

# MiVoice MX-ONE

## MX-ONE Provisioning Manager Deployment - Installation Instruction

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# Introduction

MX-ONE Provisioning Manager is a web-based management tool for management of MX-ONE™ extensions through a Graphical User Interface (GUI).

MX-ONE Service Node Manager is a web-based management tool used for configuration of the MX-ONE through a Graphical User Interface (GUI). MX-ONE Service Node Manager is also used for creation and updates of configuration files for the IP phones.

MX-ONE Service Node Manager must always be deployed on Service Node 1 (LIM1) in the MX-ONE.

The purpose with this document is to describe the alternatives available for deployment of MX-ONE Provisioning Manager and provide recommendations for different scenarios.

**NOTE:** *Both MX-ONE Service Node Manager and MX-ONE Provisioning Manager must be deployed on Linux based servers.*

# MX-ONE PM Deployment Alternatives

## General

MX-ONE Provisioning Manager can be deployed:

- on the same server as MX-ONE Service Node Manager
- on another MX-ONE Service Node
- on a separate, Linux based server

There are several factors considered before taking a decision such as:

- Company strategies
- System size
- Server type (s)
- Networked or one stand-alone system

The user must follow the general guidelines when planning the deployment of the management applications in the MX-ONE system and/or network:

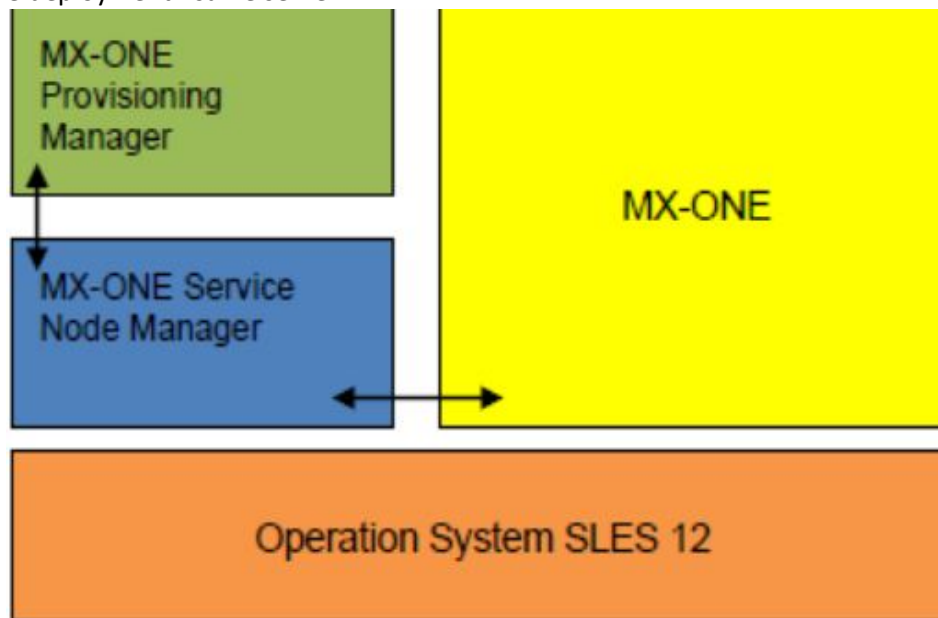
- Communication protocol used between MX-ONE Service Node Manager and MX-ONE Provisioning Manager is the only functional difference between deployment of MX-ONE Provisioning Manager on the same server or on a different server as MX-ONE Service Node Manager.
- Web services communication is used when the applications are deployed on different servers. This communication occurs in large systems with many users, which can result in longer response times (for example, requesting printouts of all extensions). The network stability/quality also has an impact on this communication, which is in an unstable network situation (means communication is disturbed or interrupted).
- MX-ONE Provisioning Manager's communication with MX-ONE is done through MX-ONE Service Node Manager, which means if MX-ONE Service Node Manager is not running; MX-ONE Provisioning Manager cannot access the MX-ONE system that MX-ONE Service Node Manager is running on. So, during network configuration, MX-ONE Provisioning Manager interfacing many MX-ONE systems is recommended to have MX-ONE Provisioning Manager on a separate server.
- Connection with the different MX-ONE Service Node Manager applications takes place by using of web services.
- MX-ONE Service Node Manager and MX-ONE Provisioning Manager must have the same SW version when deployed on the same server, which must be upgraded at the same time.
- When deployed on different servers, MX-ONE Provisioning Manager must have the same or higher SW version than MX-ONE Service Node Manager.

## MX-ONE SNM and PM on the same SN

This is the most common alternative and the recommended deployment for a 1 server (LIM) system.

The following are the industrial standard servers and virtualized server requirements for MX-ONE:

**Figure 1:** Single deployment - same server



**Table 1:** MX-ONE 7.0 - Server Requirements - Industrial Standard Servers (Sheet 1 of 2)

Provisioning Manager Standalone					
Physical Server (Bare metal)					
Number of Users	Memory (GB)	Number of CPUs	Disk (GB)	Application (GB)	Type of Server
500	4	2	100	100	Provisioning Manager Standalone
1000	4	2	100	100	Provisioning Manager Standalone
2500	6	2	100	100	Provisioning Manager Standalone
5000	6	4	100	100	Provisioning Manager Standalone
7500	6	4	100	100	Provisioning Manager Standalone

**Table 1:** MX-ONE 7.0 - Server Requirements - Industrial Standard Servers (Continued) (Sheet 2 of 2)

<b>Provisioning Manager Standalone</b>					
<b>Physical Server (Bare metal)</b>					
<b>Number of Users</b>	<b>Memory (GB)</b>	<b>Number of CPUs</b>	<b>Disk (GB)</b>	<b>Application (GB)</b>	<b>Type of Server</b>
10000	8	4	100	100	Provisioning Manager Standalone
15000	8	4	100	100	Provisioning Manager Standalone
30000	12	6	100	100	Provisioning Manager Standalone
50000	16	6	100	100	Provisioning Manager Standalone
70000	20	6	100	100	Provisioning Manager Standalone
100000	24	6	100	100	Provisioning Manager Standalone

**Table 2:** MX-ONE 7.0 - Server Requirements - Industrial Standard Servers (Sheet 1 of 2)

Provisioning Manager Standalone							
Physical Server (Bare metal)							
Number of Users	Memory (GB)		CPU			Disk (GB)	Application (GB)
Number of managed users	Minimum (GB) required Memory	Reservation (GB)	Minimum number of vCPU required	Minimum MHZ required	Minimum MHZ reservation	Disk size (GB)	Type of Application
500	4	2	2	1000	500	100	Provisioning Manager Standalone
1000	4	2	2	1000	500	100	Provisioning Manager Standalone
2500	6	2	2	1000	500	100	Provisioning Manager Standalone
5000	6	3	4	3500	2000	100	Provisioning Manager Standalone
7500	8	3	4	3500	2000	100	Provisioning Manager Standalone
10000	8	4	4	3500	2000	100	Provisioning Manager Standalone
15000	8	4	4	3500	2000	100	Provisioning Manager Standalone
30000	12	6	6	4000	2000	100	Provisioning Manager Standalone



**Table 2:** MX-ONE 7.0 - Server Requirements - Industrial Standard Servers (Continued) (Sheet 2 of 2)

Provisioning Manager Standalone							
Physical Server (Bare metal)							
Number of Users	Memory (GB)		CPU			Disk (GB)	Application (GB)
Number of managed users	Minimum (GB) required Memory	Reservation (GB)	Minimum number of vCPU required	Minimum MHZ required	Minimum MHZ reservation	Disk size (GB)	Type of Application
50000	16	6	6	4000	2000	100	Provisioning Manager Standalone
70000	20	6	6	4000	2000	100	Provisioning Manager Standalone
100000	24	8	6	4000	2000	100	Provisioning Manager Standalone

It is mandatory to change the heap memory size in JBoss configuration for Provisioning Manager and Service Node Manager as mentioned below. The memory requirements are in addition to the memory required by Service Node.

- 2048 MB (2GB) or more recommended for up to 2000 users
- 4096 MB (4GB) or more recommended for more than 2000 users

**NOTE:** The default value of 512 MB in JBoss configuration support is up to 1000 users.

For instructions on how to change heap size, contact Mitel Support team or refer to *Installing MX-ONE Provisioning Manager* document or *INSTALLING AND CONFIGURING MIVOICE MX-ONE* document.

Also, it is recommended to run Provisioning Manager on a standalone system for more than 2000 users.

## MX-ONE SNM and PM on different Service Nodes

This alternative is recommended for a multi-server (LIM) system, that is more than one server and more than 2000 users using either with industrial standard servers or virtualized server. In this situation, the master LIM server has MX-ONE Service Node Manager installed and MX-ONE Provisioning Manager is placed on any of the LIM in the system. This is done to offload the master server.

This is recommended as an alternative during configurations, where it is foreseen that the processing in server one (master server) becomes heavy due to specific functionality/interfaces.

It is mandatory to change the heap memory size in JBoss configuration for Provisioning Manager and Service Node Manager as mentioned below:

- 4096 MB (4GB) for PM system (for more than 2000 users). Note! If a large number of users are managed by Provisioning Manager, you may need to increase the heap memory size to a higher value.
- 4096 MB (4GB) for Service Node Manager (4GB). This memory requirement is on top of memory needed by Service Node.

For instructions on how to change heap size, contact Mitel Support team or refer to *Installing MX-ONE Provisioning Manager* document or *INSTALLING AND CONFIGURING MIVOICE MX-ONE* document.

**NOTE:** This deployment mode is that, even if MX-ONE Service Node Manager is the MX-ONE Provisioning Manager communication link to the MX-ONE Service Node, it is the server that MX-ONE Provisioning Manager is deployed on that absorbs the Java CPU load.

The communication between MX-ONE Service Node Manager and MX-ONE Provisioning Manager takes place through web services (with or without security enabled).

## MX-ONE PM on Separate Server

In a network where there may be several MX-ONE systems, networked together, it may be advantageous to place the MX-ONE Provisioning Manager on its own server, independent of any MX-ONE system. This is the recommended alternative for a networked set-up as MX-ONE Provisioning Manager can access all operational MX-ONE systems.

By placing the MX-ONE Provisioning Manager on a separate server, user can avoid loss of communication to all other MX-ONE systems; which is unavoidable during upgrading of the MX-ONE system where MX-ONE Provisioning Manager typically resides.

The server that MX-ONE Provisioning Manager is deployed on should be equipped with minimum 4 GB of RAM.

The communication between MX-ONE Service Node Manager and MX-ONE Provisioning Manager takes place through web services (with or without security enabled).

**Figure 2:** Communication between MX-ONE Node Manager and Provisioning Manager