

Micetro

FREE TRIAL DEPLOYMENT GUIDE

NOTE: There is a deployment video playlist available on YouTube if you have a preference to watch videos or would like to supplement this guide with videos.
https://www.youtube.com/playlist?list=PLg9woNoZKJM0Vgugsm0PFkjs5ll_VQx-a

Overview

Micetro is an overlay DNS, DHCP, and IPAM orchestration solution which helps you with network management. Because Micetro is a software overlay solution it can be very flexible in the way that you deploy it. For example, it may be deployed on Windows or Linux, on-premises or in the cloud. This guide is meant to be modular so that you can take what you need (example: Micetro installed on a Windows server) and leave out what you don't (example: connection to AWS Route 53).

Installations you may use

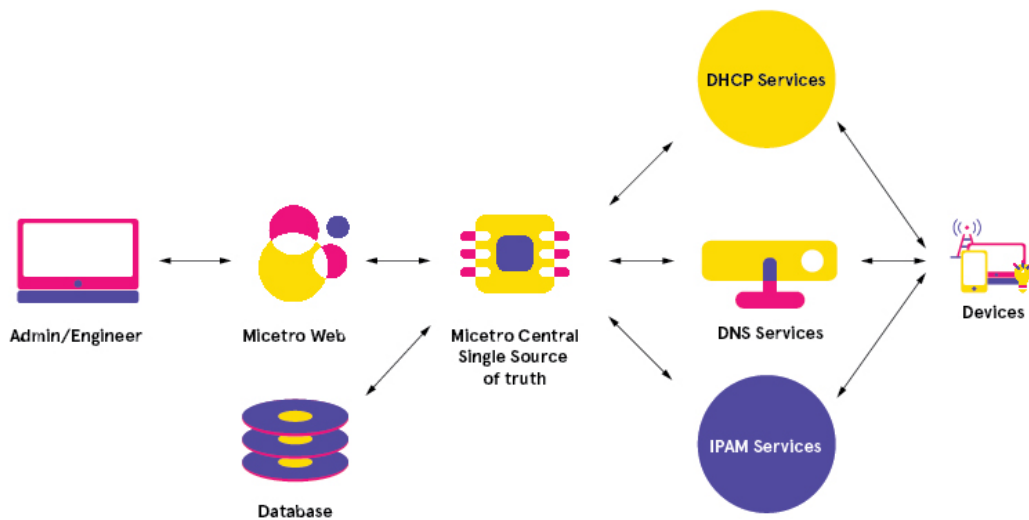
Deploying Micetro on a Windows Server	3
Deploying Micetro on a Linux Server	5
Deploying Micetro from Azure Marketplace	9

Note

Micetro installation or removal WILL NOT disrupt your current DNS, DHCP, or IPAM environment. No endpoint devices will need to be directed towards Micetro so installation and removal are safe. It is always recommended to deploy to a test environment when doing this yourself for the first time.

Miceto has five components:

- Central (the brains of the operation)
- Web App (Front-end Web UI) – REST and SOAP APIs are built-in to the Web App
- Agent (Controller)
- Database (embedded and included in the Free Trial version, but can be scaled out for larger implementations)
- Management Console (Soon to be deprecated)



Part 1: Deployment Methods

Deploying Micetro on a Windows Server (on-premises or public cloud)

Requirements:

Versions: Windows Server 2012-2022

Size: For lab deployments of Micetro, only a small amount of memory and disk space are needed. It may even be deployed directly on a current DNS or DHCP server without interruption to your DNS or DHCP environment. For larger environments please see the documentation

<https://docs.menandmice.com/en/latest/guides/implementation/architecture/#architecture-overview>

or email sales@menandmice.com for help deploying a large Proof of Concept environment.

Installation:

For this base Windows deployment we'll only need to use the Web UI and Micetro Central, described in the next few paragraphs. For any cloud deployments or connections, you'll need to use the Micetro Management Console (thick client) which will be described in another section. Go ahead and get started with this base-level deployment and then add to it by referencing the other sections in this document.

If you prefer to watch the video tutorial please go to:

https://www.youtube.com/watch?v=39mae_KTxEc&list=PLg9woNoZKJM1wN3fVjUxLndMwtiIT3FkU&index=1

1. Install IIS
 - a. Go to Server Manager on your Windows Server
 - b. Click on "Add roles and features"
 - c. Select "Role-based or feature-based installation" and click Next
 - d. Choose the correct server to install IIS to and click Next
 - e. Select "Web Server (IIS) and then Click Next and Install
 - f. Wait for the installation to complete before moving on to the next step
2. Download the binaries
 - a. You will have received an email and have been directed to the landing page with the Free Trial downloads
 - b. Download Men&Mice Web Application (Front-end Web UI)
 - c. Download Men&Mice Central (Micetro "brains", the application itself)
3. Install Men&Mice Central
 - a. Click Next at the first InstallShield wizard
 - b. Click to Accept the EULA and click Next
 - c. Provide a User Name and Organization (this is just customer information and not pertinent to Access Control in Micetro itself) and click Next.
 - d. Select the Destination Folder and Click Next
 - e. Choose the Complete installation and click Install and then Finish
4. Install Men&Mice Web Application (IIS must be installed already)
 - a. Accept the EULA and click Install
 - b. Click Next for the Application Setup
 - c. Accept the License Agreement and click Next

- d. You can accept the default setup on the Custom Setup screen and click Next and then Install
 - e. Click Finish and then Close the Success pop-up
5. Open the Micetro Web UI
 - a. Open a browser and browse to the IP address or FQDN of the server where Micetro was installed (you could also use "localhost" if you're on the server itself).
 - b. At the login page input the server FQDN or IP address
 - c. Default Username: administrator
 - d. Default Password: administrator
 - e. Click on "Log In"
6. Import Licenses
 - a. Click on Admin >> Configuration
 - b. Click on Licensing on the left-side menu
 - c. Copy the keys from the email that was sent to you for the Free Trial and paste them directly into the Import License Keys area.
 - d. Click on +Import

You now have a fully functioning installation of Micetro! However, now we'll need to import some information. Please go to the section on Importing IPAM Information in Part 2 of this Guide.

Deploying Micetro on a Linux Server (on-premises or public cloud)

Requirements:

While Micetro will likely work on any Linux distro, we recommend the use of one of the following. If you're planning on using the now deprecated Management Console (thick client) you will need a Windows server for that, but

if you're going to only use the Web UI then you should be fine in a pure Linux environment.

- RHEL Server 6-8
- CentOS 6-8
- SUSE 11-13
- Ubuntu 14.04, 16.04, 18.04, 20.04

Size: For lab deployments of Micetro, only a small amount of memory and disk space are needed. It may even be deployed directly on a current DNS or DHCP server without interruption to your DNS or DHCP environment.

For larger environments please see the documentation

<https://docs.menandmice.com/en/latest/guides/implementation/architecture/#architecture-overview>

or email sales@menandmice.com for help deploying a large Proof of Concept environment.

Installation:

For this base Linux deployment we'll only need to use the Web UI and Micetro Central, described in the next few paragraphs. For any cloud deployments or connections, you'll need to use the Micetro Management Console (thick client) which will be described in another section. Go ahead and get started with this base-level deployment and then add to it by referencing the other sections in this document.

The following will show an Ubuntu installation using an SSH session.

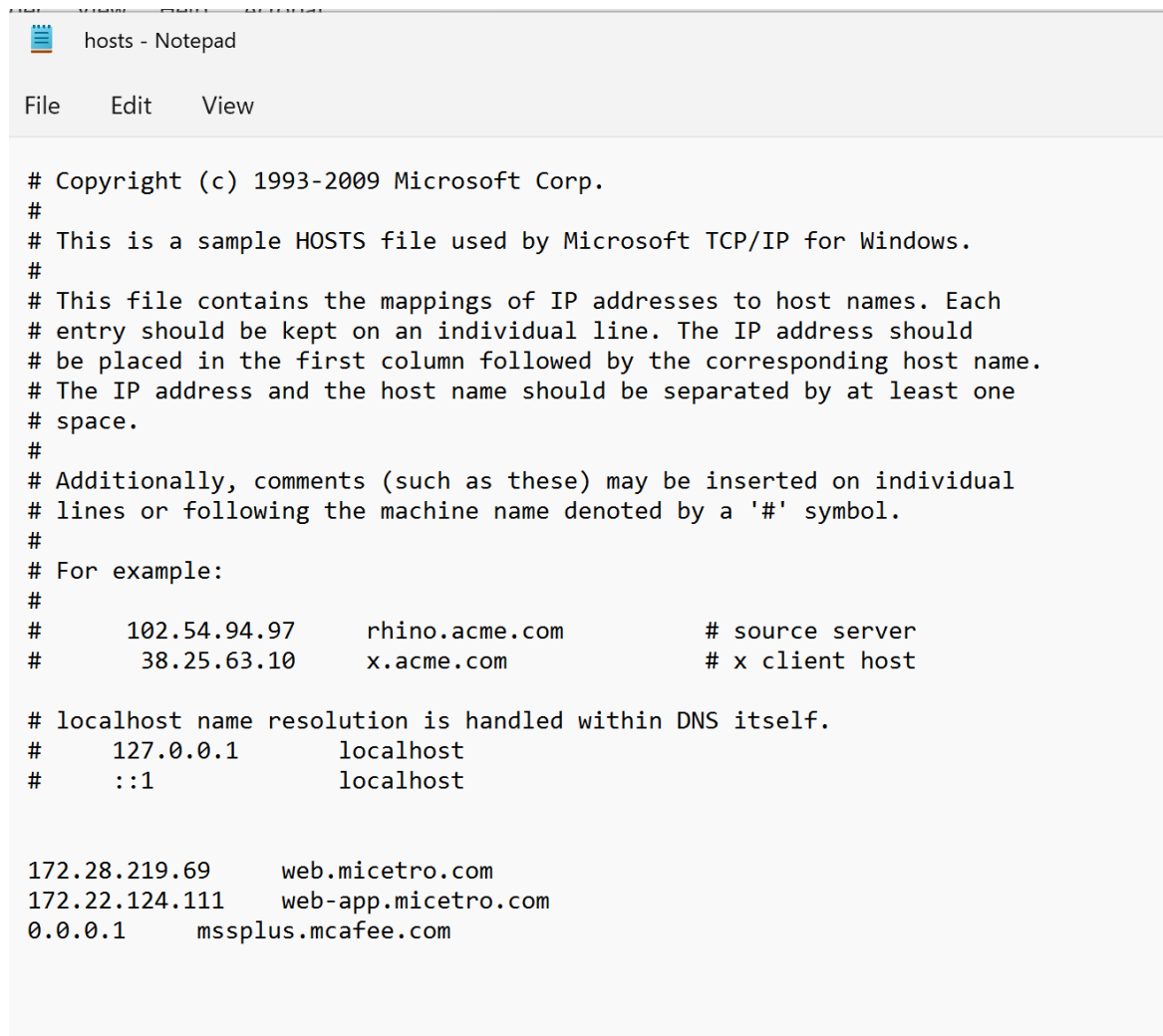
If you prefer to watch the video tutorial please go to:

<https://www.youtube.com/watch?v=Vdt5J4ewll4&t=11s>

1. Install Apache
 - a. Make sure all your repositories are up-to-date
 - i. `$ sudo apt update`
 - b. Install Apache for the web app
 - i. `$ sudo apt install apache2`
 - c. Make sure your firewall rules will allow for communication over the proper ports (HTTP (80) or HTTPS (443))
 - d. Check that Apache is running
 - i. `$ systemctl status apache2`
 - ii. You should see "active (running)" next to the Active state.
2. Download the binaries
 - a. Download Micetro Web App
 - i. `$ wget https://download.menandmice.com/current/micetro-web-application.linux.x64.tgz`
 - b. Download Micetro Central
 - i. `$ wget https://download.menandmice.com/current/micetro-central.linux.x64.tgz`
3. Install Micetro Central
 - a. `$ tar -xzvf micetro-central.linux.x64.tgz`
 - b. `$ cd Micetro-central-x.x.x.linux.x64`
 - c. `$./install`
 - d. Ensure that ports 1231 and 4603 are open on the Micetro central server
4. Install Micetro Web App
 - a. Back out to the directory where you downloaded the web app
 - b. `$ tar -xzvf micetro-web-application.linux.x64.tgz`
 - c. `$ cd Micetro-web-application-x.x.x.linux.x64`
 - d. `$./install --web-virtual-host-domain web-application.domain-name.com`
 - i. Insert your domain name for "domain-name.com"
 - e. Restart apache

- i. `$ service apache2 restart`
5. Use a browser to go to the `web-application.domain-name.com` that you specified in step 4d.

Note: You cannot use an IP address to browse to the Micetro web UI using the Linux install. You must specify an FQDN (Fully Qualified Domain Name) in order to browse to the UI. However, there is a workaround if you don't have a domain in your lab, for example. You can change your local hosts file to direct you to the correct IP using the FQDN you specified in step 4d.



```
hosts - Notepad
File Edit View

# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com           # source server
#       38.25.63.10      x.acme.com               # x client host

# localhost name resolution is handled within DNS itself.
#       127.0.0.1        localhost
#       ::1              localhost

172.28.219.69    web.micetro.com
172.22.124.111  web-app.micetro.com
0.0.0.1         mssplus.mcafee.com
```

- a. At the login page input the server FQDN or IP address
 - b. Default Username: administrator
 - c. Default Password: administrator
 - d. Click on "Log In"
2. Import Licenses
 - a. Click on Admin >> Configuration
 - b. Click on Licensing on the left-side menu
 - c. Copy the keys from the email that was sent to you for the Free Trial and paste them directly into the Import License Keys area.
 - d. Click on +Import

You now have a fully functioning installation of Micetro! However, now we'll need to import some information. Please go to the section on Importing IPAM Information in Part 2 of this Guide.

Deploying Micetro from Azure Marketplace

Requirements:

Azure account (Free or paid tier)

Size: For Micetro Lab, only a small amount of memory and disk space are needed, likely the smallest size will work for you. For larger environments please see the documentation

<https://docs.menandmice.com/en/latest/guides/implementation/architecture/#architecture-overview>

or email sales@menandmice.com for help deploying a large Proof of Concept environment.

Installation:

For this base Azure Marketplace deployment we'll use the appliance available in Marketplace. If you'd prefer to watch the video and follow along please go to: <https://www.youtube.com/watch?v=n5IA95jdFEA>

1. Log on to Azure and go to the Marketplace.
2. In the search field type Micetro and select Micetro by Men&Mice
3. Click on the Create button

Basics Tab

4. Select the subscription account you'll be using
5. Then select a Resource Group or create a new Resource Group by clicking on Create New
 - a. If you are creating a new RG then you only need to give it a name
6. Select the Region that works for your deployment
7. Click Next

Virtual Machine Tab

8. Choose the Operating System, Windows Server 2019
9. Either accept the default virtual machine size or change the size
 - a. For a Free Trial or Proof of Concept deployment, the smallest size will work (1 vCPU, 2 GB of RAM). For much larger enterprise deployments, you may need to select up to 16 vCPUs and 16GB of RAM.
10. Select a Diagnostic Storage Account or Create a new one using Blob Storage with LRS (Locally Redundant Storage)
11. Choose a Username and Password
 - a. This is the username and password for the server itself, not for Micetro

Networking Tab

12. You can accept the defaults here, but choose the Virtual Networks and Subnets that make sense for your environment.
13. Choose to Allow access for the Web UI and Management console
14. Accept the defaults or choose your own Public IP and DNS Prefix. This will all be mostly up to your Azure setup, but you'll need to be able to access this information if you'd like to get to the Web UI from a local laptop. If you want a static public IP, you'll need to specify your own here.

Database Configuration Tab

The version of Micetro from Azure Marketplace comes embedded with Azure SQL

15. Specify a Username and Password for Azure SQL.
 - a. This is a brand new username and password you're creating now, not one that you already have configured.
16. Choose the edition to use, Standard will work for a Free Trial or Proof of Concept. It may even work for production depending on the level of redundancy you'd like to achieve.

Active Directory Tab

17. If you'd like to join an Active Directory Domain you can do so here by entering the valid admin and service account information.
 - a. Click Yes to Join the Virtual Machine to AD
 - b. Click No to leave the VM out of AD

Review and Create Tab

18. Once the validation has passed click Create and wait for the Deployment to Complete

Getting to the Micetro Web UI

1. Click on the Resource Group Link and then click on the new *MenandMiceVM* which was just created.
2. In the MenandMiceVM dashboard there will be a Public IP Address in the upper right. Copy that IP address and then paste it in your browser.
 - a. At the login page input the server FQDN or IP address
 - b. Default Username: administrator
 - c. Default Password: administrator
 - d. Click on "Log In"
3. Import Licenses
 - a. Click on Admin >> Configuration
 - b. Click on Licensing on the left-side menu
 - c. Copy the keys from the email that was sent to you for the Free Trial and paste them directly into the Import License Keys area.
 - d. Click on +Import

You now have a fully functioning installation of Micetro! However, now we'll need to import some information. Please go to the section on Importing IPAM Information in Part 2 of this Guide.

Part 2: Initial DNS, DHCP, and IPAM (DDI) Connections

Importing IPAM Information

Micetro comes with a `::/0` IPv6 container and `0.0.0.0/0` IPv4 container built in. A container in Micetro is an organizational structure, not the same as an immutable container which may be used to create cloud-native applications.

There are several ways to get IP information into your Micetro solution. The most popular way to get started quickly is by importing the information from your current spreadsheet if you're doing spreadsheet IPAM. To do this, simply

export or convert that spreadsheet to a .csv file. In the case that you're running another DDI solution like Infoblox or EfficientIP, you may need to export this information to a CSV file from those solutions.

If you'd prefer to watch the video go here:

<https://www.youtube.com/watch?v=RVRDdaOfq5U>

Importing a CSV file to Micetro

Micetro allows you to use commas, semi-colons, tabs, pretty much anything common as your value separator and it will pick it up. If you're using multiple headers which aren't included by default then you'll need to add these as Custom Properties in Micetro before importing your IP information. You can read more about Custom Properties here:

https://www.menandmice.com/docs/10.3/guides/admin-manual/admin_custom_properties

1. Login to the Micetro Web UI
2. Click on IPAM
3. Click on Action
4. Click on Import
5. Choose the appropriate option in the pull-down menu
 - a. Networks – import the subnets you'd like to have visibility and control over
 - b. IP Addresses – import networks and individual IP address information you may have in your spreadsheet
6. Paste or Import the contents of the file and click Next
 - a. Note: if nothing happens when you click Next, it's likely there's an error or misconfiguration in your file. Check that all the tabs and spacing are correct.
7. Check for any errors and then click Import

Adding Networks Manually

To add a new IP range or network:

1. Click on IPAM
2. Click on Create
3. Click on Network
4. Specify the network including the CIDR notation and click Next
 - a. Ex: 192.168.2.0/24
 - b. Specify whether you want to include network and broadcast IPs in your usable range
5. If this is a part of an Active Directory Domain you can optionally select the appropriate site from the pull-down menu
6. Fill in the form for the optional and required identity information for that network and click Finish

Adding Networks Through the APIs

If you're interested in adding networks, scopes, and other DDI objects through automated workflows, there's a playlist available on YouTube. Here's one video on Building Network Templates.

https://www.youtube.com/watch?v=glcFfYhOpUw&list=PLg9woNoZKJMOVgugs_mOPFkjs5ll_VQx-a&t=2s

Connecting to a Windows DNS Server

In the case of a Free Trial or Proof of Concept deployment your DNS server could be on the same server where you've installed Micetro Central, Micetro Web, and DHCP.

To connect to a DNS server, you need to install a Micetro agent (sometimes referred to as a Controller). In a Microsoft environment you don't need to install an agent on every server if you have multiple DNS and DHCP servers. You'll only need one agent installed in your domain and use it as a proxy for your other DNS and DHCP servers.

If you'd prefer to watch the video, you can go

here: <https://www.youtube.com/watch?v=MVEcw31hrOo&list=PLg9woNoZKJM1wN3fVjUxLndMwtiIT3FkU>

You can download the Agent on to the Microsoft DNS server of your choice. The agent is available from the Free Trial downloads page and is called the Men&Mice Server Controller. The same agent is used for both DNS and DHCP connectivity.

Note: Micetro will work with other DNS services, which we'll cover in a later section.

1. Login to the Web UI
2. Go to Admin >> Server Management
3. Click on Add DNS Server
4. Fill out the form with the Server Name and Server Address (using FQDN or IP)
5. Specify the Server Type as Microsoft in this case
6. Leave Agent-Free unchecked since this is the first instance
7. Click Confirm

You should now see the server in Micetro with a State of "OK." When you click on the DNS tab you should immediately see your DNS information which was contained on that Windows DNS server. You can create new DNS Zones, Add Records, and View History directly from Micetro now.

Create a New DNS Zone

1. Click on DNS in the Web UI
2. Click Create and select the appropriate zone type
3. Specify the Zone name
4. The DNS Server
5. Check whether there's Active Directory (AD) integration

6. Specify any servers for redundancy
7. Fill in any other required custom properties
8. Click Create

Getting DNS Information from the API

Watch this video to see how you can interact with the APIs using Swagger and get DNS information. <https://www.youtube.com/watch?v=eYspuGFYZgY>

Connecting to a Windows DHCP Server

In the case of a Free Trial or Proof of Concept deployment your DNS server could be on the same server where you've installed Micetro Central, Micetro Web, and DHCP.

To connect to a DHCP server, you need to install a Micetro agent (sometimes referred to as a Controller). In a Microsoft environment you don't need to install an agent on every server if you have multiple DNS and DHCP servers. You'll only need one agent installed in your domain and use it as a proxy for your other DNS and DHCP servers.

If you'd prefer to watch the video, you can go here:

<https://www.youtube.com/watch?v=iXb30x-JrwQ&t=170s>

You can download the Agent on to the Microsoft DNS server of your choice. The agent is available from the Free Trial downloads page and is called the Men&Mice Server Controller. The same agent is used for both DNS and DHCP connectivity.

1. Login to the Web UI
2. Go to Admin >> Server Management
3. Click on Add DHCP Server
4. Fill out the form with the Server Name and Server Address (using FQDN or IP)
5. Specify the Server Type as Microsoft in this case
6. Specify whether to use DHCPv6 in the case of an IPv6 environment

7. Leave Agent-Free unchecked since this is the first instance.
 - a. If it's not the first instance, you may check the Agent-Free toggle and then specify the IP address/FQDN of where the agent is located in the Proxy address box
8. Click Confirm

Create a New DHCP Scope

1. Click on the IPAM tab
2. Click on Create and select DHCP Scope
3. Specify the network using CIDR notation
 - a. Ex: 192.168.2.0/24
4. Select the appropriate DHCP server
5. Check whether to enable the scope
6. Specify the address pool
 - a. Ex: Start – 192.168.2.5
 - b. Ex: End – 192.168.2.250
7. Click Next
8. Give it a Title and Description and click Next
9. Click Finish