

MIFOS PLATFORM 23.12.31 RELEASE

Windows 11 Home x86_64 Installation Instructions

Version 1.0

11-January-2024

INSTALLATION INSTRUCTIONS

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1. Objective

Provide clear instructions in order to Install the Mifos Platform 23.12.31 Release on a Windows 11 Home x86_64 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 Software Installation on Windows.

3. System requirements

Hardware:

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

Software:

- Windows 11 Home x86_64 Operating System
- Apache Tomcat 10.1
- Java JDK Zulu version 17 LTS
- MariaDB 11.3

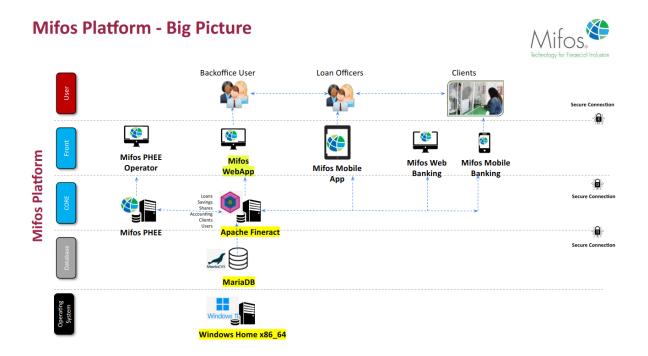
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4. Deployment Architecture

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.

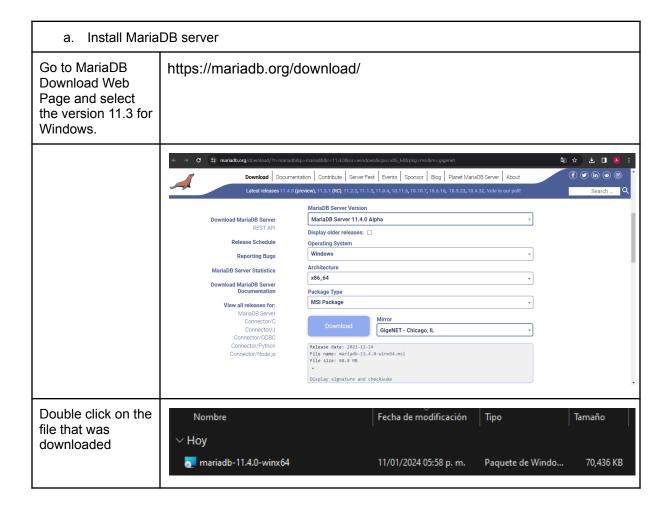




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5. Instructions





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The Installation MariaDB 11.4 (x64) Setup Wizard will help us to have a graphical UI for the process. Welcome to the MariaDB 11.4 (x64) Click on the Next Setup Wizard button. The Setup Wizard will install MariaDB 11.4 (x64) on your computer. Click Next to continue or Cancel to exit the Setup Wizard. Back Next Cancel Read the license MariaDB 11.4 (x64) Setup and check the box "I accept the terms **End-User License Agreement** MariaDB in the License Please read the following license agreement carefully Agreement" and click on the "Next" button. GNU GENERAL PUBLIC LICENSE Version 2, June 1991 Copyright (C) 1989, 1991 Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1335 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed. Preamble The licenses for most software are designed to take away your freedom. ✓ I accept the terms in the License Agreement Print Back Next Cancel

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Select the software MariaDB 11.4 (x64) Setup that will be installed as it is **Custom Setup** MariaDB shown in the Select the way you want features to be installed. Server 5 Screenshot. And click on the "Next" button. Click the icons in the tree below to change the way features will be installed. ■ ▼ MariaDB Server Install server ■ ▼ Database instance ☐ ▼ Client Programs ■ ▼ Backup utilities Development components This feature requires 162MB on Third party tools your hard drive. It has 3 of 3 subfeatures selected. The subfeatures require 88MB on your hard drive. Location: C:\Program Files\MariaDB 11.4\ Browse... Reset Disk Usage Back Next Cancel Set the root User settings password, in this case we are Default instance properties MariaDB setting it as: MariaDB 11.4 (x64) database configuration skdcnwauicn2ucna ecasdsajdnizucaw encascdca Modify password for database user 'root' New root password: ••••• Enter new root password Make sure to set the same Retype the password Confirm: ••••• password in the Enable access from remote machines for environment root' user variables in the following section. Use UTF8 as default server's character set Data directory C:\Program Files\MariaDB 11.4\data\ Browse... <u>B</u>ack <u>N</u>ext Cancel

INSTALLATION INSTRUCTIONS



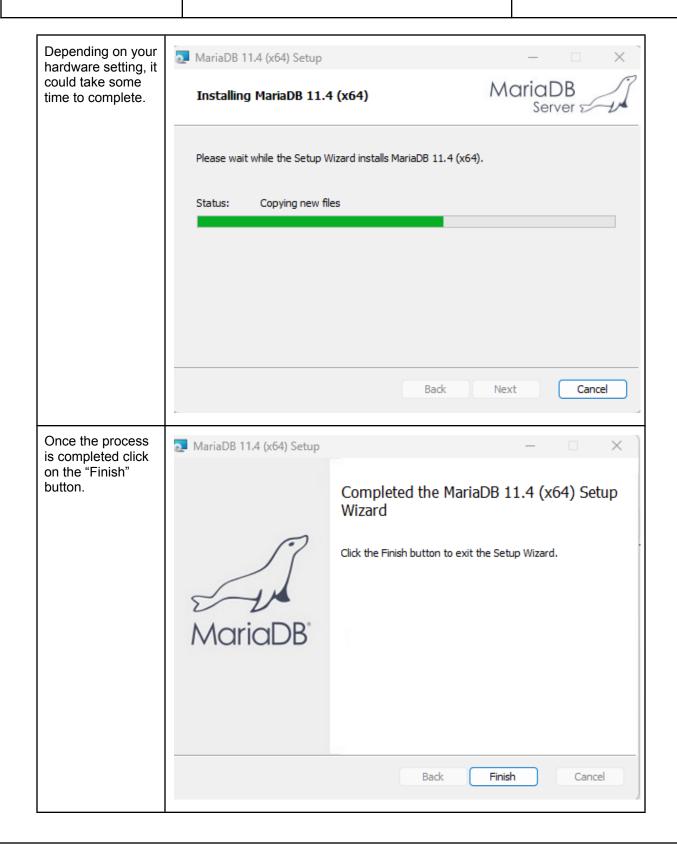


Select the 3306 Database settings port. Please make sure that it is free Default instance properties MariaDB uninstalling old MariaDB 11.4 (x64) database configuration Server 2 MySQL or MariaDB installations, if you do this make sure Install as service to backup your Service Name: MariaDB data. Enable networking 3306 TCP port: **Innodb engine settings** Buffer pool size: 2013 MB Page size: KΒ 16 ~ Back Next Cancel Click on the MariaDB 11.4 (x64) Setup "Install" button. MariaDB Ready to install MariaDB 11.4 (x64) Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard. Back <table-cell-rows> Install Cancel



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Using the HeidiSQL 12.3.0.6589 - Administrador de sesiones Windows 🜟 Iniciar 🥊 SSL Q Filter ... application launcher, execute Nombre de la sesión ^ Host New here? In order to connect to a server, you have to create a so called "session" at first. Just click the "New" button on the bottom left to create your first session. Give it a friendly name (e.g. "Local DB server") so you'll recall it the next time you start HeidiSQL. the "HeidiSQL" application. It will show an initial screen like this one. Importar archivo de ajustes... ⊕Nueva ▼ ☐ Guardar ⊗ Borrar I₩ Cancelar Más Create a 10 HeidiSQL 12.3.0.6589 - Administrador de sesiones: Unnamed × connection to the Filter ... 🔑 Ajustes 🔑 Avanzado 💡 SSL 📊 Estadísticas localhost: IP: 127.0.0.1 Nombre de la sesión ^ Host Tipo de red: MariaDB or MySQL (TCP/IP) Port: 3306 127.0... Unnamed * Library: libmariadb.dll User root Password: Nombre del host / IP: 127.0.0.1 skdcnwauicn2ucna Pedir credenciales ecasdsajdnizucaw Usar autenticación de Windows encascdca Usuario: Contraseña: And click on the Puerto: 3306 "Open" button Protocolo cliente/servidor comprimido Bases de datos: Separadas por punto y coma (;) Comentario: Abrir Cancelar Más

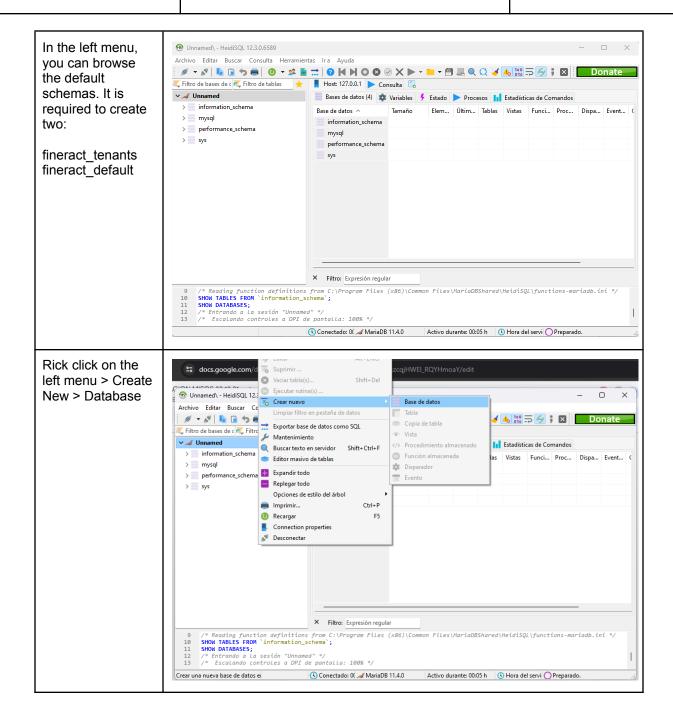
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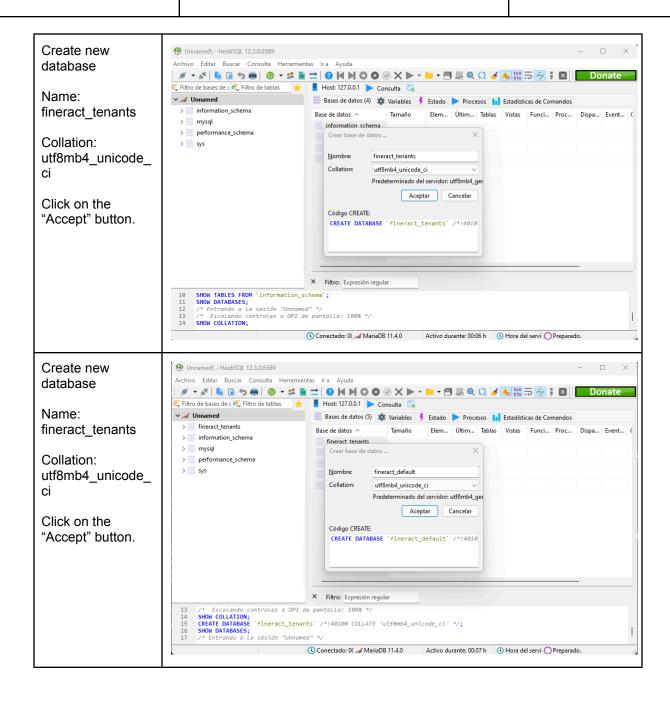












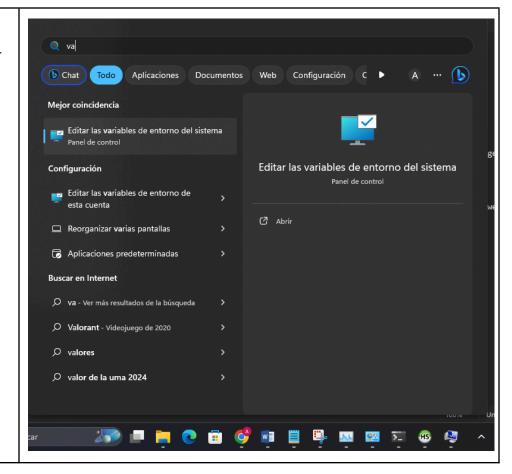
b. Set the Apache Fineract's environment variables

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In the Windows Application Launcher look for the System Variables Edition functionality



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On the bottom of Propiedades del sistema the window, look for "Env Variables" Nombre del equipo Hardware Opciones avanzadas Protección del sistema Remoto Para realizar la mayoría de estos cambios, inicie sesión como administrador. Rendimiento Efectos visuales, programación del procesador, uso de memoria y memoria virtual Configuración... Perfiles de usuario Configuración del escritorio correspondiente al inicio de sesión Configuración... Inicio y recuperación Inicio del sistema, errores del sistema e información de depuración Configuración... Variables de entomo... Aceptar Cancelar Aplicar

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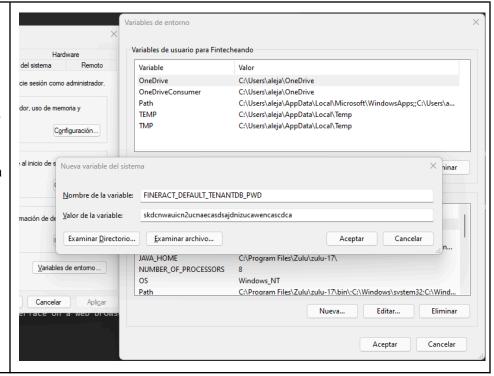


In the "Env Variables", add a new entry:

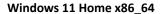
Name: FINERACT_DEFA ULT_TENANTDB_ PWD

Value: skdcnwauicn2ucna ecasdsajdnizucaw encascdca

Click on the "Accept" button.



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In the "Env Variables de entorno Variables", add a new entry: Variables de usuario para Fintecheando Name: Variable FINERACT_HIKA OneDrive C:\Users\aleja\OneDrive RI_PASSWORD OneDriveConsumer C:\Users\aleja\OneDrive $C:\Users\aleja\AppData\Local\Microsoft\Windows\Apps;;C:\Users\a...$ TEMP $C:\Users\aleja\AppData\Local\Temp$ Value: TMP C:\Users\aleja\AppData\Local\Temp skdcnwauicn2ucna ecasdsajdnizucaw encascdca Vueva variable del sistema Click on the "Accept" button. Nombre de la variable: FINERACT_HIKARI_PASSWORD Valor de la variable: skdcnwauicn2ucnaecasdsajdnizucawencascdca Examinar <u>Directorio</u>... Examinar archivo... Cancelar Aceptar IGCC2AC_DR AQAAANCIVING8BFGEKJHOAWE/CI+SBAAAA0PE0AKV/QEIYIXCAHN... JAVA_HOME C:\Program Files\Zulu\zulu-17\ NUMBER_OF_PROCESSORS OS Windows NT Editar... Eliminar Nueva... Aceptar Cancelar

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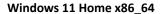


Aceptar

Cancelar

In the "Env Variables de entorno Variables", add a new entry: Variables de usuario para Fintecheando Name: Variable FINERACT_SERV OneDrive C:\Users\aleja\OneDrive ER_SSL_ENABLE One Drive ConsumerC:\Users\aleja\OneDrive Path TEMP $C:\Users\aleja\AppData\Local\Temp$ TMP $C:\Users\aleja\AppData\Local\Temp$ Value: false Click on the "Accept" button. Nueva variable del sistema Nombre de la variable: FINERACT_SERVER_SSL_ENABLED false Valor de la variable: Examinar \underline{D} irectorio... Cancelar Examinar archivo... Aceptar IGCCSVC_DB AQAAANCMnd8BFdERjHoAwE/CI+sBAAAA6pE6ARV/QEiyTXcAHn... JAVA_HOME C:\Program Files\Zulu\zulu-17\ NUMBER OF PROCESSORS Editar... Eliminar Nueva...

INSTALLATION INSTRUCTIONS



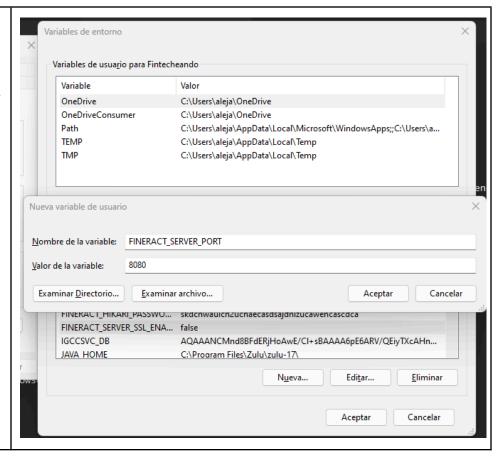


In the "Env Variables", add a new entry:

Name: FINERACT_SERV ER_PORT

Value: 8080

Click on the "Accept" button.

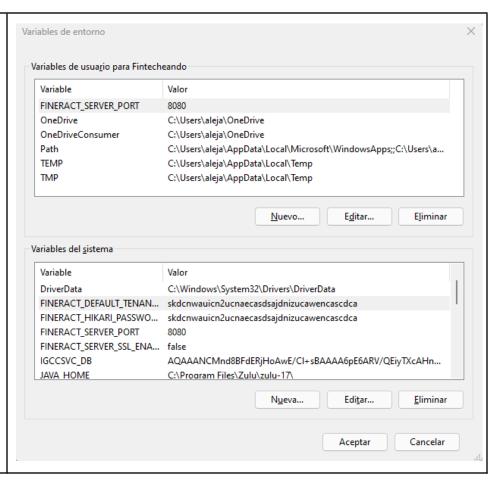








Export the environment variables required Apache Fineract in order to the root use password that was set in the MariaDB Installation, also we are disabling the SSL because this is demonstration. We encourage you to use the secure connection enabling HTTPS.



c. Install Java Zulu JDK 17

Go to Java Zulu JDK Download Web Page

https://www.azul.com/downloads/#downloads-table-zulu



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Select the Java 17 LTS Windows version, there are azul Products ▼ Solutions ▼ Customers ▼ Learn ▼ Company ▼ two options, we are going to download the Java 17 (LTS) Windows Windows Installer (msi file extension) Java 17 (LTS) x86 32-bit ARM 64-bit 17.0.9+8 17.0.9+8 Windows JDK Double click on the Nombre Fecha de modificación Tipo Tamaño file that was downloaded ∨ Hoy zulu17.46.19-ca-jdk17.0.9-win_x64 The Installation Azul Zulu JDK 17.46.19 (17.0.9), 64-bit Setup × Wizard will help us to have a graphical azul UI for the process. Welcome to the Azul Zulu JDK 17.46.19 Click on the Next (17.0.9), 64-bit Setup Wizard button. The Setup Wizard will install Azul Zulu JDK 17.46.19 (17.0.9), 64-bit on your computer. Click Next to continue or Cancel to exit the Setup Wizard. Back Next Cancel



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Select the options Azul Zulu JDK 17.46.19 (17.0.9), 64-bit Setup as it is shown in the Window Custom Setup azul (including the Select the way you want features to be installed. JAVA HOME option) and click on the Next button. Click the icons in the tree below to change the way features will be installed. ■ ✓ Azul Zulu JDK 17.46.19 x64 Set JAVA_HOME environment Add to PATH variable Set JAVA_HOME variable JavaSoft (Oracle) registr This feature requires 0KB on your hard drive. Browse... Reset Disk <u>U</u>sage Back Next Cancel Click on the Next Azul Zulu JDK 17.46.19 (17.0.9), 64-bit Setup button in order to start the Ready to install Azul Zulu JDK 17.46.19 (17.0.9), 64-bit azul Installation process. Click Install to begin the installation. Click Back to review or change any of your installation settings. Click Cancel to exit the wizard. Back Install Cancel

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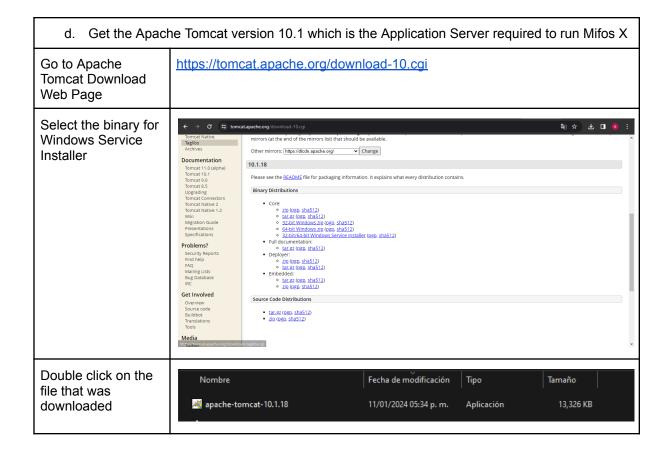


Once completed Azul Zulu JDK 17.46.19 (17.0.9), 64-bit Setup the process you can click the Finish azul button. It could Completed the Azul Zulu JDK 17.46.19 take a few (17.0.9), 64-bit Setup Wizard seconds or some minutes. depending on your Click the Finish button to exit the Setup Wizard. PC hardware settings. Back Finish Cancel in order to verify Ejecutar that the JDK Zulu has been installed. open a cmd Escriba el nombre del programa, carpeta, documento o terminal. recurso de Internet que desea abrir con Windows. cmd Abrir: Aceptar Cancelar Examinar... On the terminal execute the Microsoft Windows [Versión 10.0.22631.2861] (c) Microsoft Corporation. Todos los derechos reservados. following C:\Users\aleja>java -version openjdk version "17.0.9" 2023-10-17 LTS OpenJDK Runtime Environment Zulu17.46+19-CA (build 17.0.9+8-LTS) OpenJDK 64-Bit Server VM Zulu17.46+19-CA (build 17.0.9+8-LTS, mixed mode, sharing) command: java -version :\Users\aleja> It should have a similar output as the screenshot.

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The Installation Apache Tomcat Setup Wizard will help us to have a graphical Welcome to Apache Tomcat Setup UI for the process. omcat.apache.org Click on the Next button. Setup will guide you through the installation of Apache Tomcat. It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer. Click Next to continue. Apache Tomcat 10 Next > Cancel Read the license Apache Tomcat Setup and click on the "I License Agreement agree" button. Please review the license terms before installing Apache Tomcat. Press Page Down to see the rest of the agreement. Apache License Version 2.0, January 2004 http://www.apache.org/licenses/ TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION 1. Definitions. "License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document. If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Apache Tomcat. Nullsoft Install System v3.09 -Cancel < Back I Agree

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Check the options Apache Tomcat Setup as per the Screenshot and Choose Components click on the "Next" Choose which features of Apache Tomcat you want to install. button. Check the components you want to install and uncheck the components you don't want to install. Click Next to continue. Select the type of install: Custom Description Or, select the optional ⊕ · ✓ Tomcat Position your mouse components you wish to ✓ Start Menu Items over a component to install: ✓ Documentation see its description. Manager ✓ Host Manager Examples Space required: 14.6 MB Nullsoft Install System v3.09 -< Back Next > Cancel Check the options Apache Tomcat Setup: Configuration Options as per the Configuration Screenshot and click on the "Next" Tomcat basic configuration. button. For the example we have created a simple Server Shutdown Port -1 Tomcat HTTP/1.1 Connector Port 8080 Administrator and its password, this is optional. Windows Service Name Tomcat10 Create shortcuts for all users Tomcat Administrator Login admin User Name (optional) Password •••• Roles manager-gui,admin-gui Nullsoft Install System v3.09 -< Back Next > Cancel

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Verify the path of Apache Tomcat Setup: Java Virtual Machine path selection the Zulu Java 17 Installation and click Java Virtual Machine on the "Next" button. Java Virtual Machine path selection. Please select the path of a Java 11 or later JRE installed on your system. C:\Program Files\Zulu\zulu-17\ ... Nullsoft Install System v3.09 -< Back Next > Cancel Verify the location of Apache Tomcat Setup the Apache Tomcat Installation and click Choose Install Location on the "Next" button. Choose the folder in which to install Apache Tomcat. This location is important because Setup will install Apache Tomcat in the following folder. To install in a different folder, click we will use it later Browse and select another folder. Click Install to start the installation. for copying the Mifos WebApp files and the Apache Fineract war file. Destination Folder Browse... C:\Program Files\Apache Software Foundation\Tomcat 10.1 Space required: 14.6 MB Space available: 30.4 GB Nullsoft Install System v3.09 -< Back Install Cancel



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Complete the Apache Tomcat Setup Installation, checking the "Run **Completing Apache Tomcat Setup** Apache Tomcat" mcat, apache, org option and click the "Finish" button. Apache Tomcat has been installed on your computer. Click Finish to close Setup. Run Apache Tomcat Show Readme Apache Tomcat 10 < Back Finish Cancel Apache Tomcat Apache Commons Daemon Service Manager Service will start. It could take a few Service Manager is attempting to start the following service ... seconds or some Apache Tomcat 10.1 Tomcat 10 minutes, depending on your PC hardware settings. Cancel Close

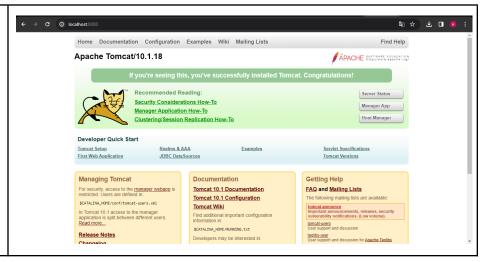
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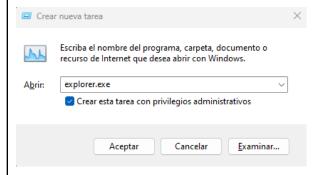
Once completed you can check that Tomcat is running opening a Web browser and go to http://localhost:8080

A web page will be displayed

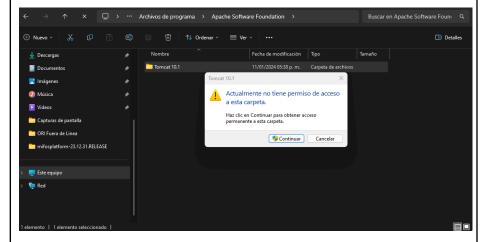


e. Delete the Apache Tomcat ROOT folder content and copy on it the content of the Webapp Mifos Release 23.12

Execute the File Explorer with Aministrator's privileges then navigate to the Apache Tomcat Location that was defined in the previous step.



You will get a warning message about the access grants to the Apache Tomcat Folder. Click on the "Continue" button.

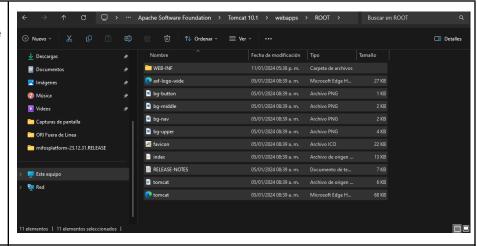


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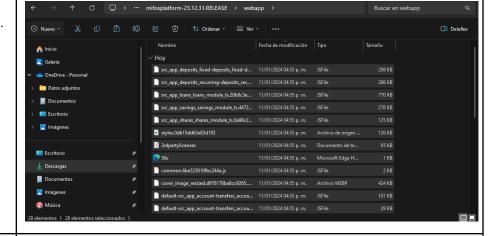
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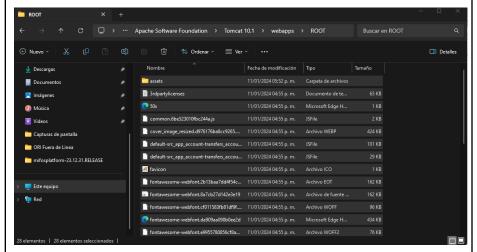
Select all the files and folders inside the Apache Tomcat "ROOT" folder and delete them.



Go to the mifosplatform-23.12. 31.RELEASE folder that was unzipped and select the content of the "webapp" folder. Copy the files and folders on it.



Go back to the Apache Tomcat "ROOT" folder and paste the files that were selected in the previous step.



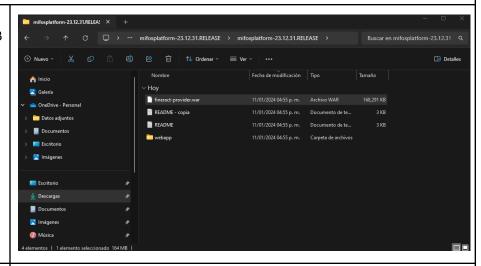


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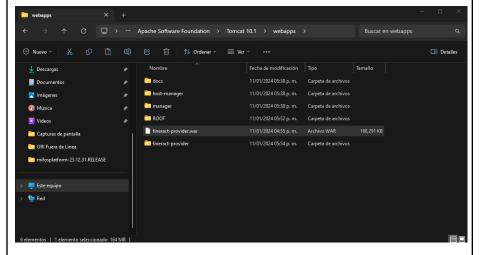


f. Copy the Apache Fineract binary

Go to the mifosplatform-23.12.3 1.RELEASE folder that was unzipped and select the fineract-provider.war file and copy it.



Paste fineract-provider.war in the Apache Tomcat "webapps" folder. It will be deployed and at the end it will create a "fineract-provider" folder. Please wait some minutes, the Apache Fineract deployment process and its first time running will take some minutes to complete.



g. Verify the Mifos Platform 23.12.31 Release



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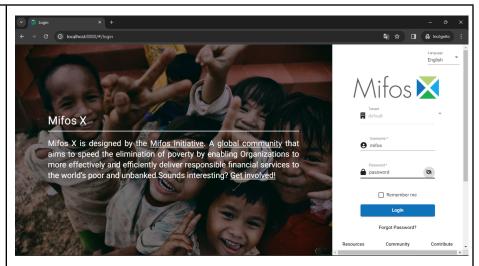
Open the Mifos X 23.12 User Interface on a web browser

http://localhost:8080

The credentials for login:

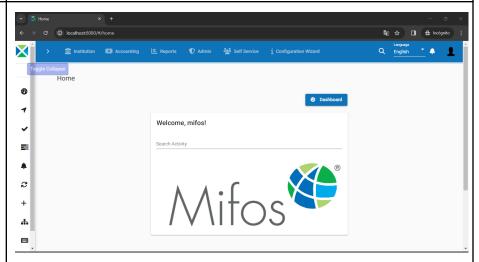
user: mifos

password: password



Once you can enter into the Mifos WebApp the initial page will look like this one.

Enjoy and give us feedback.



6. Document versions

Version	Date	Subject	Author	Reviewer
1.0	11th January 2024	Document creation	Victor Romero	Juan Karlos Hernandez