





MIFOS PLATFORM 23.12.31 RELEASE - MARIADB

Docker Compose on Linux Ubuntu 22.04 Installation Instructions



Version 1.0

13-february-2024

	INSTALLATION INSTRUCTIONS	 FINTECHeando
	Linux Ubuntu	

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1. Objective

Provide clear instructions in order to Install the Docker Compose on a Linux Ubuntu 22.04 Operating System, these instructions should ideally be executed by users with basic technical skills.

2. Target Audience

Username	User description
General Public	User should have basic knowledge about Linux commands.



3. System requirements

Hardware:

- 8Gb RAM
- 2 vCPUs (Intel x86 64bits or AMD x86 64bits)
- 32Gb Storage

Software:

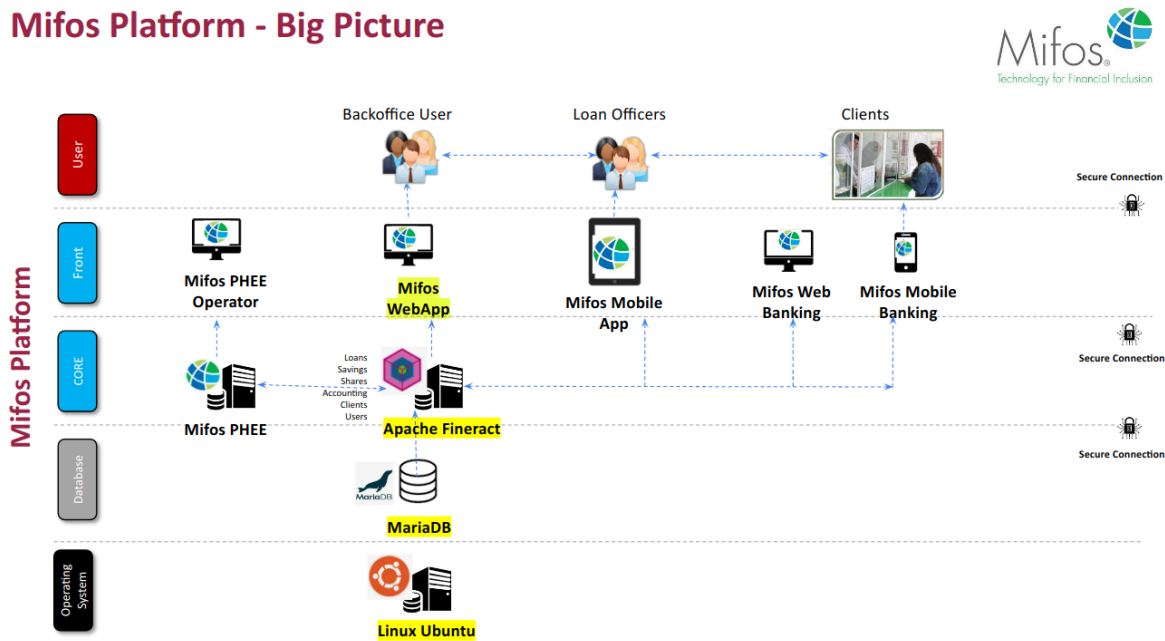
- Linux Ubuntu 22.04 LTS 64 bits Operating System
- Docker 25.03



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4. Deployment Architecture

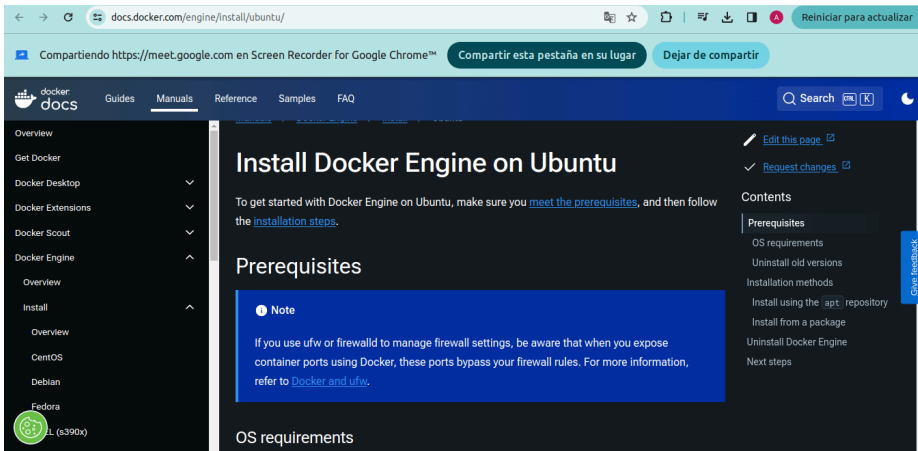
This is a graphical representation of the components that will be installed, they are highlighted in yellow, and the others put in the graphic as a reference and they can be used for extending the functionality.



Mifos Platform - Big Picture





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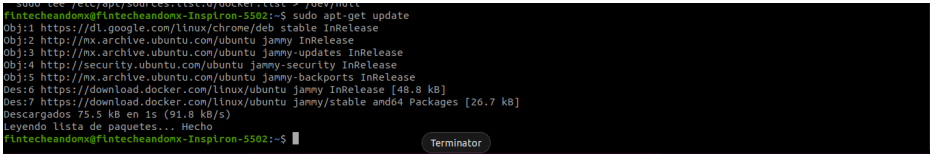
5. Instructions



a. Install Docker	
Go to Docker Download Web Page and select the version for Ubuntu.	https://docs.docker.com/engine/install/ubuntu/
	
Run the following command to uninstall all conflicting packages	<pre> fIntecheandonx@fIntecheandonx-Inspiron-5502:~\$ for pkg in docker.io docker-doc docker-compose docker-compose-v2 podman-docker containerd runc; do sudo apt-get remove \$pkg; done [sudo] contraseña para fIntecheandonx: Leyendo lista de paquetes... Hecho Creando árbol de dependencias... Hecho Leyendo la información de estado... Hecho El paquete «docker.io» no está instalado, no se eliminará 0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 96 no actualizados. Leyendo lista de paquetes... Hecho Creando árbol de dependencias... Hecho Leyendo la información de estado... Hecho El paquete «docker-doc» no está instalado, no se eliminará 0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 96 no actualizados. Leyendo lista de paquetes... Hecho Creando árbol de dependencias... Hecho Leyendo la información de estado... Hecho El paquete «docker-compose» no está instalado, no se eliminará 0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 96 no actualizados. Leyendo lista de paquetes... Hecho Creando árbol de dependencias... Hecho Leyendo la información de estado... Hecho El paquete «docker-compose-v2» no está instalado, no se eliminará 0 actualizados, 0 nuevos se instalarán, 0 para eliminar y 96 no actualizados. </pre>
We update the package list sudo apt-get update	<pre> fIntecheandonx@fIntecheandonx-Inspiron-5502:~\$ sudo apt-get update Obj:1 http://mx.archive.ubuntu.com/ubuntu jammy InRelease Obj:2 https://dl.google.com/linux/chrome/deb stable InRelease Des:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB] Des:4 http://mx.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB] Obj:5 http://mx.archive.ubuntu.com/ubuntu jammy-backports InRelease Des:6 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [402 kB] Des:7 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1154 kB] Des:8 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [590 kB] Des:9 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [839 kB] Descargados 3 215 kB en 2s (1 416 kB/s) Leyendo lista de paquetes... Hecho fIntecheandonx@fIntecheandonx-Inspiron-5502:~\$ </pre>

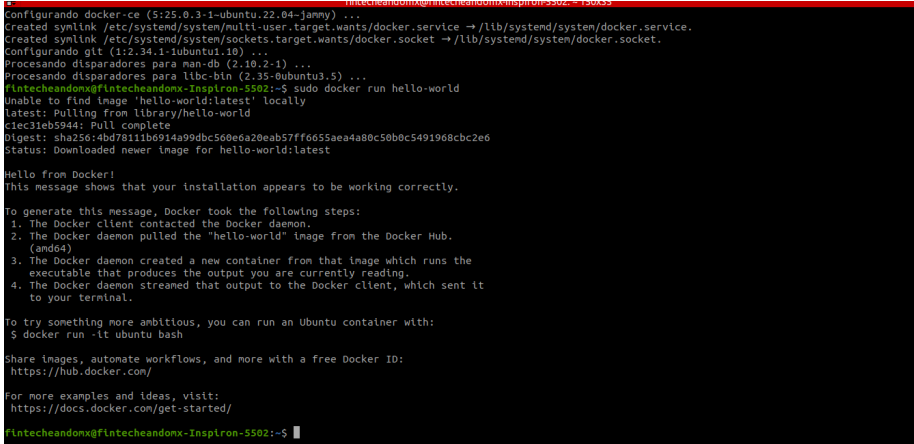


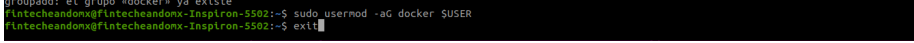
	<h2 style="text-align: center;">INSTALLATION INSTRUCTIONS</h2> <h3 style="text-align: center;">Linux Ubuntu</h3>	 <p style="text-align: center;">FINTECHeando</p>
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<p>We install the certificates</p> <p><code>sudo apt-get install ca-certificates curl</code></p>	<pre> fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo apt-get install ca-certificates curl Leyendo lista de paquetes... Hecho Creando árbol de dependencias... Hecho Leyendo la información de estado... Hecho ca-certificates ya está en su versión más reciente (20230311ubuntu0.22.04.1). El fichero ca-certificates como instalado manualmente. Se instalarán los siguientes paquetes NUEVOS: curl 0 actualizados, 1 nuevos se instalarán, 0 para eliminar y 99 no actualizados. Se necesita descargar 194 kB de archivos. Se utilizarán 454 kB de espacio de disco adicional después de esta operación. ¿Desea continuar? [5/n] S Des:1 http://mx.archive.ubuntu.com/ubuntu jammy-updates/main amd64 curl amd64 7.81.0-1ubuntu1.15 [194 kB] Descargados 194 kB en 1s (219 kB/s) Seleccionando el paquete curl previamente no seleccionado. (Leyendo la base de datos ... 217350 ficheros o directorios instalados actualmente.) Preparando para desempaquetar .../curl_7.81.0-1ubuntu1.15_amd64.deb ... Desempaquetando curl (7.81.0-1ubuntu1.15) ... Configurando curl (7.81.0-1ubuntu1.15) ... Procesando disparadores para man-db (2.10.2-1) ... </pre>
<p>We enter the keys.</p> <p><code>sudo install -m 0755 -d /etc/apt/keyrings</code></p> <p><code>sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc</code></p>	<pre> fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo apt-get update Des:1 http://mx.archive.ubuntu.com/ubuntu jammy InRelease Des:2 https://dl.google.com/linux/chrome/deb stable InRelease Des:3 http://security.ubuntu.com/ubuntu jammy-security InRelease [119 kB] Des:4 http://mx.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB] Des:5 http://mx.archive.ubuntu.com/ubuntu jammy-backports InRelease Des:6 http://security.ubuntu.com/ubuntu jammy-security/main i386 Packages [402 kB] Des:7 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [115 kB] Des:8 http://security.ubuntu.com/ubuntu jammy-security/universe i386 Packages [590 kB] Des:9 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [839 kB] Descargados 3 215 kB en 2s (1 416 kB/s) Leyendo lista de paquetes... Hecho fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo apt-get install ca-certificates curl Leyendo lista de paquetes... Hecho Creando árbol de dependencias... Hecho Leyendo la información de estado... Hecho ca-certificates ya está en su versión más reciente (20230311ubuntu0.22.04.1). El fichero ca-certificates como instalado manualmente. Se instalarán los siguientes paquetes NUEVOS: curl 0 actualizados, 1 nuevos se instalarán, 0 para eliminar y 99 no actualizados. Se necesita descargar 194 kB de archivos. Se utilizarán 454 kB de espacio de disco adicional después de esta operación. ¿Desea continuar? [5/n] S Des:1 http://mx.archive.ubuntu.com/ubuntu jammy-updates/main amd64 curl amd64 7.81.0-1ubuntu1.15 [194 kB] Descargados 194 kB en 1s (219 kB/s) Seleccionando el paquete curl previamente no seleccionado. (Leyendo la base de datos ... 217350 ficheros o directorios instalados actualmente.) Preparando para desempaquetar .../curl_7.81.0-1ubuntu1.15_amd64.deb ... Desempaquetando curl (7.81.0-1ubuntu1.15) ... Configurando curl (7.81.0-1ubuntu1.15) ... Procesando disparadores para man-db (2.10.2-1) ... fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo install -m 0755 -d /etc/apt/keyrings fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc fintechandmx@fintechandmx-Inspiron-5502:~\$ </pre>
<p>Entering the command grants read, write, and execute permissions to the owner, and read and execute permissions to the group and others.</p> <p><code>sudo chmod a+r /etc/apt/keyrings/docker.asc</code></p>	<pre> fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo chmod a+r /etc/apt/keyrings/docker.asc fintechandmx@fintechandmx-Inspiron-5502:~\$ echo \ "deb [arch=\$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \ \$(cat /etc/os-release grep ^VERSION_CODENAME cut -d= -f2) stable" \ sudo tee /etc/apt/sources.list.d/docker.list > /dev/null fintechandmx@fintechandmx-Inspiron-5502:~\$ </pre>
<p>Add the repository to Apt sources</p> <p><code>echo \</code> <code>"deb</code> <code>[arch=\$(dpkg</code> <code>--print-architecture)</code> <code>signed-by=/etc/apt/</code> <code>keyrings/docker.as</code> <code>c]</code></p>	<pre> fintechandmx@fintechandmx-Inspiron-5502:~\$ sudo chmod a+r /etc/apt/keyrings/docker.asc fintechandmx@fintechandmx-Inspiron-5502:~\$ echo \ "deb [arch=\$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \ \$(cat /etc/os-release grep ^VERSION_CODENAME cut -d= -f2) stable" \ sudo tee /etc/apt/sources.list.d/docker.list > /dev/null fintechandmx@fintechandmx-Inspiron-5502:~\$ </pre>

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<pre>https://download.docker.com/linux/ubuntu \ \$. /etc/os-release && echo "\$VERSION_CODENAME") stable" \ sudo tee /etc/apt/sources.list.d/docker.list > /dev/null</pre>	
<p>Update the package list again</p>	
<p>Install the Docker packages.</p> <p>To install the latest version, run:</p> <pre>sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin</pre>	

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<p>Verify that the Docker Engine installation is successful by running the hello-world image.</p> <p>sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin</p>	
<p>Linux post-installation steps for Docker Engine</p>	<p>https://docs.docker.com/engine/install/linux-postinstall/</p>
	
<p>Create the docker group.</p>	
<p>Add your user to the docker group.</p>	

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Validate that docker is installed.

docker info

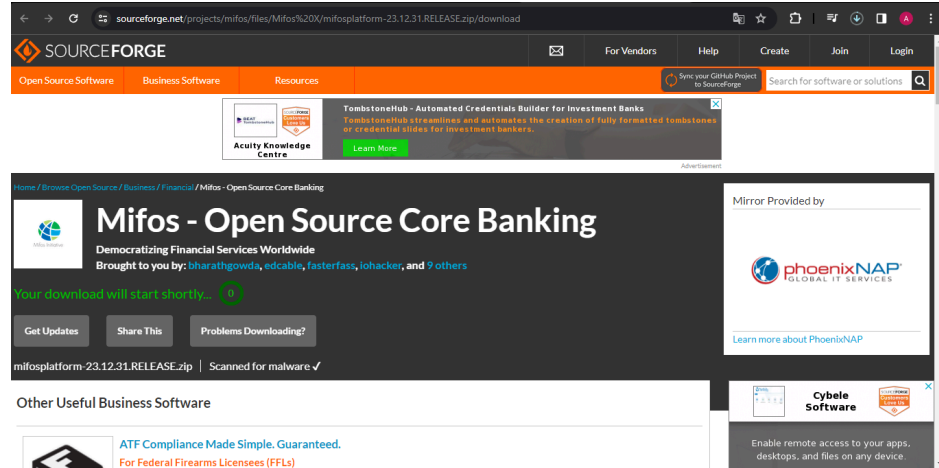
Note: if the docker information is not displayed, log out and validate again

```
fintechandomx@fintechandomx-Inspiron-5502: ~$ docker info
Client: Docker Engine - Community
Version: 25.0.3
Context: default
Debug Mode: false
Plugins:
  buildx: Docker Buildx (Docker Inc.)
    Version: v0.12.1
    Path: /usr/libexec/docker/cli-plugins/docker-buildx
  compose: Docker Compose (Docker Inc.)
    Version: v2.24.5
    Path: /usr/libexec/docker/cli-plugins/docker-compose
Server:
  Containers: 1
    Running: 0
    Paused: 0
    Stopped: 1
  Images: 1
  Server Version: 25.0.3
  Storage Driver: overlay2
    Backing Filesystem: extfs
    Supports d_type: true
    Using metacopy: false
    Native Overlay Diff: true
    userxattr: false
  Logging Driver: json-file
  Cgroup Driver: systemd
  Cgroup Version: 2
  Plugins:
    Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local splunk syslog
  Swarm: inactive
  Runtimes: io.containerd.runc.v2 runc
  Default Runtime: runc
  Init Binary: docker-init
```

b. Download zip file from SourceForge

<https://sourceforge.net/projects/mifos/files/Mifos%20X/mifosplatform-23.12.31.RELEASE.zip/download>

When you enter the download link, the file will automatically start downloading





We locate the downloaded zip file



Enter the path where the Zip file is located

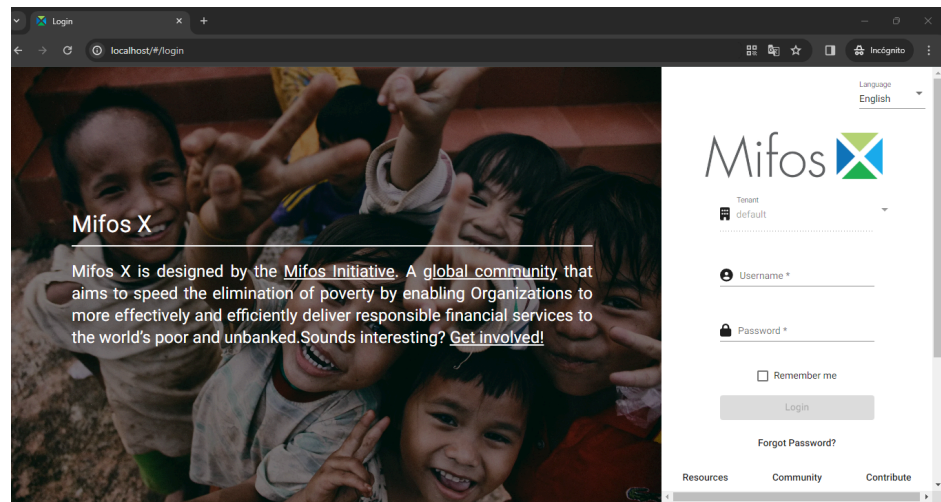
```
fintechandomx@fintechandomx-Inspiron-5502: ~$ cd ./Descargas
fintechandomx@fintechandomx-Inspiron-5502: ~$ ls
BACKUP_RESTORE_FINABIEN.sql  'google-chrome-stable_current_and64 (1).deb'
'DAAP_CPP_Diccionario de Datos (comentado por FINABIEN).pdf'  google-chrome-stable_current_and64.deb
'DAAP_PR_Anejo de Evidencias Pruebas Unitarias.docx.pdf'  mifosplatform-23.12.31.RELEASE.zip
'DAAP_PR_Registro de Pruebas Unitarias.docx.pdf'  mifos.zip
'Diagrama Entidad Relación (1).pdf'  'Propuesta - Alejandro Escutia - 20220215.pdf'
'Diagrama Entidad Relación.pdf'  tablas.txt
```


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Validate that containers are lifted correctly:

```
fintecheamonx@fintecheamonx-Inspiron-5502: ~/Descargas/mifosplatform-23.12.31.RELEASE/docker/mifosx-mariadb
fintecheamonx@fintecheamonx-Inspiron-5502: ~/Descargas/mifosplatform-23.12.31.RELEASE/docker/mifosx-mariadb
HTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:56 +0000] "GET /assets/env.js HTTP/1.1" 200 1088 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:56 +0000] "GET /runtime.66314b0c4c69af3.js HTTP/1.1" 200 3560 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:56 +0000] "GET /polyfills.6528633b20decdd4.js HTTP/1.1" 200 47610 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:56 +0000] "GET /main.eda4aacd869bd981.js HTTP/1.1" 200 7660858 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:56 +0000] "GET /styles.0db15d0d3e3d103.css HTTP/1.1" 200 128203 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:57 +0000] "GET /assets/translations/en-US.json HTTP/1.1" 200 206829 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:57 +0000] "GET /cover_image_resized.d976176ba8cc9265.webp HTTP/1.1" 200 433414 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:57 +0000] "GET /assets/images/mifos-Logo-flat.png HTTP/1.1" 200 7489 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
fineract-server-1 | 2024-02-13 17:22:57.356 - INFO 1 --- [nto-8080-exec-1] o.a.c.c.C.[.][fineract-provider] : Initializing Spring DispatcherServlet 'dispatcherServlet'
fineract-server-1 | 2024-02-13 17:22:57.356 - INFO 1 --- [nto-8080-exec-1] o.s.web.servlet.DispatcherServlet : Completed initialization in 9 ms
web-app-1 | 172.19.0.1 - - [13/Feb/2024:17:22:57 +0000] "GET /favicon.ico HTTP/1.1" 200 318 "http://localhost/" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/119.0.0.0 Safari/537.36" -
fineract-server-1 | 2024-02-13 17:23:00.044 - INFO 1 --- [duler1_Worker-3] o.s.b.c.l.support.SimpleJobLauncher : Job: [SimpleJob: [name=SEND_ASYNCHRONOUS_EVENTS]] launched with the following parameters: [{"run.id":{"value=3, type=class java.lang.Long, identifying=true}}]
fineract-server-1 | 2024-02-13 17:23:00.062 - INFO 1 --- [duler1_Worker-3] o.s.batch.core.job.SimpleStepHandler : Executing step: [SEND_ASYNCHRONOUS_EVENTS_STEP]
fineract-server-1 | 2024-02-13 17:23:00.080 - INFO 1 --- [duler1_Worker-3] o.s.batch.core.step.AbstractStep : Step: [SEND_ASYNCHRONOUS_EVENT S_STEP] executed in 17ms
fineract-server-1 | 2024-02-13 17:23:00.090 - INFO 1 --- [duler1_Worker-3] o.s.b.c.l.support.SimpleJobLauncher : Job: [SimpleJob: [name=SEND_ASYNCHRONOUS_EVENTS]] completed with the following parameters: [{"run.id":{"value=3, type=class java.lang.Long, identifying=true}}] and the following status: [COMPLETED] in 42ms
```

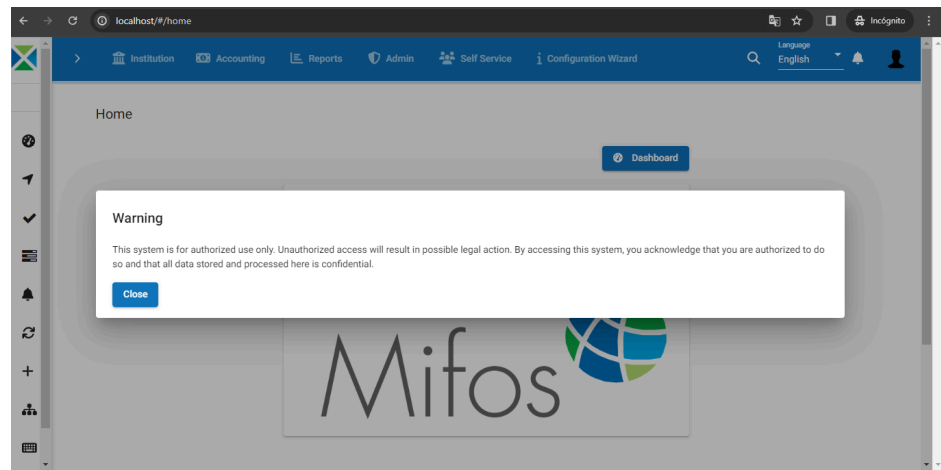
Validate that Mifos X Release 23.12 is up and running entering the following url <http://localhost> in a Web Browser





Sign in with the default credentials:

User: mifos

Password: password



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6. Document versions

Version	Date	Subject	Author	Reviewer
1.0	13th February 2024	Document creation	Alejandro Escutia	