

# MX-ONE Service Node Manager

USER GUIDE



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# 1 INTRODUCTION

This user guide describes how to use MX-ONE Service Node Manager (SNM), which is a web-based management tool used to configure MiVoice MX-ONE.

## 1.1 SCOPE

The user guide contains:

- A description of the navigation and the user interface in MX-ONE Service Node Manager
- An overview of how to work using MX-ONE Service Node Manager.
- An overview of system messages and error handling within MX-ONE Service Node Manager

## 1.2 SYSTEM REQUIREMENTS

MX-ONE Service Node Manager can be accessed from anywhere using a commercially available browser. The browser requirements are:

- Microsoft Internet Explorer 8.0 (or later versions)
- Mozilla Firefox 18 (or later versions)

Both HTTP (TCP Port 80) and HTTPS (TCP Port 443) are supported. If HTTPS is used, this needs to be configured. For higher security, it is recommended to use a commercial digital certificate issued by a commercial Certification Authority (CA).

## 1.3 PREREQUISITES

To be able to use MX-ONE Service Node Manager, user accounts must be defined. Users can be defined in MX-ONE Provisioning Manager, that is used to manage users and administrators for MX-ONE. For more information about MX-ONE Provisioning Manager, see the description for *MX-ONE PROVISIONING MANAGER*. One user is defined during the installation of the MX-ONE Service Node, for more information see *INSTALLING AND CONFIGURING MIVOICE MX-ONE*.

Javascript must be enabled in the browser in order use MX-ONE Service Node Manager.

The browser must be configured to refresh pages on every visit. For information on how to configure, refer to help and documentation specific to your browser.

## 2

## MX-ONE SERVICE NODE MANAGER OVERVIEW

MX-ONE Service Node Manager is part of the MX-ONE Manager concept that consists of several operation and maintenance applications providing management functions for MX-ONE. For more information about MX-ONE Service Node Manager, see the description for *MX-ONE SERVICE NODE MANAGER*. For more information about MX-ONE Service Node Manager in MX-ONE, see the system description, *MIVOICE MX-ONE*.

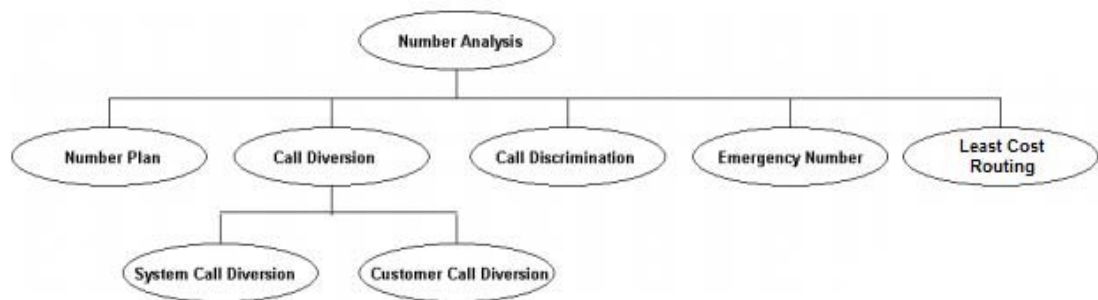
## 2.1

### CONFIGURATION AREAS AND TASKS IN MX-ONE SERVICE NODE MANAGER

The configuration areas in MX-ONE Service Node Manager are the following:

- Initial Setup
- Number Analysis
- Telephony
- Services
- System
- Tools
- Logs

Each configuration area handles a number of tasks and subtasks. For example:



**Figure 1: Tasks in Number Analysis**

**Figure 1: Tasks in Number Analysis**

**Note:** Which configuration tasks for each area that are displayed, depends on system configuration and user privileges.

For a complete list of the tasks available in MX-ONE Service Node Manager, see the Site Map. A link to the site map can be found in the upper right corner.

## 3 USING MX-ONE SERVICE NODE MANAGER

This section describes the user interface and navigation in MX-ONE Service Node Manager. How to use each task is explained in the online help, see 3.2.2 Using the Help on page 9.

### 3.1 LOGGING IN AND LOGGING OUT

Browse to the login screen of MX-ONE Service Node Manager (SNM) and enter user-name and password provided by the administrator to log in to the application. The password is case sensitive.

**Note:** If MX-ONE Service Node Manager and MX-ONE Provisioning Manager server is configured for AD Authentication, the user password will not be provided by the administrator, but instead be the same as defined for the domain.

Click **Logout** in the upper right corner to log out from SNM. Closing the browser window will also log you out from the application.

The application has a time limit, after which an inactive user is automatically logged out. The time limit is by default set to 45 minutes and the time left, before automatic logout, is indicated in the browser status bar (lower left corner).

To be able to see this indicator, the browser must be configured for allowing status bar updates using JavaScript. For more information, see 3.3 Enabling the Automatic Logout Indicator on page 10.

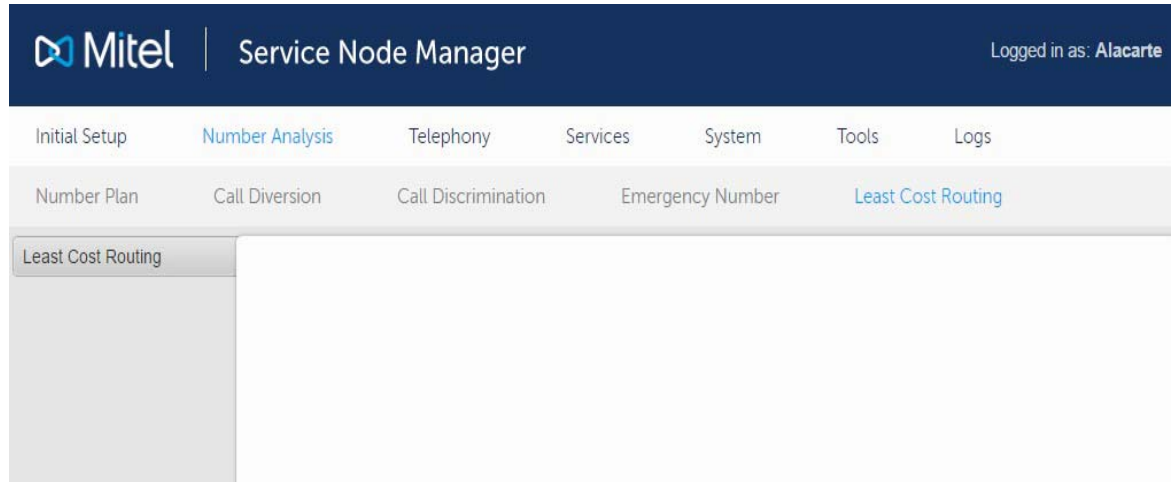
#### 3.1.1 APPLICATION ID

When using the SNM it is advisable to set the basic application information in order to recognize the site and application. Settings for the Application ID can be found by selecting **Initial Setup** and then **Application ID**. The Site name is displayed in the upper right corner and on the login screen.

## 3.2

## NAVIGATING IN MX-ONE SERVICE NODE MANAGER

The user interface is divided into menu tabs and sub menus relating to different configuration tasks in the system. For most of the tasks it is possible to add, change, view or remove configuration properties. How to use the different functions can be found in 4 Actions on page 11.



**Figure 2: MX-ONE Service Node Manager User Interface**

Item	Description
A	Main menu
B	Submenu
C	Task menu
D	Work area
E	Summary and Help frame

**Note:** Do not use the back and forward buttons in the browser when you are working in MX-ONE Service Node Manager.

Using back or forward buttons will result in an error message. Reload the page to go back to MX-ONE Service Node Manager
















### 3.2.1







## ICONS, SYMBOLS AND OTHER GRAPHICAL ELEMENTS

The following icons and symbols can be found in MX-ONE Service Node Manager:

**Table 1 Icons and Symbols in the GUI**

Symbol	Name/Function	Description
	Help	Information on how to set properties for the field.
	Change	Change the properties for an existing configuration.
	View Details	View details for a configuration.


Symbol	Name/Function	Description
	Remove	Remove the selected configuration.
	Add new using this as template	Add a new configuration using an existing as a template.
	Create template from this	Create a template with the values in the existing configuration item.
	Information	Information exclamation mark followed by system information.
	Update field	Update a specific field.
	Restore	Restore the system to a previous state.
	Mandatory	The field is required and mandatory to fill in.
	Undo changes	Undo the changes just made for a specific field.
	Change	Open the field for editing.
	Play the message	Plays a recorded soundfile.
	Sort the list	Sort the list in ascending or descending order. The arrow pointing in both directions indicates that the column is unsorted.
	Run	Run a selected batch operation.
	Download	Download a template or a batch operation as an xml file.
	Reset	Reset the configuration.
	Block	Block the board.

Symbol	Name/Function	Description
	Deblock	Deblock the board.
	Logged on	The IP phone is logged on to the system.
	Logged off	The IP phone has logged off from the system.
	Unknown	The IP phone has not reported anything to the exchange in the last 48 hours.
	Not used	Initial mode after the IP phone is registered, but no log on attempt to the system has been done.
	Log on rejected	The IP phone has attempted to log on, but has been rejected by the system.

### 3.2.2

## USING THE HELP

There are several levels of Help in the MX-ONE Service Node Manager:

- **User Guide:** This User Guide, which can be found in the upper right corner of the application.
- **Help:** Online help for a specific task. There are three different types of help, overview of the task, help for adding a task (step by step instruction), and help for changing a task. The online help is opened in a pop-up window or the Help frame. See also 3.2.3 Summary and Help frame on page 9.
-  : Context help for a specific property. The context help describes the property usage, options and if special conditions are to be considered.
- **Walkthrough Help:** Help for a specific walkthrough. Each step in the walkthrough, and the purpose of it, is explained.

### 3.2.3

## SUMMARY AND HELP FRAME

For some configuration tasks that contain several steps, a frame with summary and help information is displayed. The summary shows configuration information for all properties that have been configured in the task. Help shows step by step instructions related to the task. The summary and help frame can be minimized by clicking the arrow, below or on top of the frame.



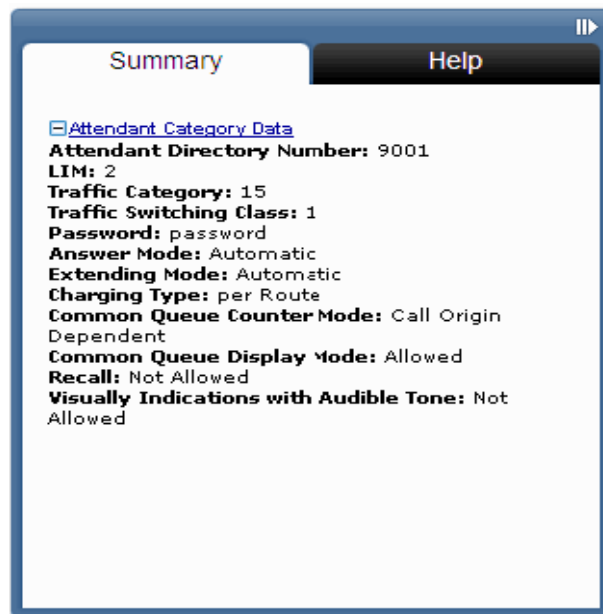


Figure 3: Summary and Help frame

### 3.2.4

## BASIC OR ADVANCED SETTINGS

Property settings that are not often used and not mandatory are grouped in advanced settings for a task. Some fields in advanced settings have default values. The advanced settings are displayed by clicking **Advanced**. Basic settings are displayed by clicking **Basic**.

## 3.3

## ENABLING THE AUTOMATIC LOGOUT INDICATOR

MX-ONE Service Node Manager comprises a function for displaying the remaining time until an automatic logout due to inactivity is performed. The information is displayed in the status bar of the browser.

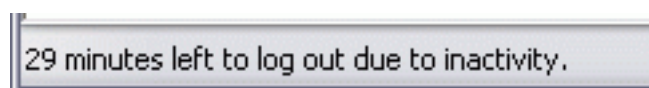


Figure 4: Automatic logout indicator

To be able to see this information, the browser must be configured for allowing status bar updates using JavaScript. For information on how to enable this function in the browser, see the browser documentation.

## 4

## ACTIONS

This section describes the actions that can be performed in the different tasks. Most of the actions can be performed at different stages, for example from a result screen or from a list view.

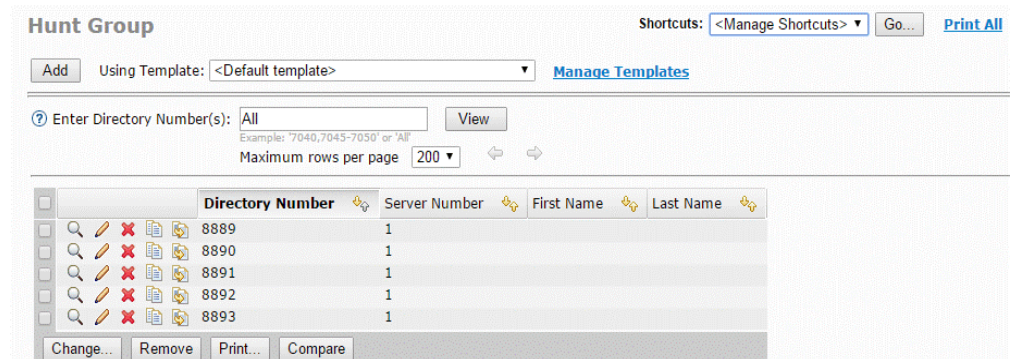



Figure 5: List view

## 4.1

## ADDING DATA

Data can be added to a new configuration item in the following ways:


- Click **Add**. System default values are displayed for the new configuration item. To create a configuration item without using a template, the value `<Default template>` must be selected in the **Using Template** drop-down list before clicking the button. To create a configuration item using a template, see 4.7.3 Using a Template for a Configuration Task on page 15.
- From a result screen or a view details screen, click **Add from this....** The previously added configuration item is used as a template.
- From a list view, click  (**Add new using this as template**). The selected configuration item is used as a template.

Some configuration tasks have predefined values and can only be changed.

## 4.2

## VIEWING DATA

Configuration items can be viewed in the following ways:

- For some tasks the list view is displayed by clicking **View**. The list displays the existing configuration items with a subset of the property values or all property values.
- From a list view, click  (**View details**). The details of the configuration item are displayed. Click on the arrows to view the previous or the next configuration item.

Data for selected configuration items can also be compared, see 4.3 Comparing data on page 12.

The list in the listview can be sorted by the items in the column clicking

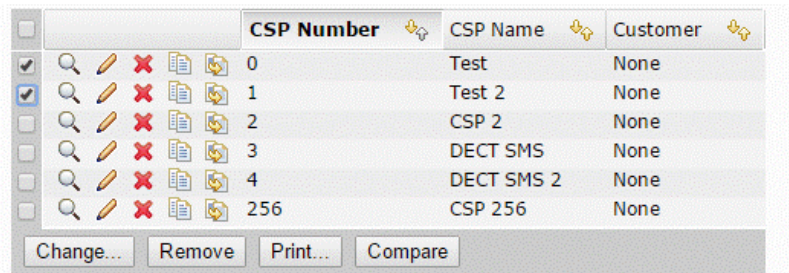
 (Sort by <column name>),  (Sort descending), or  (Sort ascending).

### 4.3 COMPARING DATA

Configuration item properties can be compared with the compare function. The compare function is available in list views.

Perform the following steps to compare two configuration items:

1. Select two items to compare in the list.





2. Click **Compare**.

A new screen with the result of the comparison is displayed. Property values that differ in the comparison are displayed in orange. The property values can be changed by clicking one of the **Change <item>...** buttons.

Common Service Profiles - Compare - 0, 1		
<div>Done</div>		
Name Identity		
Property	Value	Value
CSP Number	0	1
CSP Name	Test	Test 2
Customer	None	None
Number Presentation Category		
Property	Value	Value
Request A-number from the PSTN	Restricted for extension	Restricted for extension
Use Number Presentation Restriction	Not restricted	Not restricted
Number Presentation Restriction is Permitted per Call	No	No
Allow Network Affiliation	Allowed	Allowed
Calling Line Identification Presentation Restriction Override	Permitted when type of connected party is private	Permitted when type of connected party is private
Never Display Number from PSTN	No	No
Calling Party Display	PBX member	PBX member
Traffic Category		
Property	Value	Value
Block Emergency Switching Characteristics	No	No
Direct Indialling Characteristics	Open	Open

### 4.4 CHANGING DATA

Configuration items can be changed in the following ways:

- From a list view, click  (**Change**). The configuration item is opened and the set values can be edited.
- From a list view, select one or more configuration items and click **Change....** Makes it possible to change values for all selected configuration items at the same time. If changing values for more than one configuration item,  (**Change**) enables the field.
- From a result screen, click **Change This....** The configuration item is opened and the set values can be edited.


To restore the previously saved value in a field, that is to undo the

change, click  (**Undo Change**). Click **Apply** to save and apply the changes.

## 4.5

### REMOVING DATA

Configuration items can be removed in the following ways:

- From a list view, click  (**Remove**).
- From a list view, select one or more configuration items and click **Remove**.
- From a result screen, click **Remove This**.

A pop-up confirmation window is displayed before a configuration item is removed.

## 4.6

### PRINTING DATA

Configuration data can be printed in the following ways:


- From a list view, click **Print....** Prints the properties of selected configuration items.
- From a list view, click the **Print All** link. Prints the properties of all existing configuration items.
- From a view details screen, click the **Print** link. Prints the properties of the configuration item.

Clicking **Print....**, **Print All** or **Print** opens a pop-up window that displays the print preview.

### 4.6.1

#### EXAMPLE: PRINTING EXTERNAL NUMBER SERIES

1. Click **Number Analysis**, **Number Plan** and then **Number Series**.
2. Select *External Numbers* from the Number Series Type list and click **Print All**.
3. A new window opens showing the print preview.


Service Node Manager

Print
Close

### Number Series - 1011

Property	Value
Number Series	1011
Number Series Type	Directory numbers

### Number Series - 1500

Property	Value
Number Series	1500
Number Series Type	Directory numbers

### Number Series - 1600-1700

Property	Value
Number Series	1600-1700
Number Series Type	Directory numbers

### Number Series - 5000-5999

Property	Value
Number Series	5000-5999
Number Series Type	Directory numbers

4. Click **Print**. The browser print dialog box is opened, make desired selections and print the page.

## 4.7

## HANDLING TEMPLATES


A template is a set of predefined values that can be used when a new configuration item is added. Templates are used to simplify the process of adding many configuration items with similar property values. Only property values that can be identical for several configuration items can be set in the template. Property values set in templates will not be set in the MX-ONE.

Click the **Manage Templates** link in a task to display the list view with the existing templates for that task. In the list view, the templates are displayed with the defined name, the type, the user that created it, and the date when it was created, for example, Template name(by Username, 12/30/06)

## 4.7.1

## CREATING A TEMPLATE FOR A CONFIGURATION ITEM


There are two ways to create a template:

- Create a new template, that is, a template with no predefined values:
  - Click the **Manage Templates** link.
  - Click **Add** and enter property values in the configuration task where applicable.
  - Enter a template name and click **Apply** to save the template.
- Create a template based on an existing configuration item:
  - Click  (**Create template from this**) in the list view
  - Enter a template name and click **Apply** to save the template.

**Note:** Creating a template will not alter any data on the MX-ONE Service Node.

## 4.7.2

## UPLOADING OR DOWNLOADING A TEMPLATE

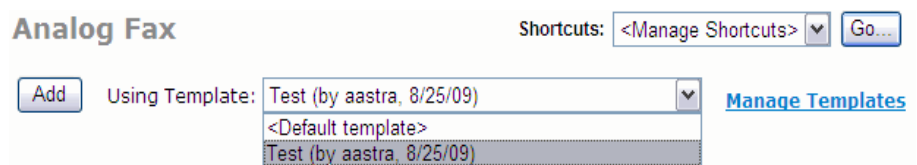
Templates can be created in one system and transferred to another. To upload a template, click **Upload...** To download a template, click  (**Download**). Templates are saved in .xml format.

## 4.7.3

## USING A TEMPLATE FOR A CONFIGURATION TASK

Perform the following steps to use a predefined template for a configuration task:

1. Select a template from the list.



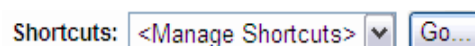
2. Click **Add** and enter property values in the configuration task where applicable.
3. Click **Apply** to save the new configuration item.

## 4.8

## USING SHORTCUTS

Shortcuts can be used when you want to create or use a shortcut to another configuration task. For example, after adding an Operator Group, a shortcut to a related task could be to add members to the Operator Group.

Select desired shortcut from the list and click **Go...** to go to the task directly.



**Figure 6: Selecting Shortcut**

4.8.1 CREATING SHORTCUTS

- 1. Select <Manage Shortcuts> and click **Go...** to create a new shortcut.
- 2. Select the desired shortcuts from the list of available configuration tasks.
- 3. Click **Apply**.

**Note:** The shortcuts must be defined for each configuration task. When adding a shortcut from task A to task B, task B does not automatically get the shortcut to task A.

4.9 USING WALKTHROUGHS

Walkthroughs can be used for guidance with a setup of several tasks. Walkthroughs are predefined, ordered flows from A to B, for example the setup of recorded voice announcements. It is possible to step forward or backward in a walkthrough, but in order to set the configuration, the property values for each task must be applied before continuing with the next step. Each task in the walkthrough is optional.

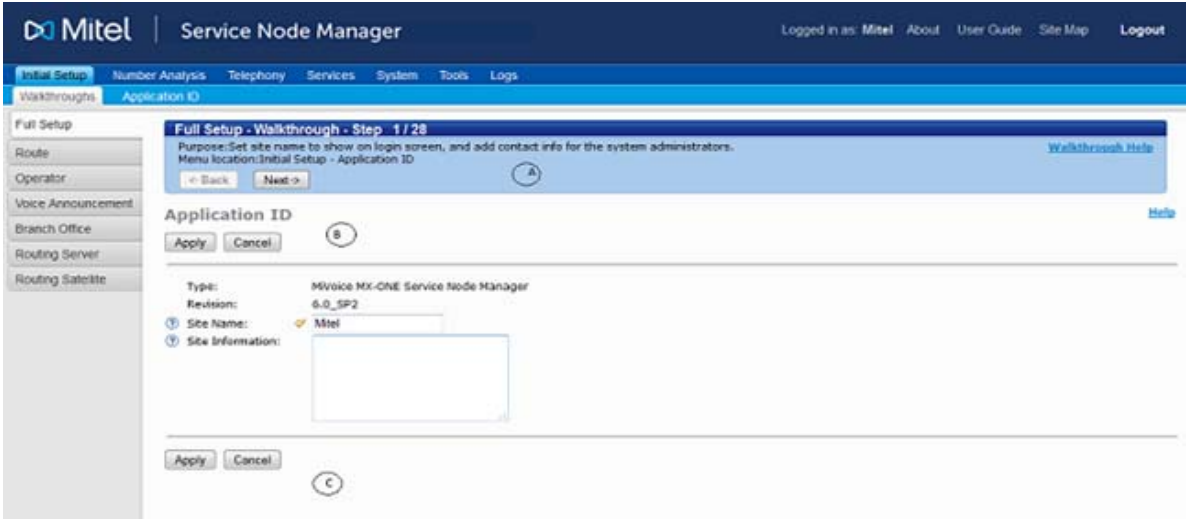


Figure 7: Walkthrough screen

Item	Description
A	Walkthrough field
B	Task field
C	Apply for a task

4.9.1 STARTING A WALKTHROUGH

The following steps are general and applies to all walkthroughs.

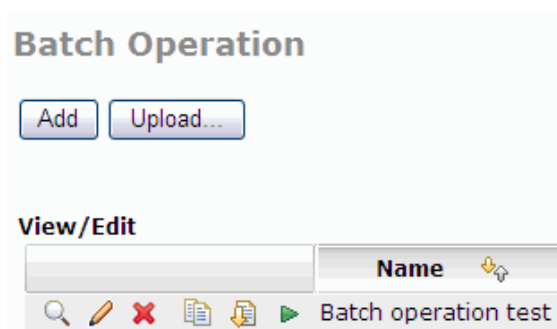
- 1. Select **Initial Setup** and then **Walkthroughs**.
  - 2. Select a walkthrough from the task menu.
  - 3. Click appropriate button in the task, for example **Add**.
  - 4. Enter desired property values for the task and click **Apply**.
- Note:** A task within the walkthrough may consist of several steps.
- 5. Click **Next->** in the walkthrough field to go to the next configuration task.

6. Repeat Step 4 (Enter desired property values for the task and click **Apply**) to Step 5 (Click **Next->** in the walkthrough field to go to the next configuration task) until the last step of the walkthrough.

## 4.10

## USING BATCH OPERATIONS

Batch operations can be used when you want to create several configuration tasks in a batch, for repeated or frequent operations that are time consuming to do manually. It is possible to record several configuration tasks into one batch operation and change the order of the operations.



**Figure 8: Batch Operation**

The following options are available in Batch Operation:

- Add new
- Upload or Download a previously defined batch operation.
- View, Change, Add from this
- Run a previously defined batch operation.

The batch operations are saved in xml format. Batch Operations can be created in one system and transferred to another.

### 4.10.1

### ADDING A NEW BATCH OPERATION

1. Select **System**, then **Batch Operation** and click **Add**.
2. Add a name for the Batch Operation and click **Next->**.
3. Click **Record** to add the configuration item and **Stop** to end the recording.
4. Click **Apply** to save the Batch Operation or **Record** to add a new instruction to the batch operation.

**Note:** Configuration properties set during the recording are not sent to the MX-ONE Service Node.

### 4.10.2

### RUNNING A BATCH OPERATION

1. Select **System**, and then **Batch Operation**.
2. Click **Run** to execute the batch operation.

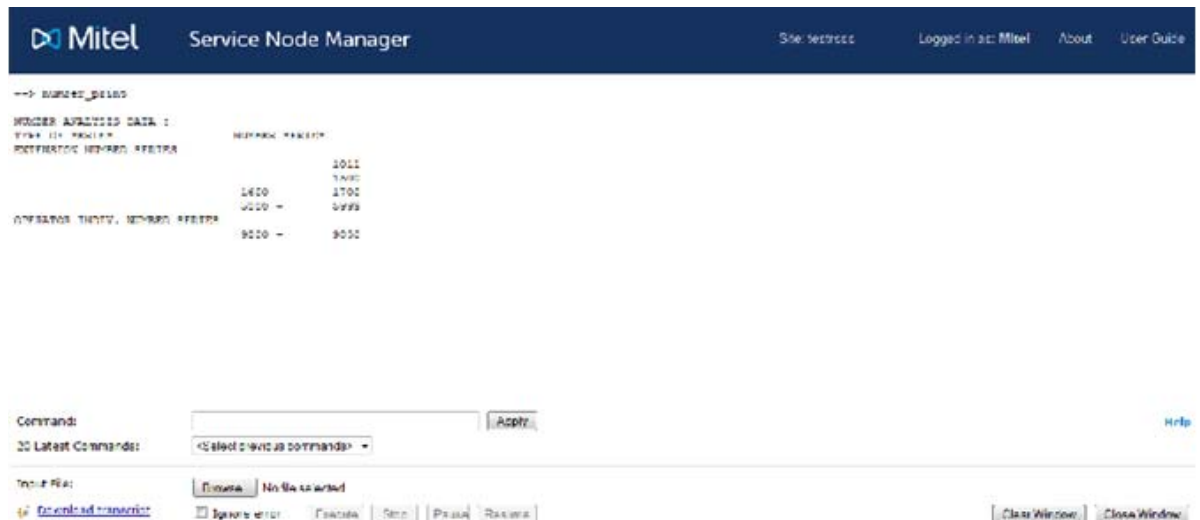


## 4.11

## USING COMMAND LINE INTERFACE

The Command Line Interface (CLI) in MX-ONE Service Node Manager is used to execute commands that cannot be handled using the web based interface of MX-ONE Service Node Manager. To have access to the CLI, the user must be logged in to an account with the privilege `Command line interface` included in the security profile.

Select **Tools** and then **Command Line** to open the CLI.



**Figure 9: Command Line Interface**

The following types of commands can be used:

- UNIX-style commands, which are separate executable files in the UNIX™/Linux™ environment outside the shell of the MX-ONE Service Node; mdsh. Some of these commands are standard UNIX tools, like the commands **less** and **emacs**, while other files belong to the MX-ONE Service Node service system software. The parameters of these commands deviate from standard unix commands in the aspect that they cannot be concatenated. Each parameter must be separate.
- Built-in commands, which are UNIX/Linux commands that are executed by mdsh as an integrated part of the shell. Examples are the commands **cd** and **threads**.
- MML commands, which comply with the CCITT MML format familiar to, for example, the MD110 user. These commands are sent by mdsh to a program (CIOR), which finds the appropriate command handler (for example GEH) to execute the command.

**Note:** Interactive commands cannot be used.

**Note:** No confirmation questions are provided for dangerous commands.

For an overview of command handling see the command description *COMMANDS IN MX-ONE SERVICE NODE*.

The latest 20 commands are stored in the system, and any of them can be executed in the following way:

1. Select the command in **20 Latest Commands**. The command is copied into **Command**.
2. To execute the command, click **Apply**.

Instead of entering each command separately it is possible to upload a file containing a number of commands to be executed:

1. Enter the search path of the file to upload, or click **Browse** to search for the file.
2. Click **Execute**.

The upper window displays the results of the operation. Executed commands are highlighted by an arrow (-->), preceding the output.

The results of the operation can be downloaded as a .txt file:

1. Click the **Download** link.
2. Select where to store the log file and click **Save**.

The log file can contain a maximum of 10 000 lines. When the number of lines is exceeded, the oldest lines are removed from the log so that new operations can be added.

To clear the list of 20 Latest Commands, click **Clear List**.

To clear the display window, click **Clear Window**.

To close the CLI window, click **Close Window**.

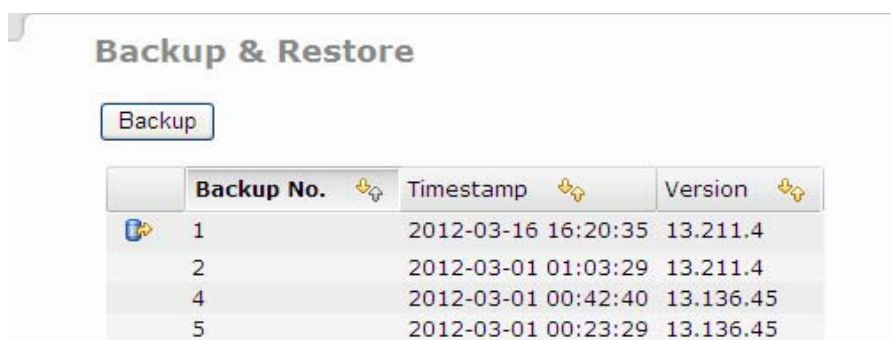
**Note:** Using the CLI to alter data on the MX-ONE Service Node (SN) may lead to data inconsistencies between MX-ONE Provisioning Manager (PM) data and SN data.

## 4.12

## USING BACKUP & RESTORE

It is possible to back up and restore MX-ONE data. Each backup file is identified by a backup number, a time stamp and the system release version number. MX-ONE Service Node Manager stores exchange data on the MX-ONE Service Node and data concerning for example names of routes and common service profiles in an SQL Database. The exchange data and the SQL database are both included in a backup or restore session.

Select **System** and **Backup & Restore** to start using the functions for Backup & Restore.



**Figure 10: Backup and Restore**

Click **Backup** to start a backup.

Click (**Restore**) to restore the system.

**Note:**

- 1 Restoring data can result in user and extension data inconsistencies.
- 2 The backups are possible to take from the Provisioning Manager subsystem task. The backups, thus performed are listed here and restored.

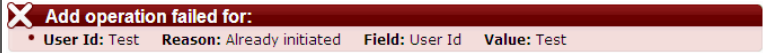

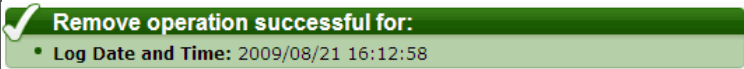
## 5

## SYSTEM AND ERROR MESSAGES

MX-ONE Service Node Manager provides system messages and error messages directly or when a configuration item is submitted.

Icons are displayed together with system information.

**Table 2 System and Error Messages**

Type	Icon
Error Message	
Information Message	
System Message	

For some operations a pop-up window is displayed. For example when entering invalid or too many characters in a field.



**Figure 11: Pop-up message**

## 5.1

## LOGS

MX-ONE Service Node Manager provides three logs with different information level:

- Audit trail: information about all changes made by a user in the system.
  - Event Log: system log information useful for fault tracing.
  - Security Log: information about successful and unsuccessful login attempts.
- MDSH log: Information about commands send from SNM to the Service Node.

**Note:** Log files are created every day even if no data is logged. Logs older than 90 days will be overwritten