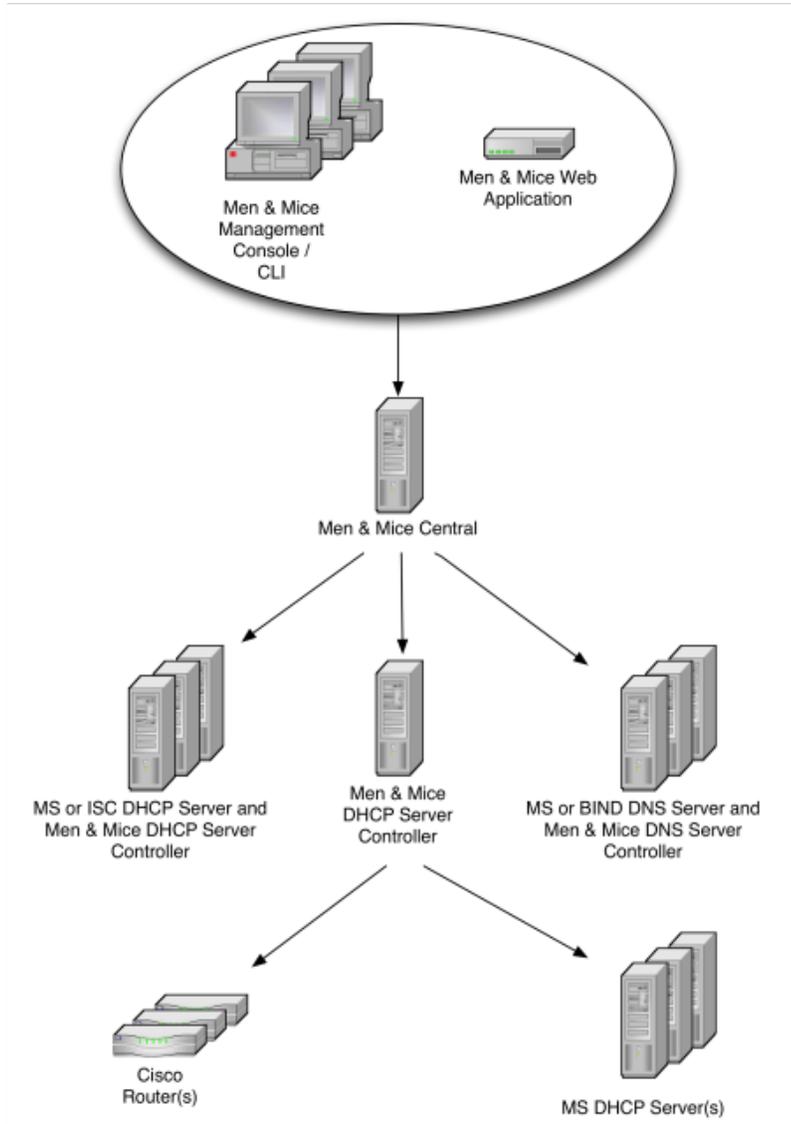


# Installation Guide

 This guide applies to the following operating systems: Windows, Solaris, Linux

## Component Overview

There are three main user interfaces for the Men & Mice Suite; Management Console, Command Line Interface and the Web Interface. Multiple copies of each may be installed, and multiple copies can be logged in at once to manage your servers.



Please click on any of the following links for more details on a specific component.

- [Management Console](#)
- [Command Line Interface](#)
- [Web Interface](#)
- [Men & Mice Central](#)
- [DNS Server Controller](#)
- [DHCP Server Controller](#)
- [Updater](#)

 This guide contains instructions to install each of these components. It is not necessary to read this entire document; but it is

recommended that the relevant sections are reviewed.

Once installation is complete, you can get more detailed information from the [Men & Mice Suite User's Guide](#).

## Minimum System Requirements

### Operating Systems

Operating System	Management Console <sup>1</sup>	MM Controllers	MM Central	Command line interface	Web Interface	Web Services
<b>Windows</b>						
Windows Server 2008	✓	✓	✓	✓	✓	✓
Windows Server 2008 R2	✓	✓	✓	✓	✓	✓
Windows Server 2012	✓	✓	✓	✓	✓	✓
Windows Server 2012 R2	✓	✓	✓	✓	✓	✓
Windows Server 2016	✓	✓	✓	✓	✓	✓
<b>Solaris</b>						
Solaris 10 x86	✗	✓	✗	✗	✗	✗
<b>Linux</b>						
Redhat Enterprise Linux 6	✗	✓	✓	✓	✓	✗
Redhat Enterprise Linux 7	✗	✓	✓	✓	✓	✗
CentOS 6	✗	✓	✓	✓	✓	✗
CentOS 7	✗	✓	✓	✓	✓	✗
Suse Enterprise Linux 11/12/13 x86	✗	✓	✓	✓	✓	✗
Ubuntu 12.04 LTS	✗	✓	✓	✓	✓	✗
Ubuntu 14.04 LTS	✗	✓	✓	✓	✓	✗
Ubuntu 16.04 LTS	✗	✓	✓	✓	✓	✗

**1: The management console also works on non-server Windows that have not reached their EOL.**

### Hardware requirements

	Men & Mice Central	MM Controllers	Management Console	Command line interface	Web Interface	Web Services
CPU	1.4 GHz x86-64 or better					
Memory	1 GB Memory					
Disk space	1 GB	250 MB				

## DNS / DHCP Servers

DNS Servers	Versions
Microsoft DNS	2008, 2008 R2, 2012, 2012 R2, 2016
ISC BIND	9.6 - 9.11
Unbound	1.4.22 - 1.6.0
PowerDNS Authoritative Server	3.4
DHCP Servers	Versions
Microsoft DHCP	2008, 2008 R2, 2012, 2012 R2, 2016
ISC DHCP	3.0.6 - 4.3.5
ISC Kea DHCP	1.1.0
Cisco IOS with DHCP support	12.3 - 15.1

## Other

### Men & Mice Web Interface

- Microsoft IIS <sup>2</sup>
- Apache 2 Web server 2.2/2.4 <sup>3</sup>

### Database Servers

- MS SQL Server 2008 R2, 2012, 2014, 2016

### Supported Cloud Services

- Azure DNS
- Amazon Route53
- OpenStack

<sup>2</sup> When using IIS 7 the IIS 6 Management Compatibility and ISAPI Extensions role services are required.

<sup>3</sup> The BIND name server and Apache web server are supported on all platforms except Windows. The ISC DHCP server is supported on all platforms except Windows.

## Networking requirements

The following services need to be able to listen for connections on the following ports. This needs to be configured in a firewall that can either reside on the servers themselves or externally.

Service Name	Port	Protocol	Source
DNS Server controller	1337	TCP	Central
DHCP Server Controller	4151	TCP	Central
Men & Mice Central	1231	TCP	Management Console, MMCLI, Web Interface
Men & Mice Updater	4603	TCP	Central

## Installation Overview

 If you are upgrading, please see [Upgrade Notes](#)

---

## Installation outline

- **Step 1:** [Download](#) the required components
- **Step 2:** Install Men & Mice Central on some server. Note that only a single instance of Men & Mice Central is required.
- **Step 3:** Install a Men & Mice DNS Server Controller for ISC BIND on each server running ISC BIND.
- **Step 4:** Install Men & Mice DNS Server Controller for MS DNS either on each MS DNS server, on the same server as Men & Mice Central, or on any other convenient Windows Server.
- **Step 5:** Install a Men & Mice DHCP Server Controller for ISC DHCP on each ISC DHCP server and/or nearby to any Cisco IOS devices used as DHCP servers.
- **Step 6:** Install a Men & Mice DHCP Server Controller for MS DHCP either on each MS DHCP server, on the same server as Men & Mice Central, or on any other convenient Windows Server.
- **Step 7:** The various user interfaces may be installed wherever convenient.

The latest version of the Men & Mice Suite components can be downloaded from the Men & Mice [website](#).



The first connection to a new installation of Men & Mice Central must originate from Men & Mice Management Console. A connection from Men & Mice Web Interface or Men & Mice CLI will be refused until after the First Use Wizard has been completed using the Management Console

## Detailed installation instructions for each OS

- [Installation on Windows](#)
- [Installation on Unix](#)

## Additional Installation Notes

### General information

Nearly all components come with installers.

Men & Mice CLI is an exception on some operating systems - it has no installer, and can be manually installed wherever convenient in the file system after it is extracted from its distribution archive.

Please note that the CLI is marked as deprecated and Men & Mice recommends to use the SOAP interface instead.

A high level overview of the installation steps can be found in the following knowledge base article: <https://otrs.menandmice.com/otrs/public.pl?Action=PublicFAQZoom;ItemID=72>

The first time Men & Mice Management Console connects to Men & Mice Central, a setup wizard will take you through the steps of entering licenses and configuring connections to DNS and DHCP servers.

### Single Sign-On and the Men & Mice Web Interface

If you wish to use single sign-on with the Men & Mice Web Interface, in addition to enabling the feature after installation using Men & Mice Management Console, you will also need to do the following:

- Using the IIS Administrator application, select an authentication method other than Anonymous and Basic for the MenandMice web folder.
- Edit the file Index.htm in the MenandMice web folder (probably `C:\Program Files\Men & Mice\Web Interface\web`), and change the redirection so `SSO=1` argument is specified.

## Upgrading the Men & Mice Suite

### Back Up Beforehand

Before starting the upgrade is advisable to back up the Men & Mice Central database beforehand. You can back up the database in one of two ways:

- stop the service and copy the data, or
- use the Men & Mice CLI to backup the database, using the backup command.

For version 5.5 and later, the database is a single file named `mmsuite.db`. See [this](#) page for finding the location of the database. For previous versions, the database is made up of a series of `.dbf`, `.cdx`, and `.fpt` files all in one directory (e.g. `/var/qdns/qdnscentral`).

### Automatic Updates

Starting with version 6.2, the Men & Mice Suite is able to handle the updates of each component automatically. If running a version < 6.4, make sure that the Men & Mice Updater is installed and running on each machine that is running a DNS or DHCP Controller. Also make sure that the firewall is configured to allow the Updater to communicate with Men & Mice Central. See [Networking Requirements](#).

To check if any updates are available, in the Management Console, navigate to Tools -> Check for updates. From there an update can be initiated.

## System Requirements

Please review the [Supported Systems](#) before upgrading. There might have been some changes in what software is supported in the new version.

## Upgrade Procedure

To upgrade the Men & Mice Suite manually, each installer for each component should be run. The installers will upgrade the corresponding component.

## Upgrade Notes

### New Storage Format

If you are upgrading from version 5.1 or older you should be aware that Men & Mice Central 6.4 uses a new data storage format. When upgrading Men & Mice Central from version 5.1 or earlier, your data will be converted to the new format if the installer can find it. Otherwise, a new database will be created; your old data is still in its previous location, but it is not practical to merge the old data with new data.

### New Access Model

If upgrading from version 5.1 or earlier, and if the DHCP module was used in the older version, note that the new access model means that the data tables for DHCP access rights in the new version are not analogous to the access rights tables in the old version. After installing version 6.4 you should review and update the DHCP access rights.

### New Method of Controlling MS DHCP Servers

In version 5.6.1 and earlier, Men & Mice Central used the Microsoft API for DHCP server management, controlling DHCP servers directly. This function has now been moved to Men & Mice DHCP Server Controller, and Men & Mice Central sends all requests through this new component. This means that it is no longer necessary to configure Central to run under a user account with DHCP management privileges. Instead, it is nearly always best to let Central run as a local system service.

The account previously used to run Central can now be used for the DHCP Server Controller if it will be used to control DHCP service on servers other than the server on which the DHCP Server Controller is installed. Note that the DHCP Server Controller can run as a local system service and still control a DHCP service running locally.