PNR.	See LEAST COST ROUTING command description (PNR parts). Until all extensions have been moved, some extensions will be 'vacant due to migration' in both old and new system.



Item	Measure	Comments
5	When a number of users (extensions or extension groups) shall be moved, they are initiated in the new system and ended in the old system. Use the ordinary extension commands or MX-ONE Provisioning Manager to do the changes. Use the <code>number_vacant_conversion_initiate</code> command to activate the feature. The number vacant conversion feature has its own object in the database, so it does not conflict with any other Number Analysis data. Hence, use the largest range possible when initiating it. For more information see the <code>number_vacant_conversion_initiate</code> help examples.	See NUMBER ANALYSIS command description and appropriate extension command descriptions.  Note: The initiation is easiest done by creating command files by editing the PC Regen files from the old system(s).
6	Verify the settings by printing the data in both old and new system. Use the <b><code>number_vacant_conversion_print</code></b> command and relevant extension print commands in the new system. PNR (LC) print commands can also be used.	
7	Migrate other devices and applications, that are not covered by the smooth migration feature.	Note that for example DECT, operators, trunks and applications must be handled separately.
8	When the migration is finished, and all extensions have been moved to the new system, enter the <b><code>number_vacant_conversion_erase</code></b> command, in order to remove the conversion.	See NUMBER ANALYSIS command description.

## 6.1.2

## PRINTING OF 'VACANT MIGRATING EXTENSION' NUMBER SERIES

## Execution

Item	Measure	Comments
1	Check the settings by printing the number and extension data in both old and new system. Use <b><code>number_vacant_conversion_print</code></b> and the relevant extension print commands in the new system. Use the relevant extension print commands in the old system.	See NUMBER ANALYSIS command description and appropriate extension command descriptions.

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## TERMINATION

Since alterations of number analysis data have been made, the system administrator shall be informed.

Since exchange data have been altered, a dump to backup media shall be performed.