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01. Download and Install SQL Server for Labworldsoft Server

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1. Downloading and Installing SQL Server database for Labworldsoft Server

Labworldsoft Server uses database for storing various data such as User information, User Logs, Configurations and Measurements. At present, Labworldsoft Server supports Microsoft SQL Server database only. Future versions will support more databases such as Oracle, Db2 and MySQL.

Major SQL Server editions are Enterprise, Developer and Express editions. Customers may choose any SQL Server edition as per their requirement. Enterprise edition provides premium offerings with fast performance, but it is not free of cost. On the other hand, Express edition is the entry-level, free database, suitable for small data management uses and free of cost. This section describes how to download and install Microsoft SQL Server 2019 Express Edition in a Windows 10 64-bit PC as an example.

1.1 Downloading SQL Server 2019 Express Edition

This section describes how to download SQL Server 2019.

- a. Go to SQL Server 2019 download page
- b. Select **Express** edition and click **Download now**.

Or, download a free specialised edition



Developer

SQL Server 2019 Developer is a full-featured free edition, licensed for use as a development and test database in a non-production environment.

[Download now ↓](#)




Express

SQL Server 2019 Express is a free edition of SQL Server, ideal for development and production for desktop, web, and small server applications.

[Download now ↓](#)

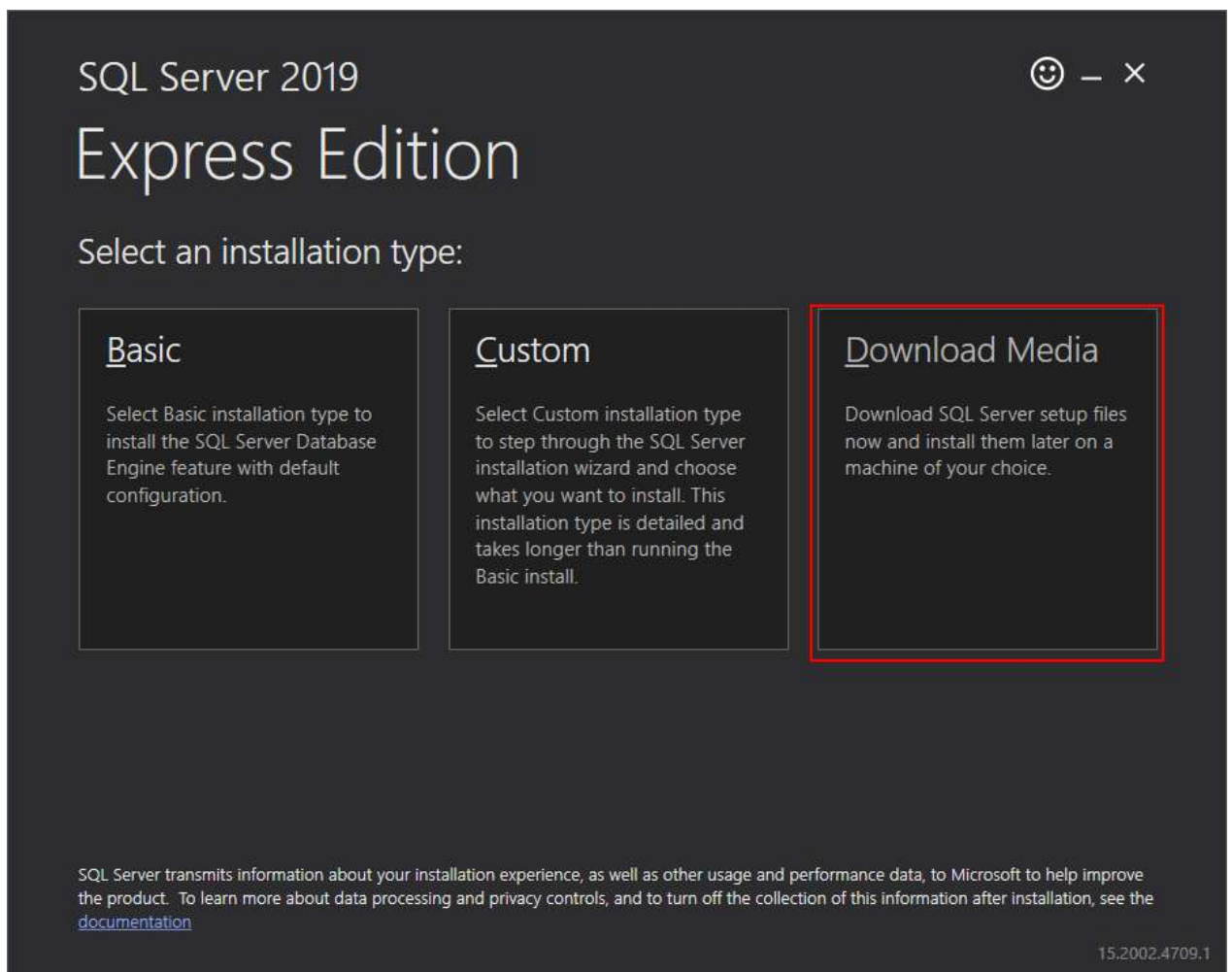
- c. Web installer will be downloaded.

 SQL2019-SSEI-Expr	17-02-2021 14:51	Application	6,227 KB
---	------------------	-------------	----------



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d. Run web installer. A window will be opened to Select an installation type. Select **Download Media** option.

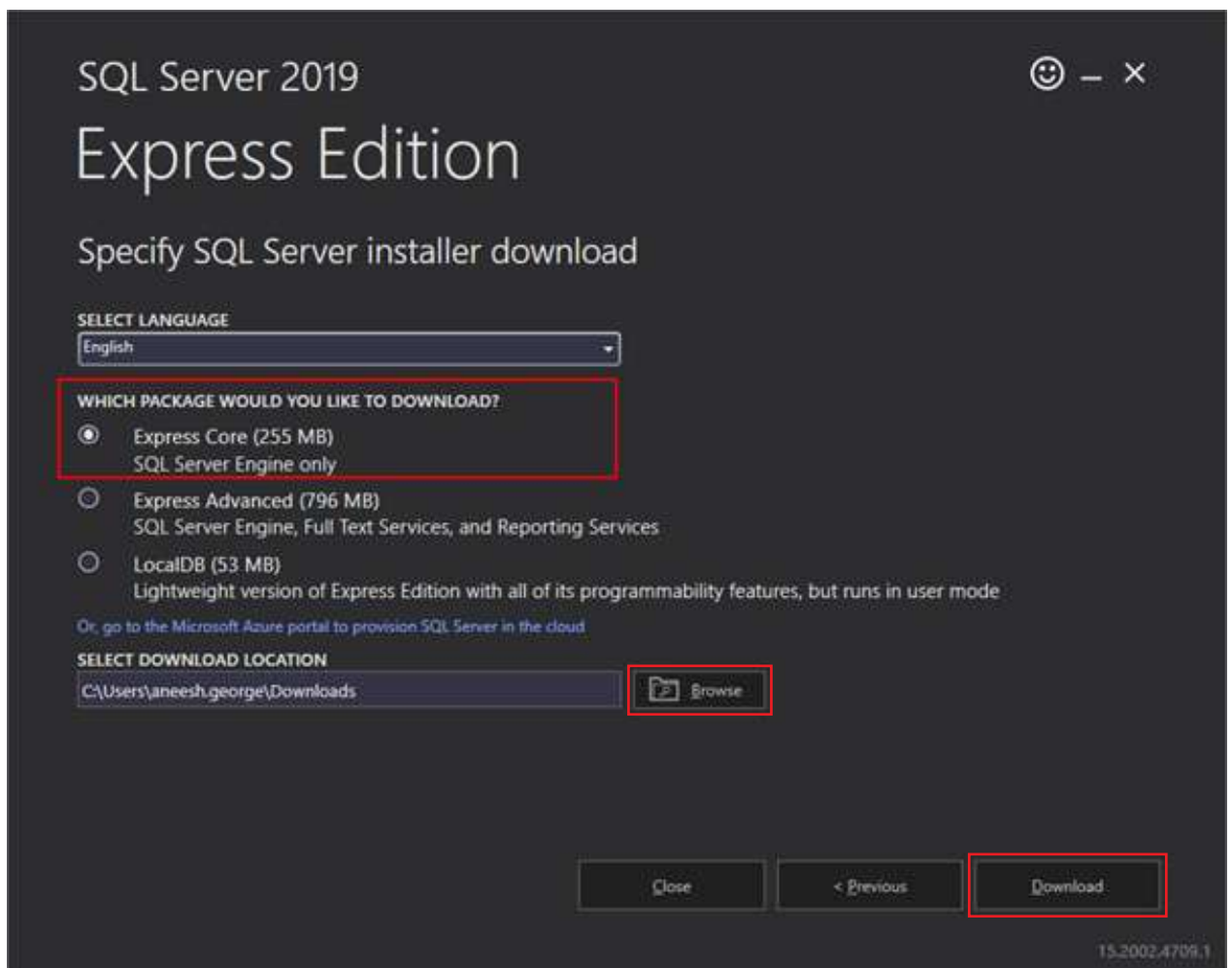




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e. A window will be opened to Specify SQL Server installer download.
Select **Express Core** option.

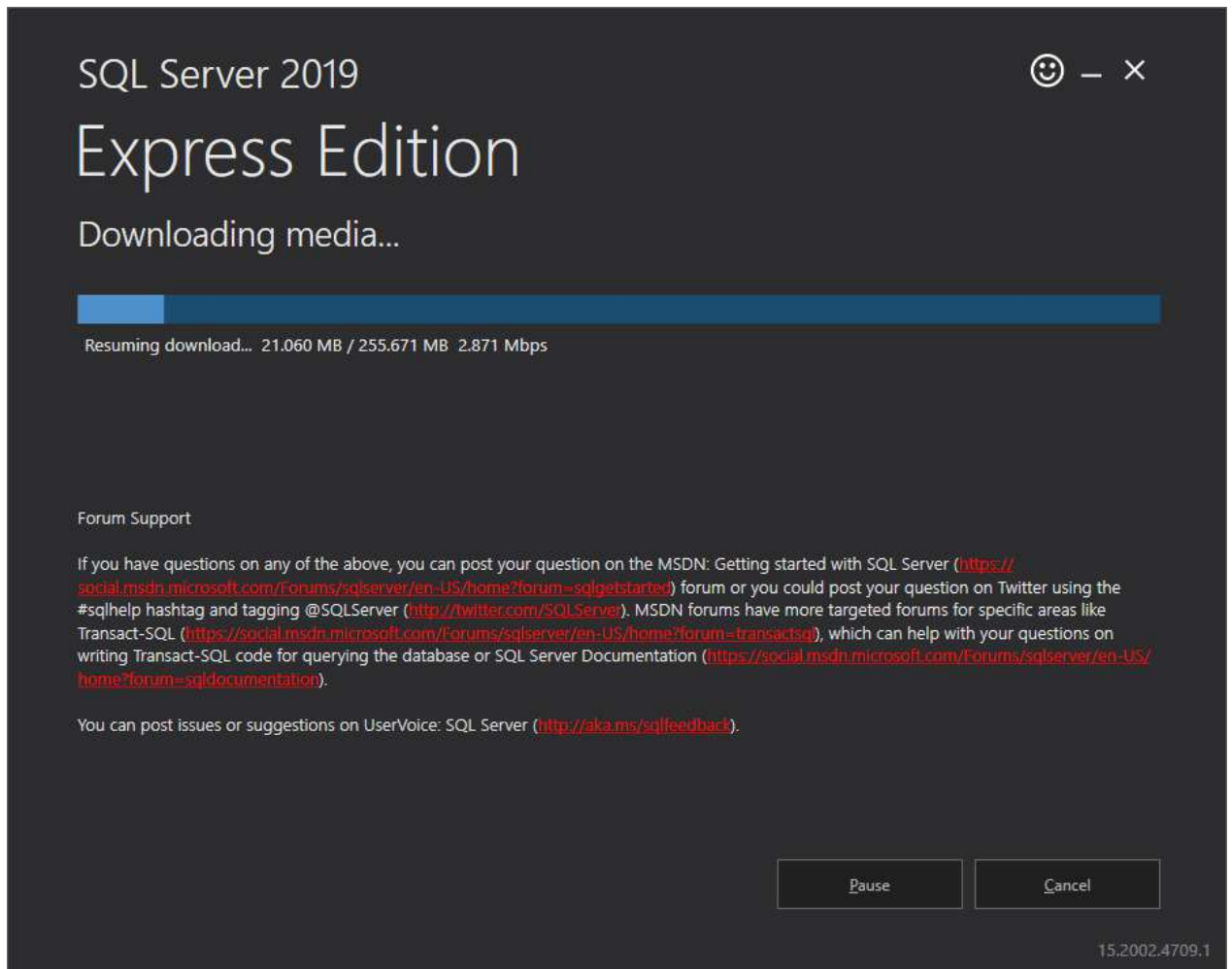
In the SELECT DOWNLOAD LOCATION text box, provide a location to download the web installer.



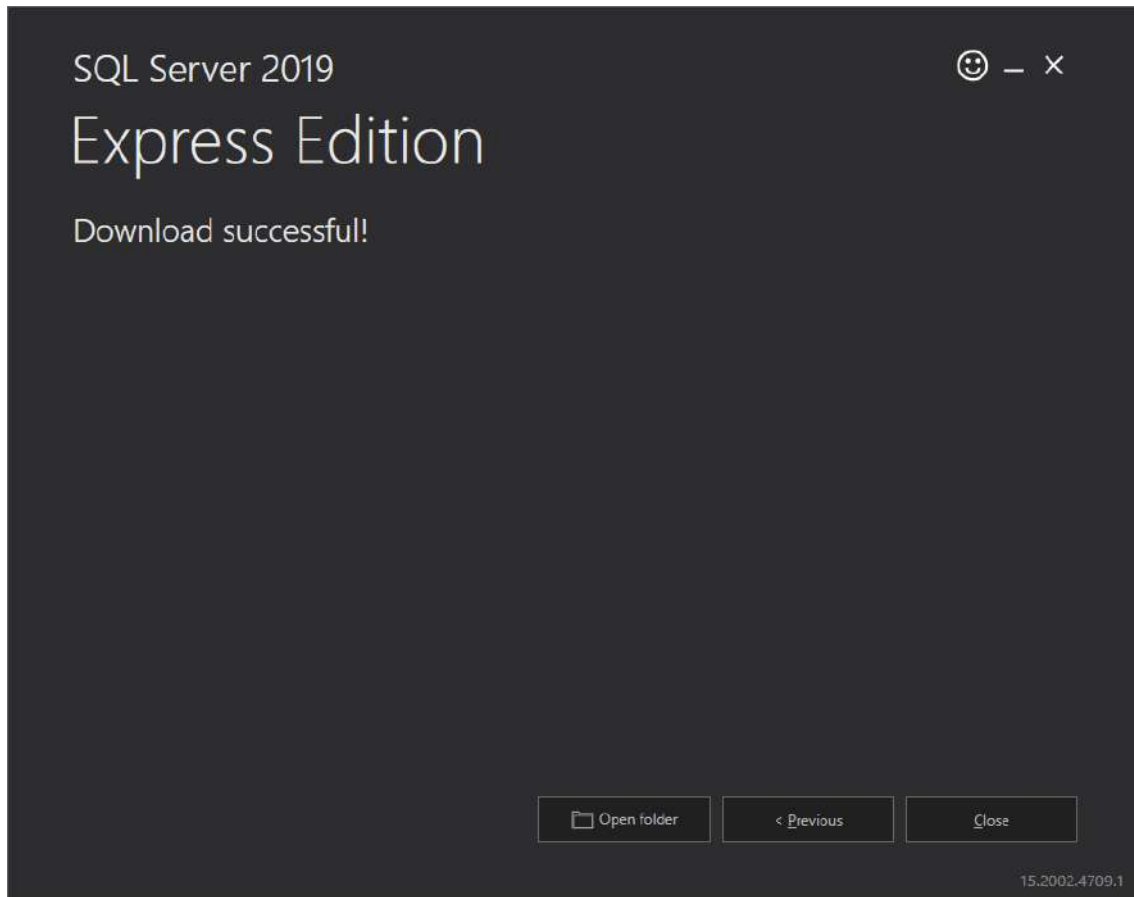


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f. SQL Server installer will be downloaded.



g. When download is completed, installation file can be accessed from the specified location in step e:




1.2 Installing SQL Server 2019 Express Edition

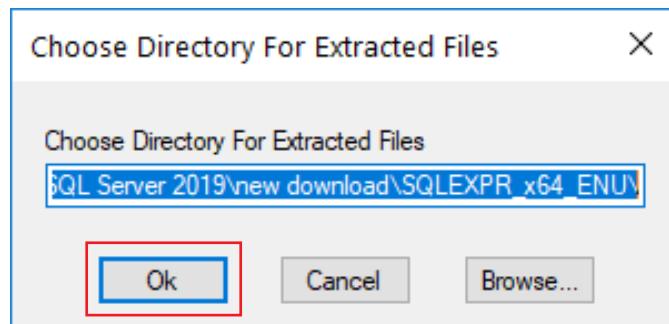
This section describes how to install SQL Server 2019.

During the installation, SQL Server 2019 instance name chosen will be **LABWORLDSOFTDS** and authentication mode selected will be **Windows Authentication**.

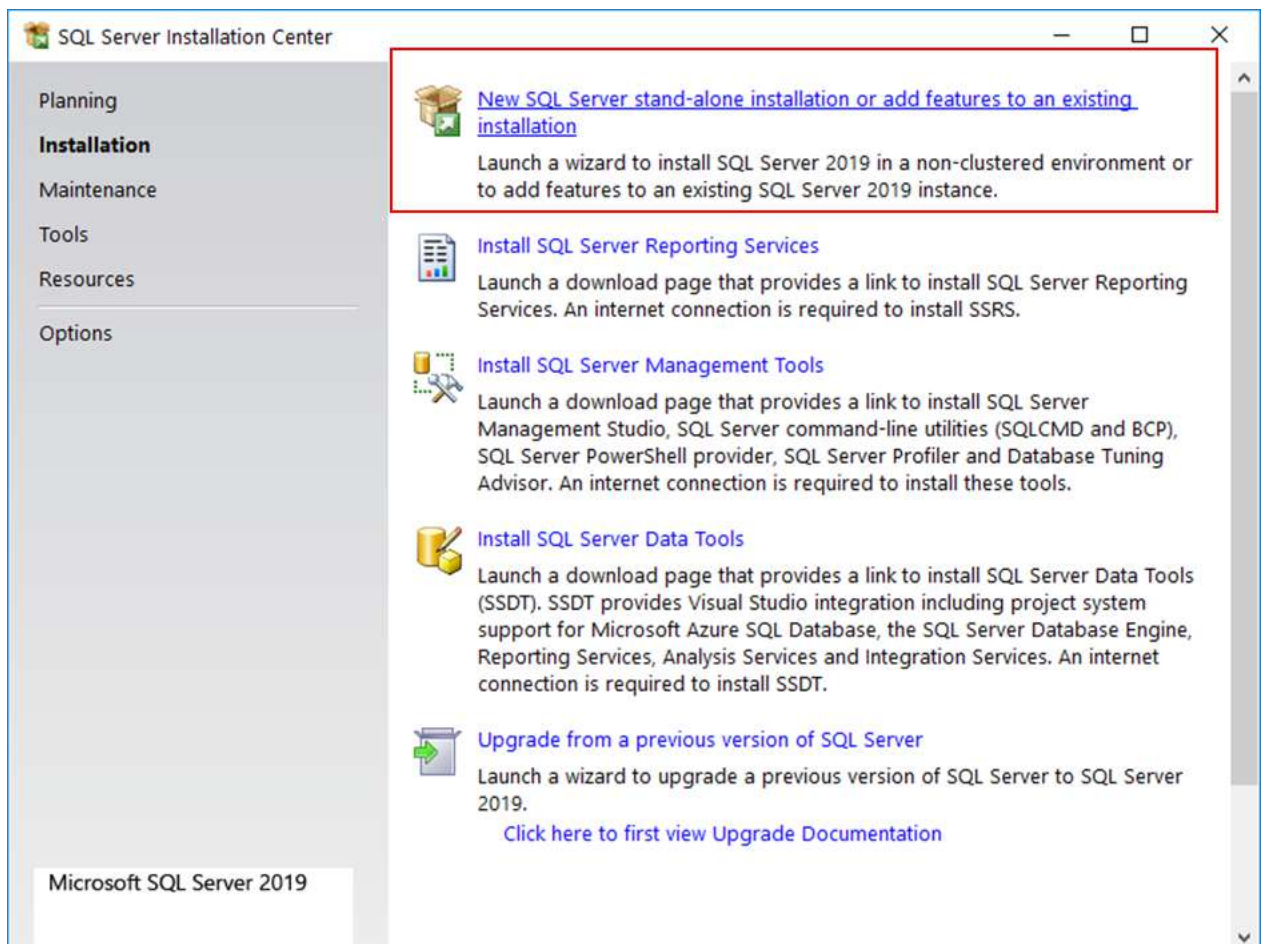
a. Start web installer by double clicking the previously downloaded installer file.

Name	Date modified	Type	Size
 SQLEXPRESS_x64_ENU.exe	03/07/2020 12:00	Application	261,808 KB

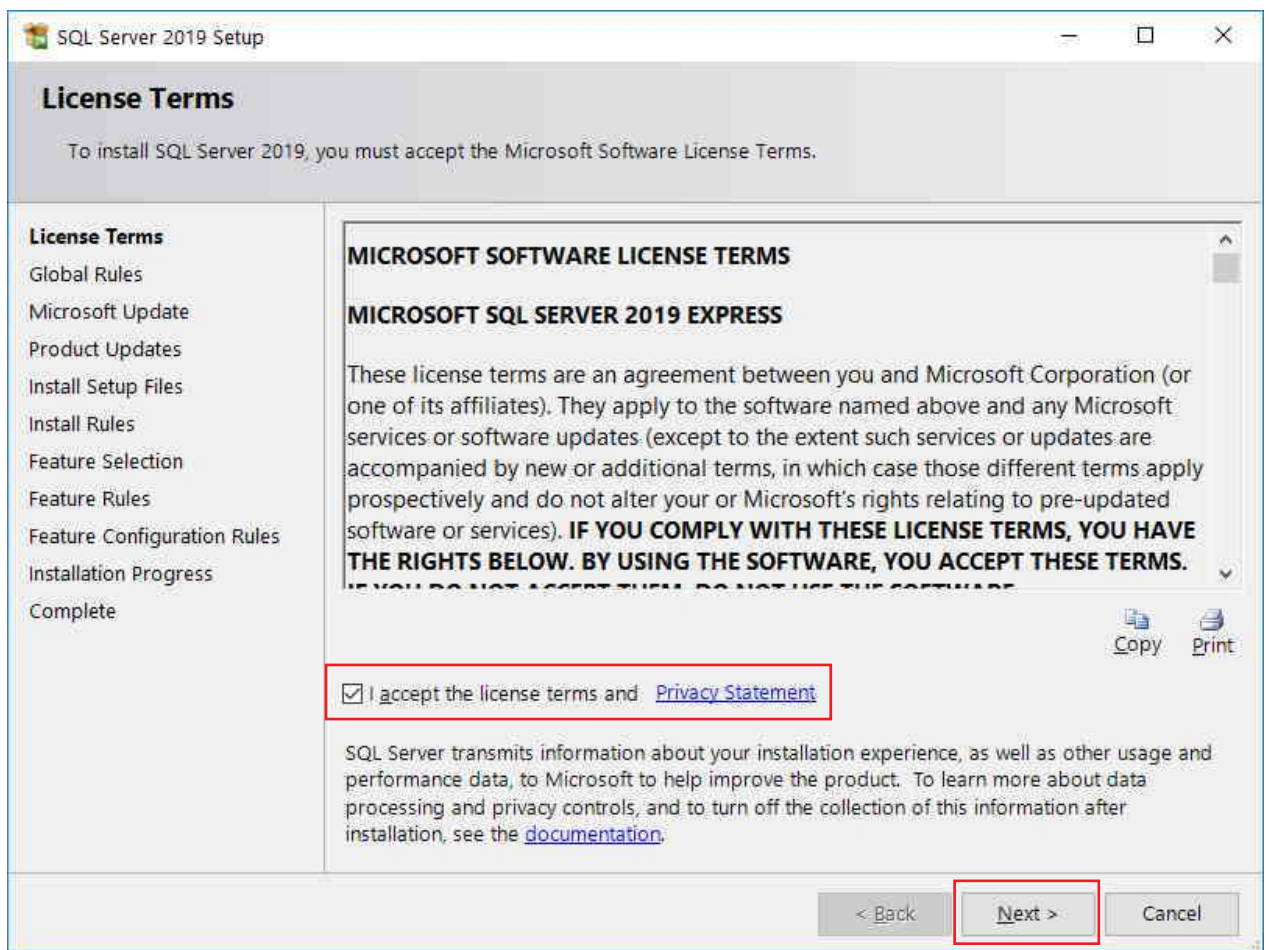
b. A window Choose Directory For Extracted Files will be popped-up. Provide a directory path for extracting files and click **Ok** button.



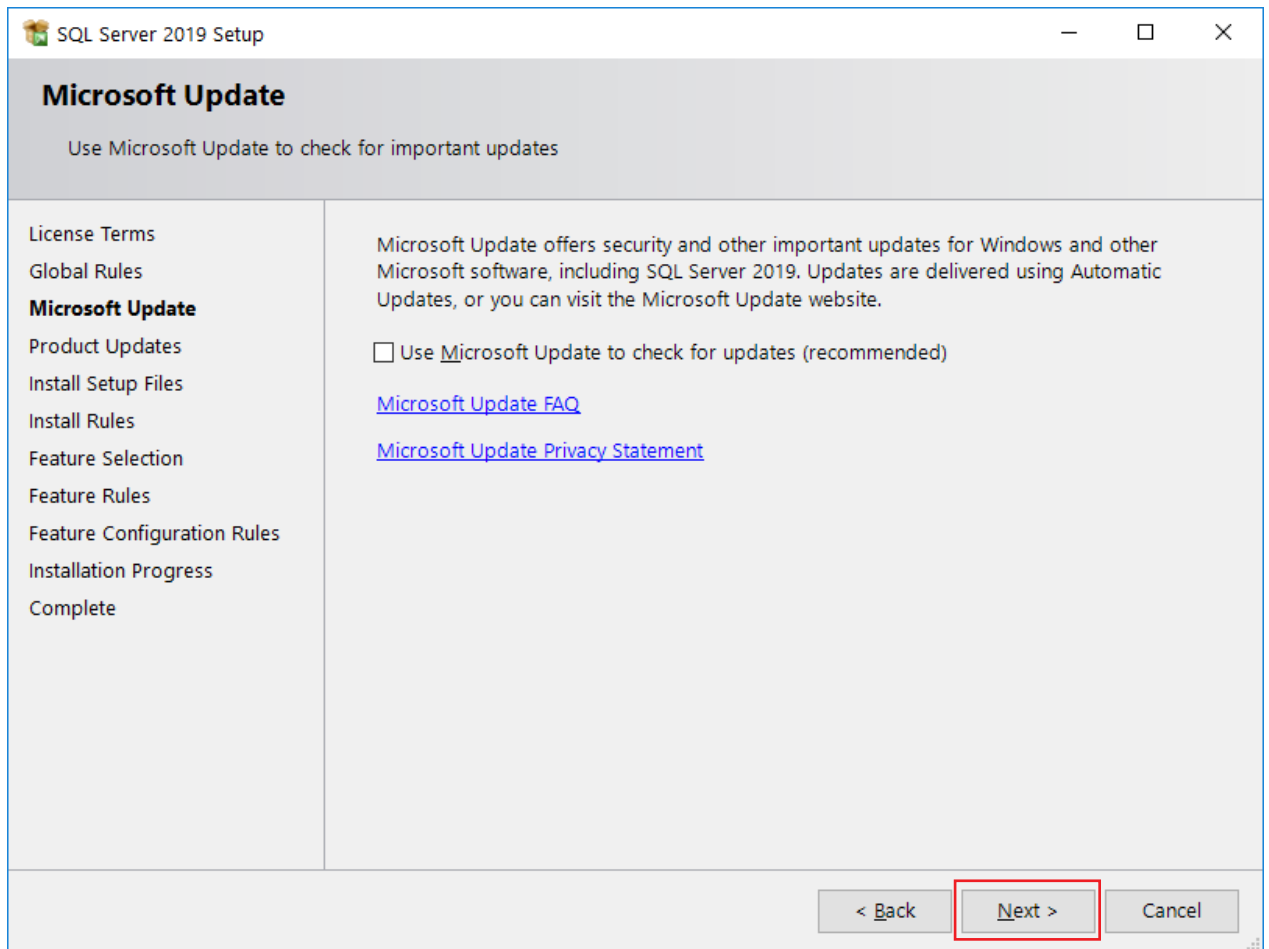
c. In SQL Server Installation Center window, select the option **New SQL Server stand-alone installation** or add features to an existing installation.



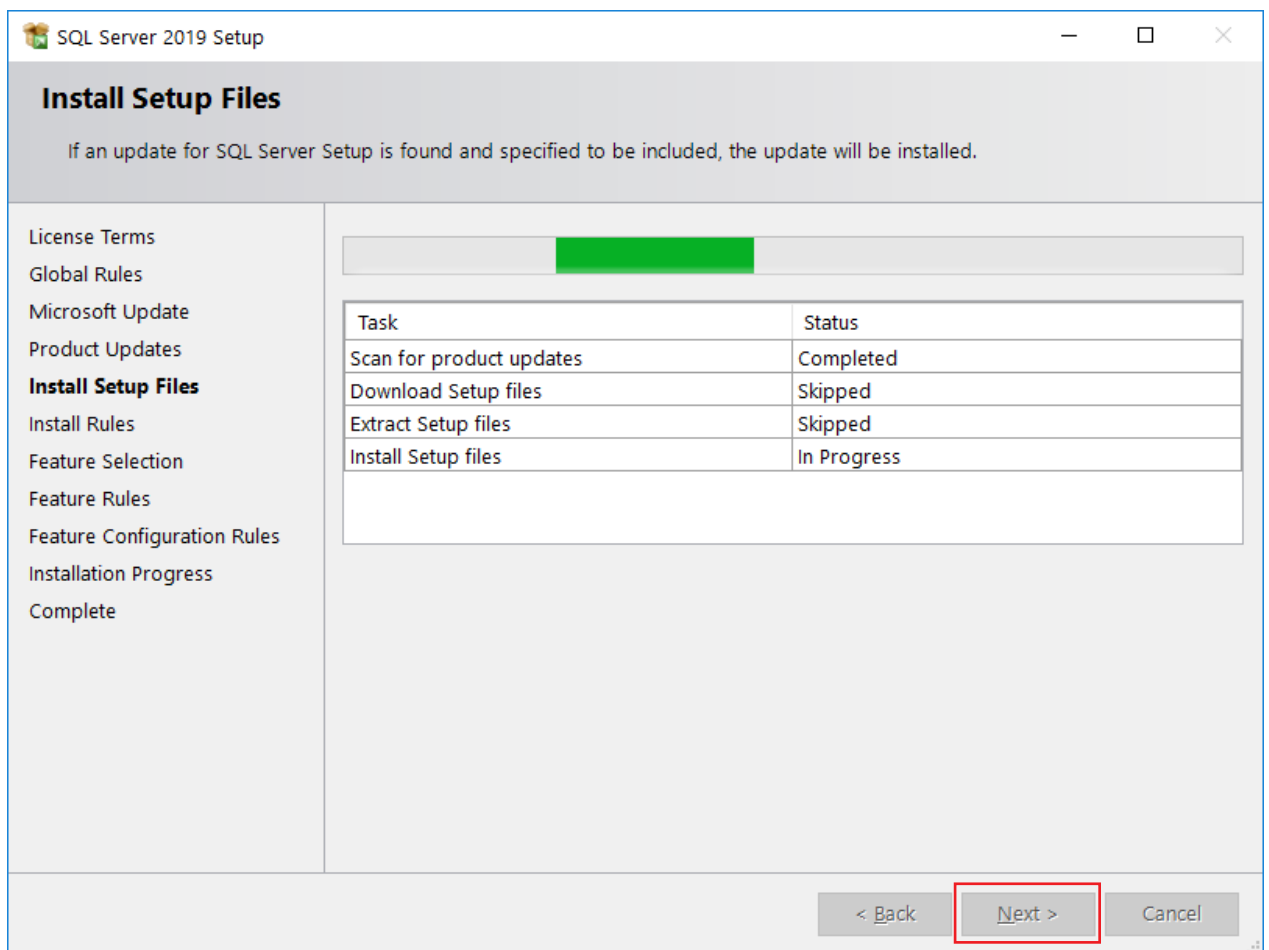
d. Accept the necessary license agreements and click **Next >** button.



e. Click **Next >** button.



f. Click **Next >** button.



g. Check for any errors and then click **Next >** button. Please contact the IT Administrator if warning reported on Windows Firewall. Windows Firewall should not block SQL Server.

SQL Server 2019 Setup

Install Rules

Setup rules identify potential problems that might occur while running Setup. Failures must be corrected before Setup can continue.

Operation completed. Passed: 3. Failed 0. Warning 1. Skipped 0.

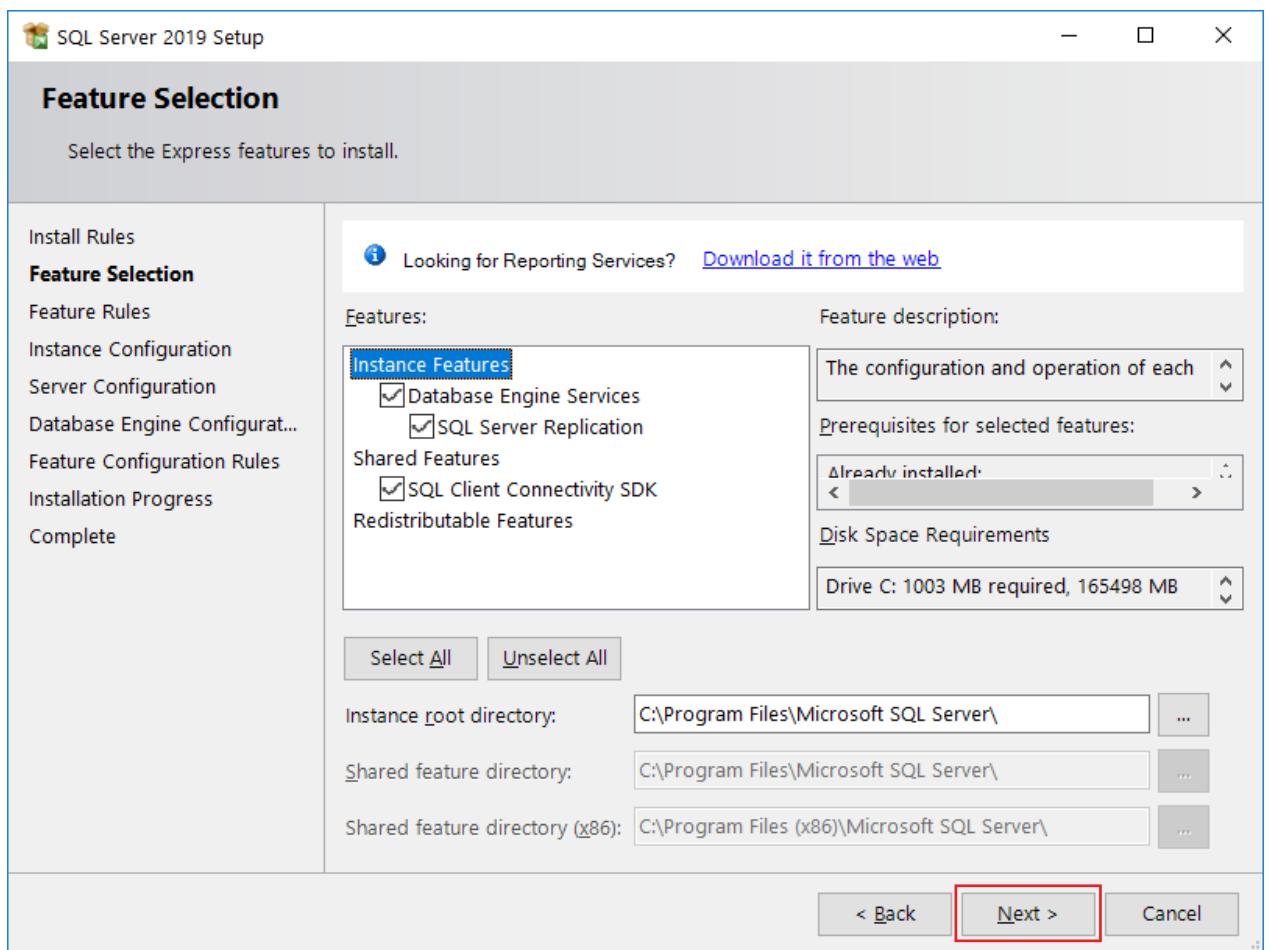
Hide details << Re-run

[View detailed report](#)

Result	Rule	Status
✓	Consistency validation for SQL Server registry keys	Passed
✓	Computer domain controller	Passed
⚠	Windows Firewall	Warning
✓	SQL 2019 minimum CTP for Upgrade and Side by Side S...	Passed

< Back Next > Cancel

h. Select instance features as shown below. Click **Next >** button.



i. In **Instance Configuration** window, select **Named Instance:** option and provide the instance name as **LABWORLDSOFTDS**.

LABWORLDSOFTDS is the acronym for Labworldsoft Data Source. Click **Next >** button.

Instance Configuration

Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.

Default instance

Named instance: LABWORLDSOFTDS

Instance ID: LABWORLDSOFTDS

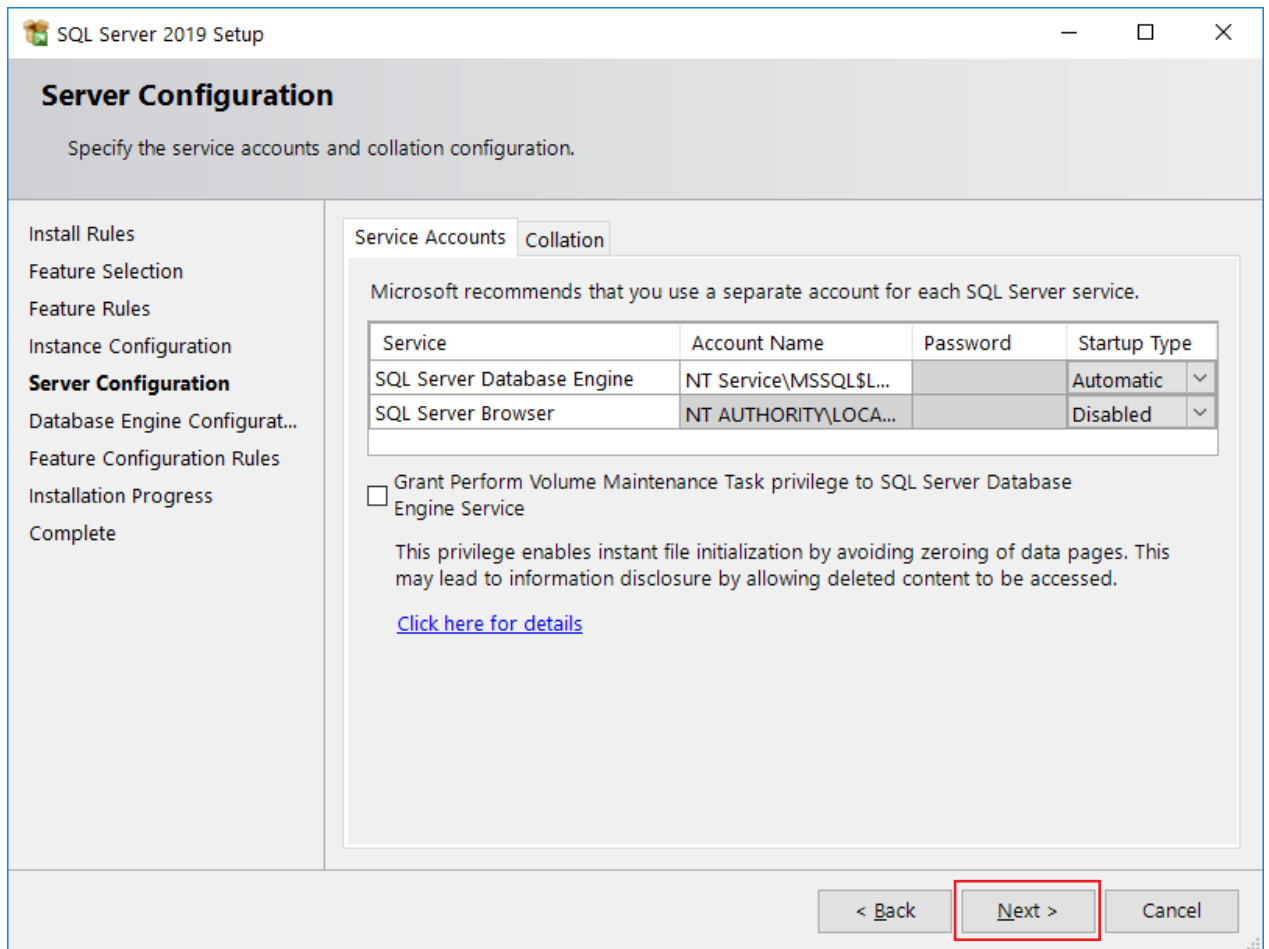
SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL15.LABWORLDSOFTDS

Installed instances:

Instance Name	Instance ID	Features	Edition	Version
MSSQLSERVER	MSSQL15.MSSQLS...	SQLEngine,SQLEn...	Developer	15.0.2000.5
LABWORLDSOFT	MSSQL15.LABWOR...	SQLEngine,SQLEn...	Express	15.0.2000.5
<Shared Compone...		Conn, BC, SDK, DQ...		15.0.2000.5

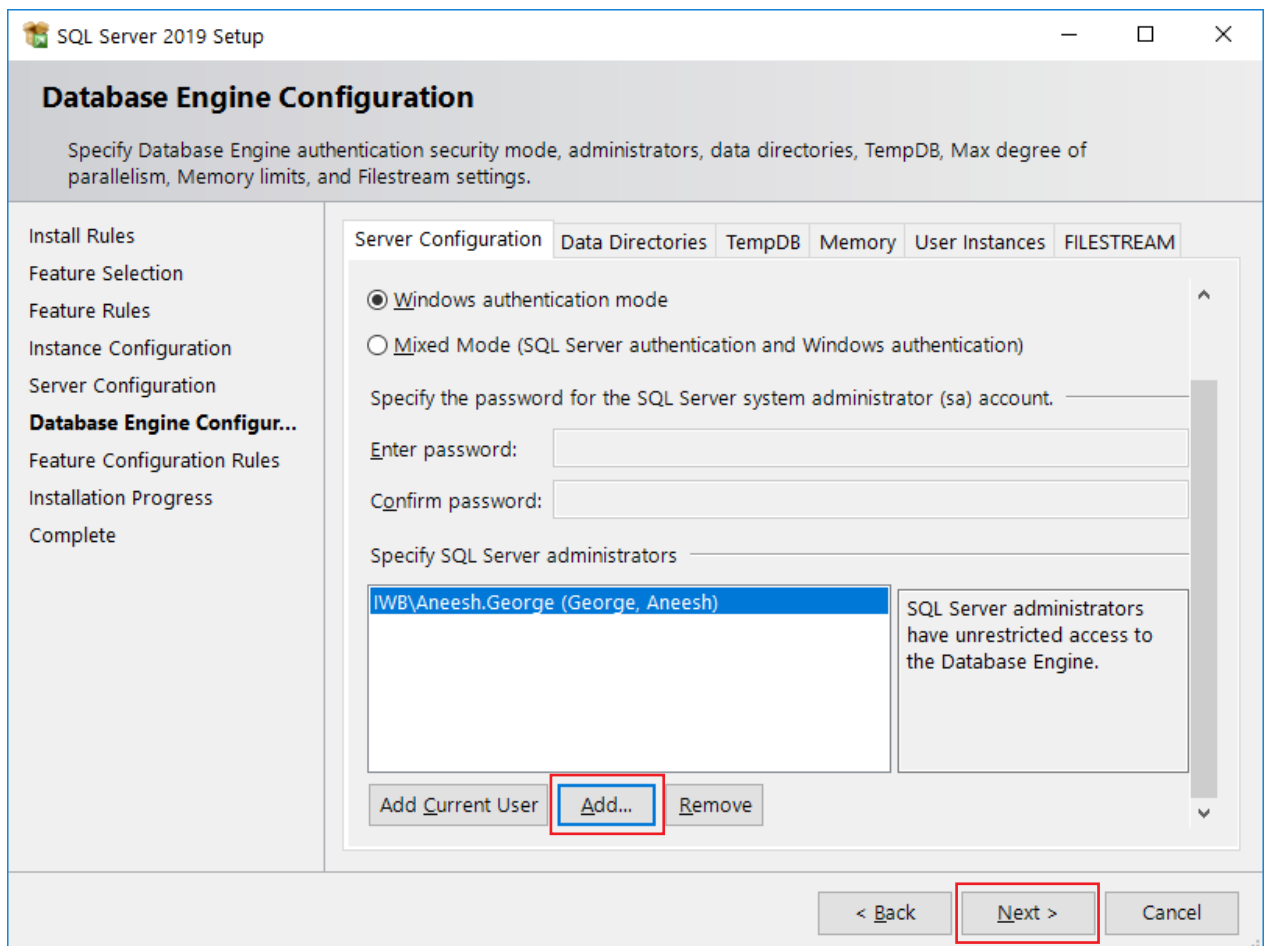
< Back **Next >** Cancel

j. Click **Next >** button.

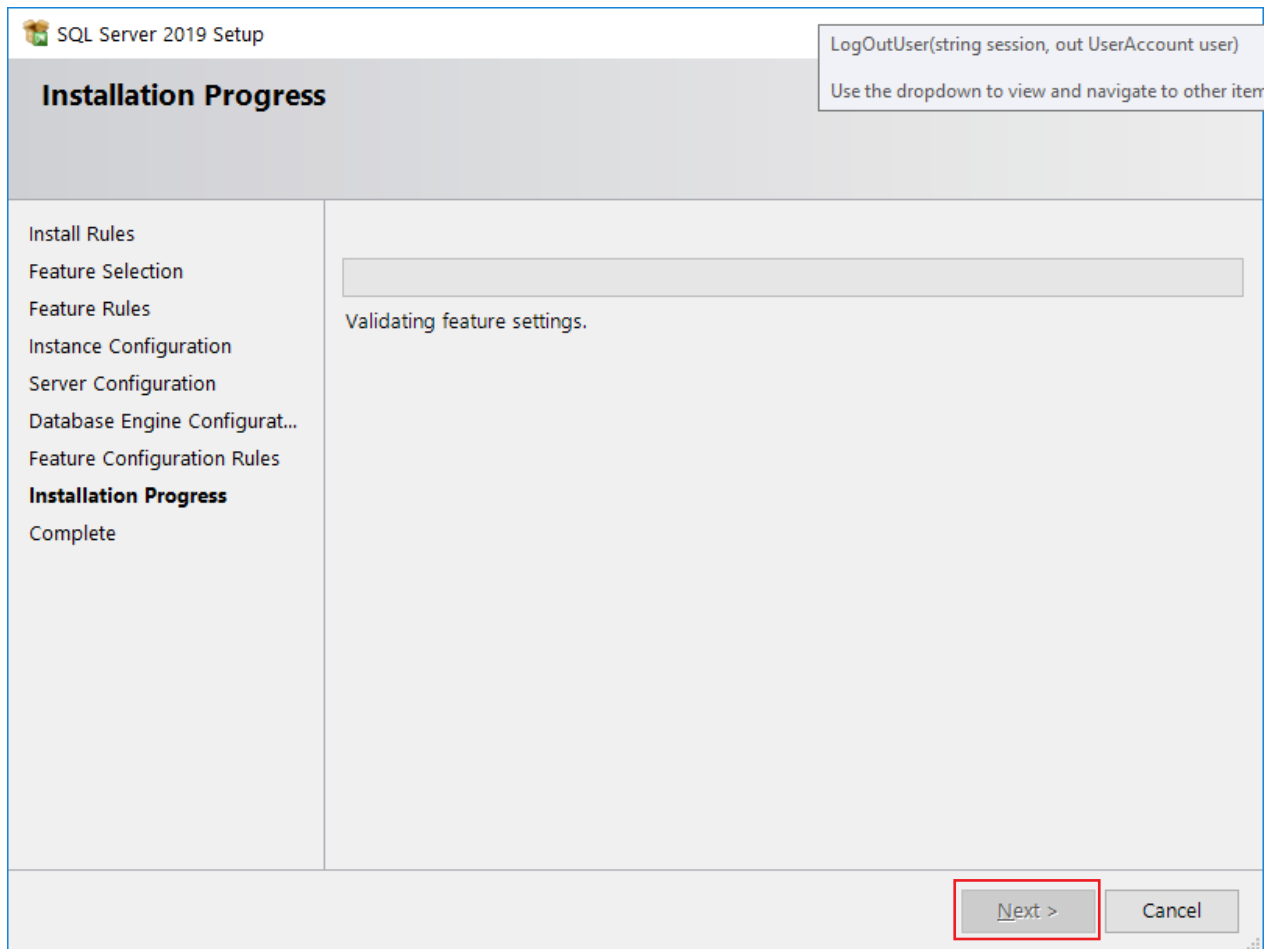


k. Select the **Windows authentication** mode. Make sure that the current user is added in **SQL Server administrators** list. If the current user is not added in **SQL Server administrators** list, the user can be added by clicking on **Add Current User** button. In case of adding another user to **SQL Server administrators** list, use the **Add...** button.

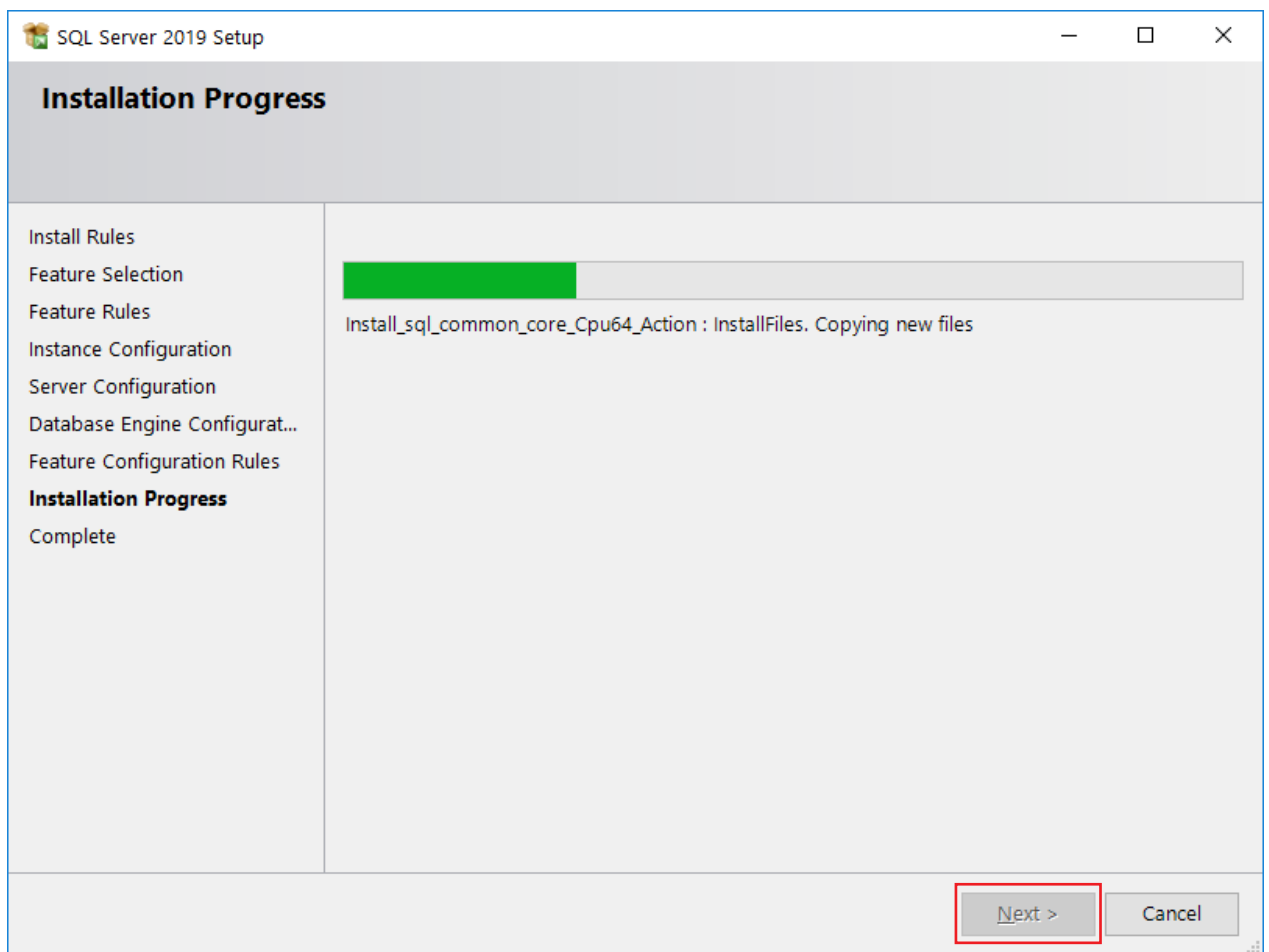
Click **Next >** button.



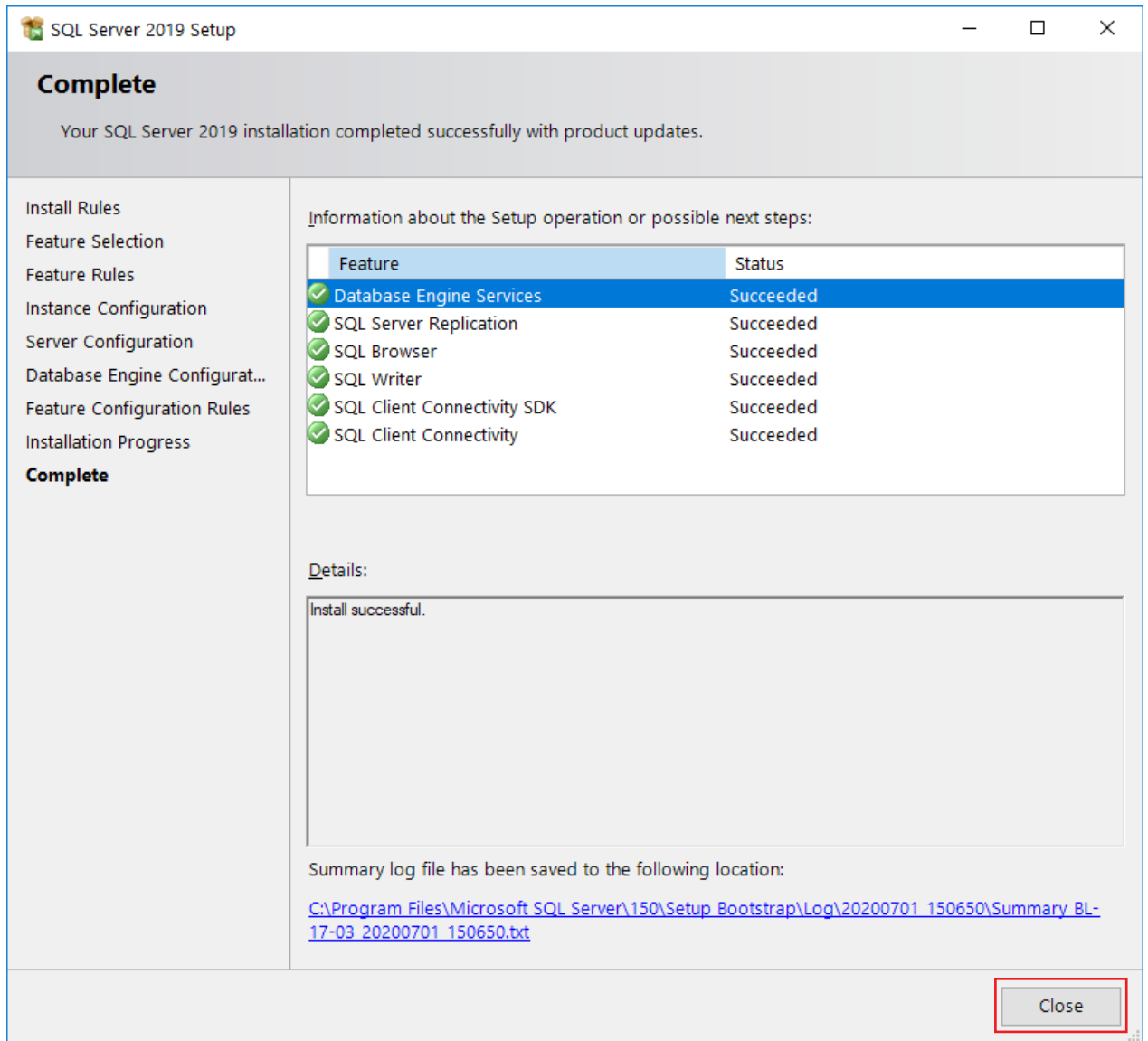
I. Click **Next >** button.



m. Click **Next >** button.



n. Click **Next >** button.



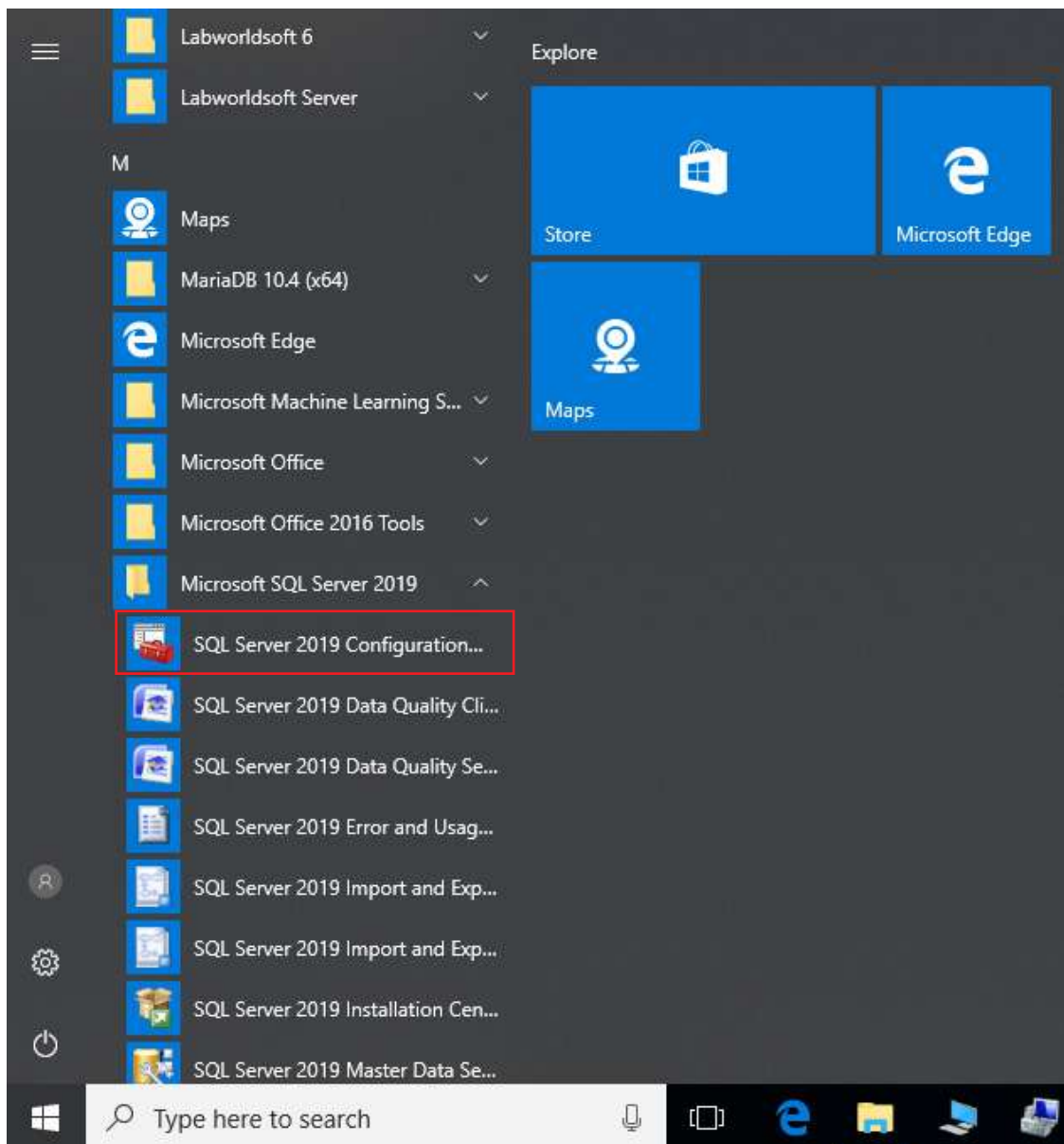
o. Check for any errors. Installation is completed. Click **Close** button.

p. Close the **SQL Server Installation Center** window

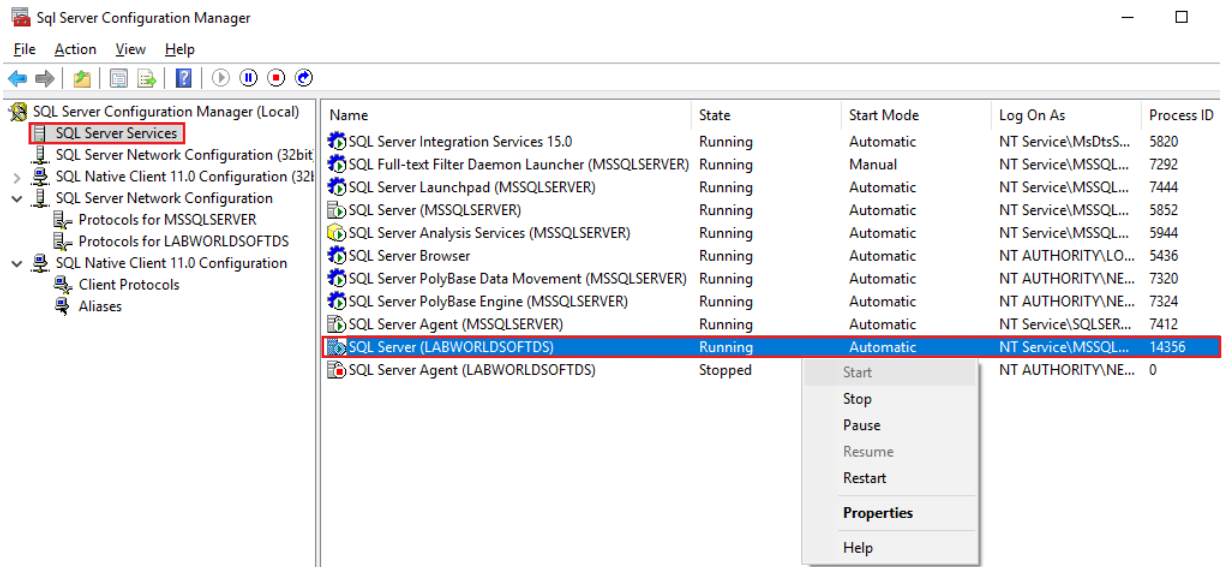
2. Verifying SQL Server installation with Sql Server Configuration Manager

After the installation, make sure that the SQL Server instance LABWORLDSOFTDS is up and running, and all the communication protocols are enabled. The following steps describe the verification process.

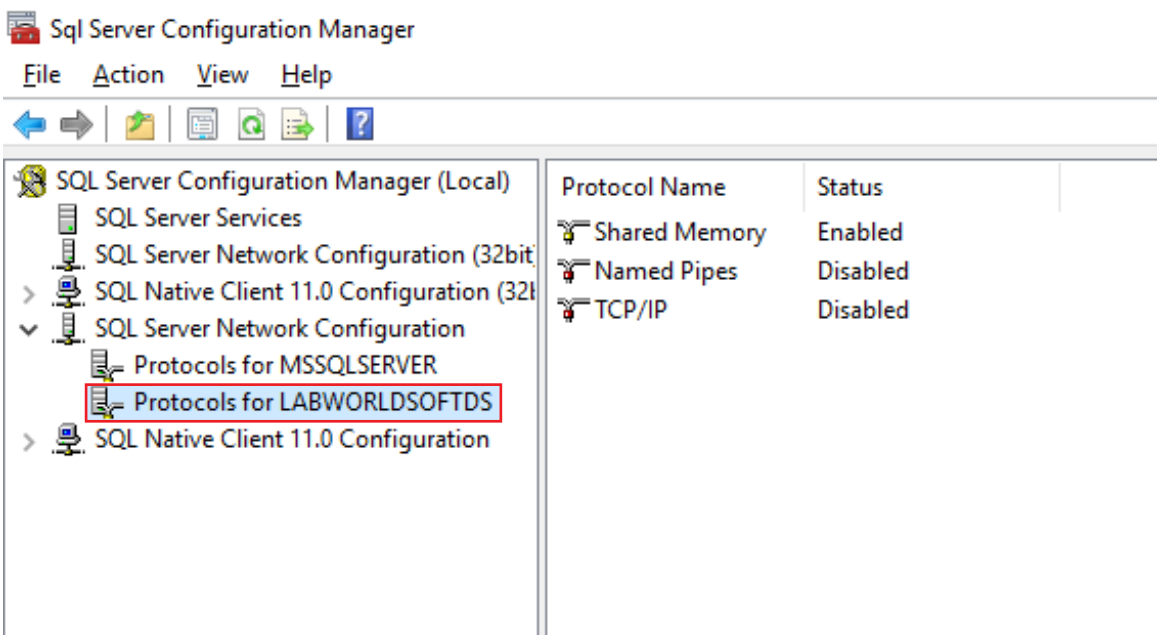
- a. Start **Sql Server Configuration Manager** from Windows Start menu.



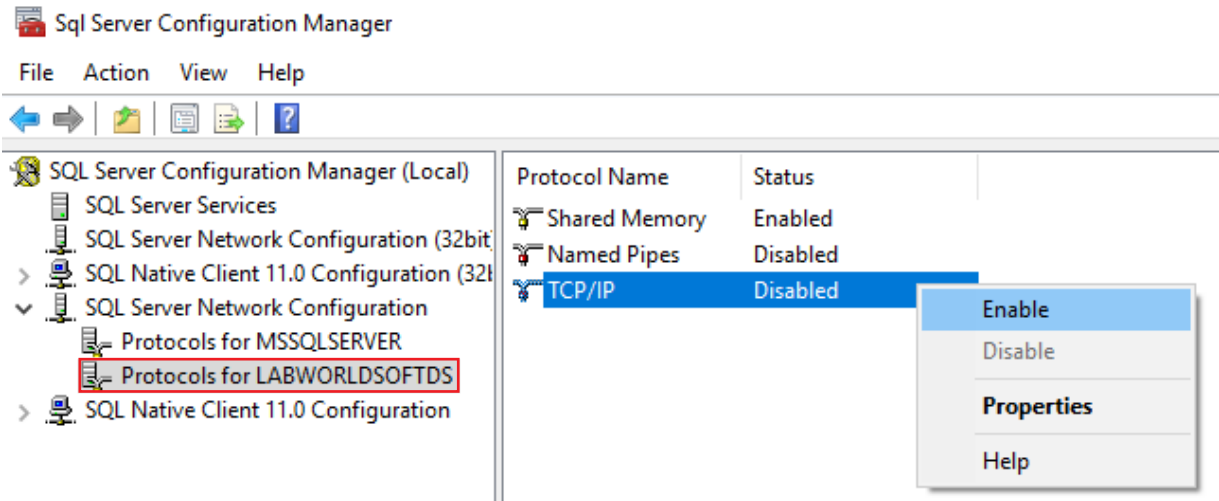
b. Select the node **SQL Server Services** and select the service **SQL Server (LABWORLDSOFTDS)**. Make sure that **SQL Server (LABWORLDSOFTDS)** service is running.



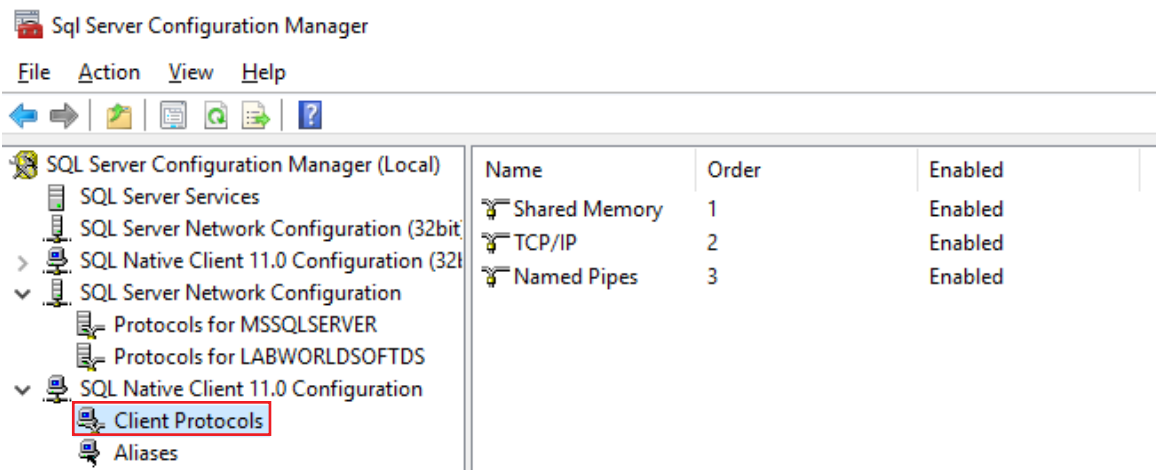
c. Select the node **Protocols for LABWORLDSOFTDS**.



d. Enable the protocols **Shared Memory**, **Named Pipes** and **TCP/IP** if not.



e. Select the node **SQL Native Client 11.0 Configuration >> Client Protocols** and enable the protocols **Shared Memory**, **Named Pipes** and **TCP/IP** as in step **d**.



f. After enabling the protocols, restart the service **SQL Server (LABWORLDSOFTDS)** once again as mentioned in step **b** to make these changes in effect.

3. Selecting SQL Server Roles using SQL Server Management Studio (SSMS)

SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure. SSMS provides tools to configure, monitor, and administer instances of SQL Server and databases.

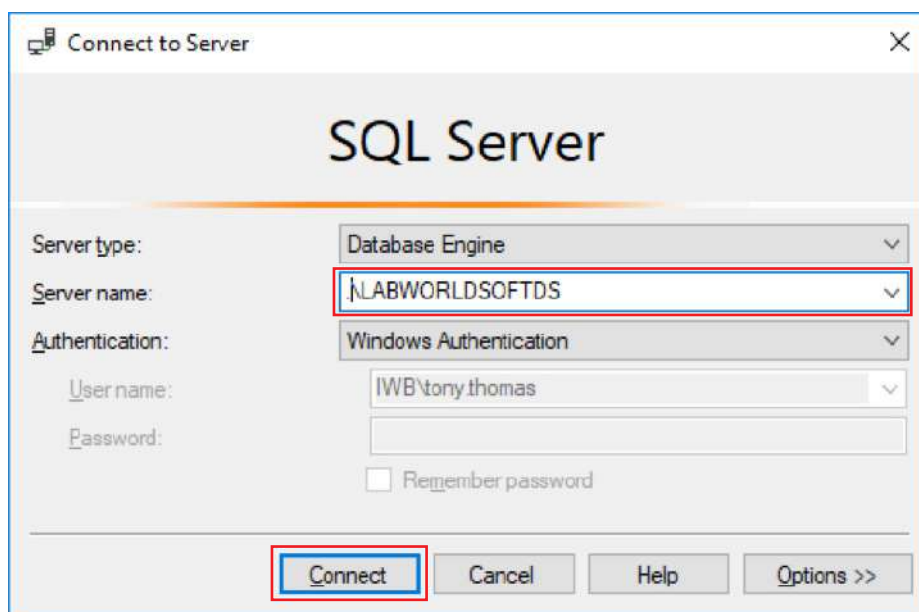
Verifying whether the needed **server roles** are select for the SQL Server user with SQL Server Management Studio is optional. However, it is highly recommended to check whether the needed Server Roles are selected for the SQL Server user. SQL Server Management Studio will be useful in future as well for managing database and adding additional SQL Server users.

3.1 Installing SQL Server Management Studio

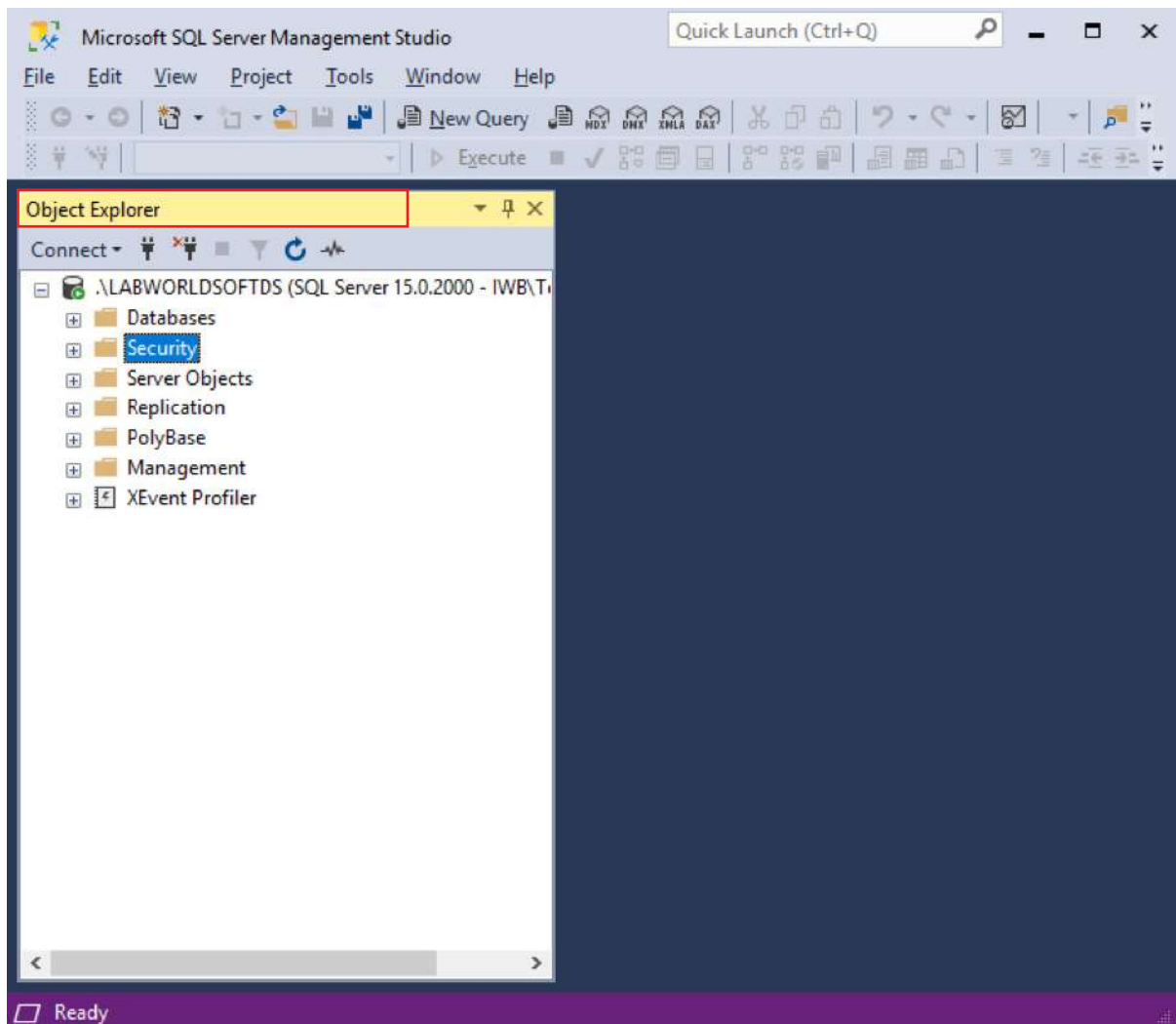
You may download SSMS from <https://aka.ms/ssmsfullsetup> and Install the software. This download link might change in future, so please visit Microsoft website for the updates.

3.2 Selecting Server Roles

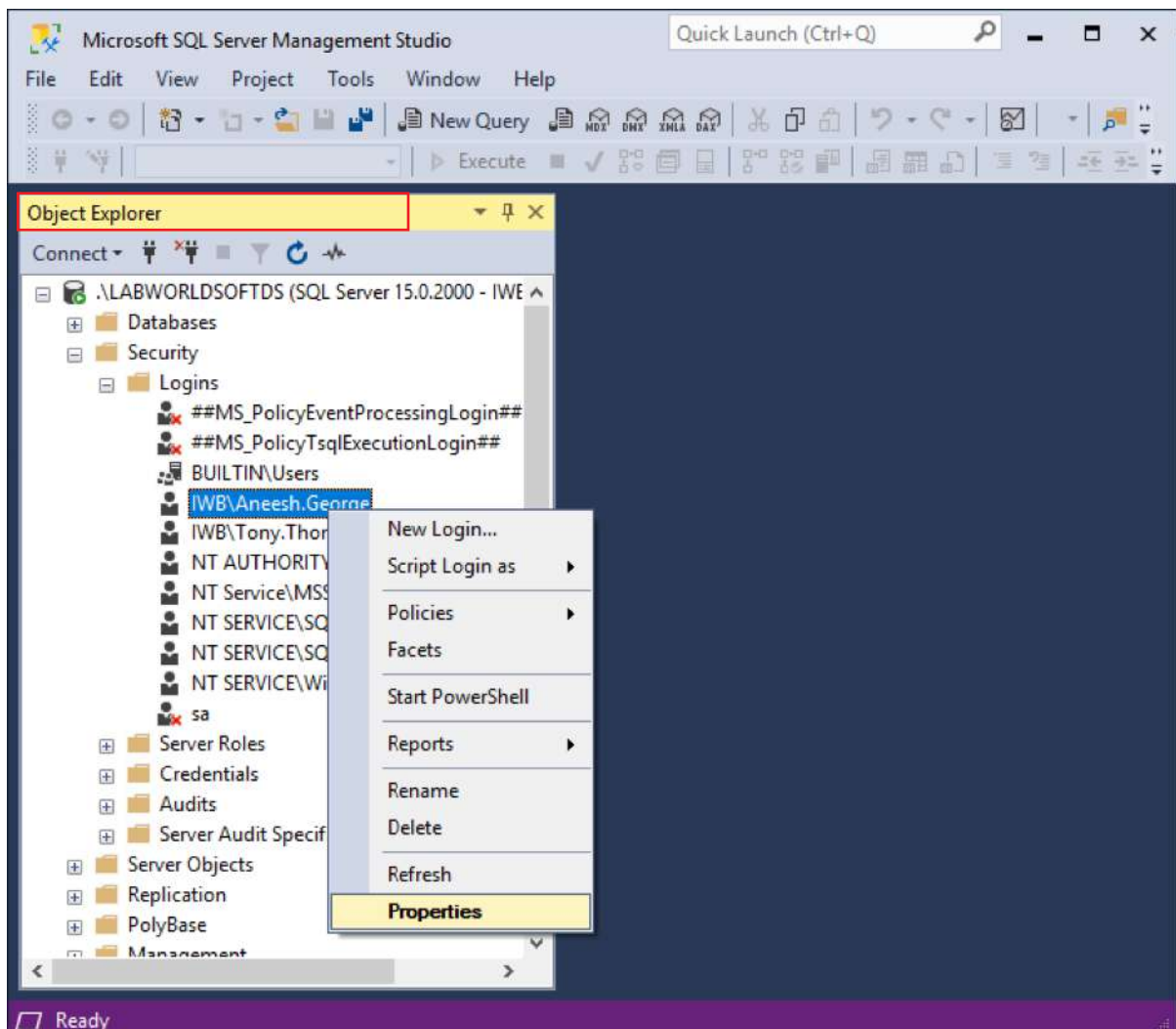
- a. Start SSMS. **Connect to Server** dialog will be popped-up. Provide the server name as `.\LABWORLDSOFTDS` and click **Connect** button.



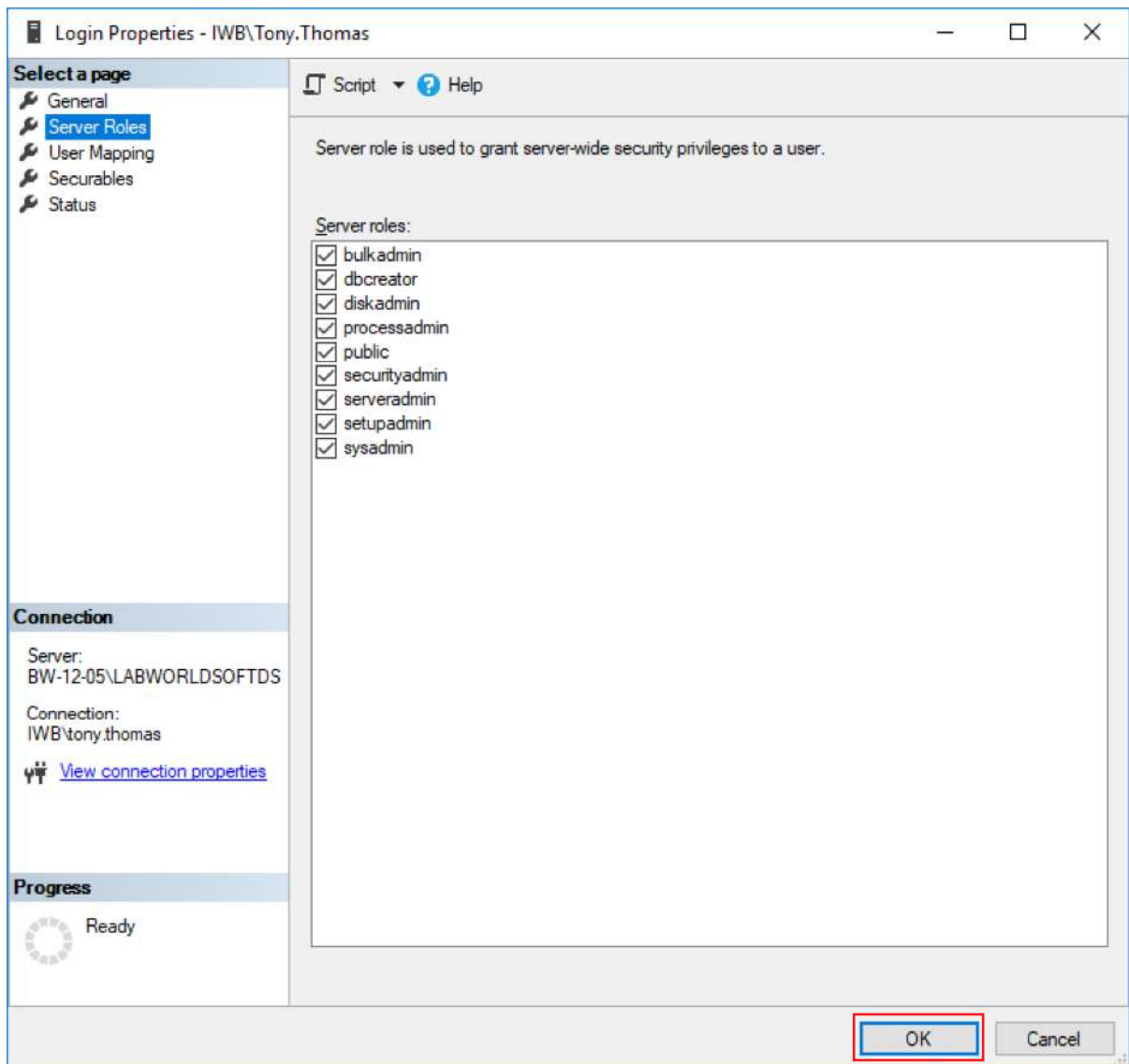
b. After connecting successfully, **Object Explorer** for **LABWORLDSOFTDS** server instance will be displayed. If **Object Explorer** is not visible, open it by clicking the menu **View >> Object Explorer**.



c. Suppose the added user to the SQL Server Administrator list during installation is **IWB\Aneesh.George**. Right click the node **IWB\Aneesh.George** from **.\LABWORLDSOFTDS / Security / Logins** and select **Properties**.



d. When clicking **Properties** menu, **Login Properties** window will be popped-up. Select **Server Roles**. Select all the **Server roles** and press **OK** button.





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02. User Guide – Setting up Labworldsoft Server

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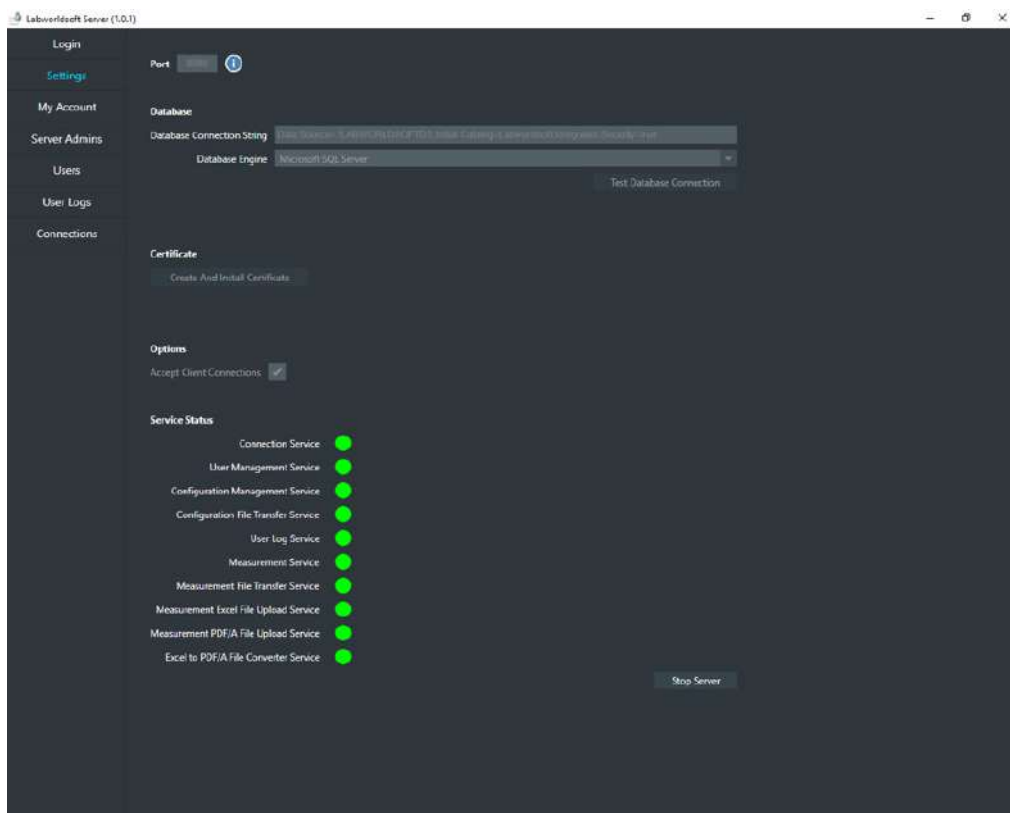
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1. Introduction

Labworldsoft Server is a Server software working together with **Labworldsoft 6** for the support of **FDA 21 CFR Part 11**, where **Labworldsoft 6** works as a client software.



Labworldsoft Server supports User management, Configuration management, Measurement file uploading/downloading, Logging of user activities etc.

Labworldsoft 6 implements **FDA 21 CFR Part 11** with the support of **Labworldsoft Server**.

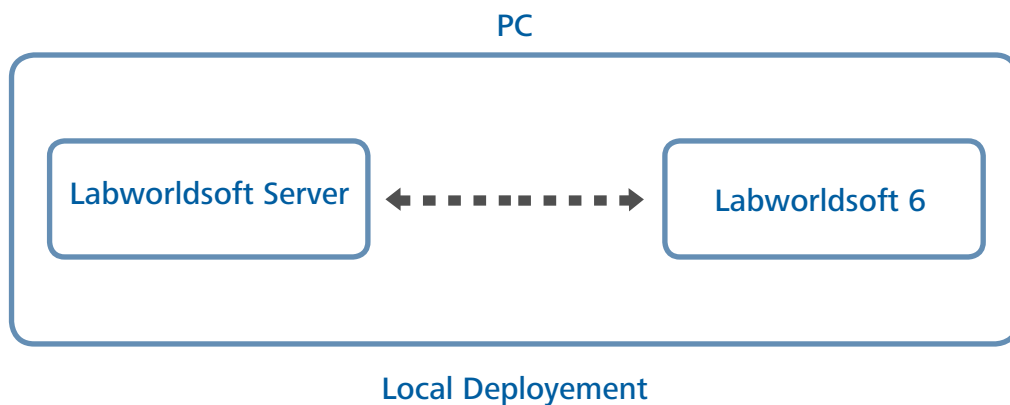
Labworldsoft Server and **Labworldsoft 6** can be deployed in 3 different ways.

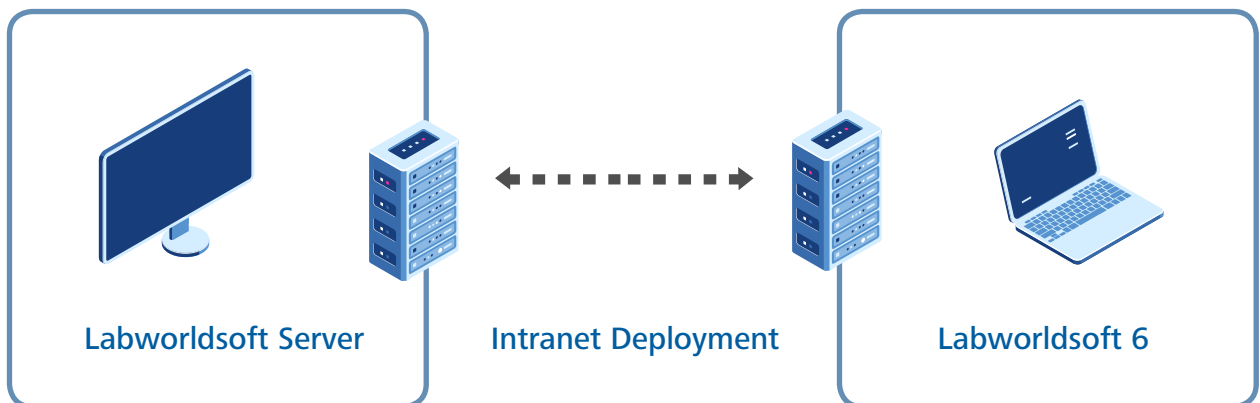
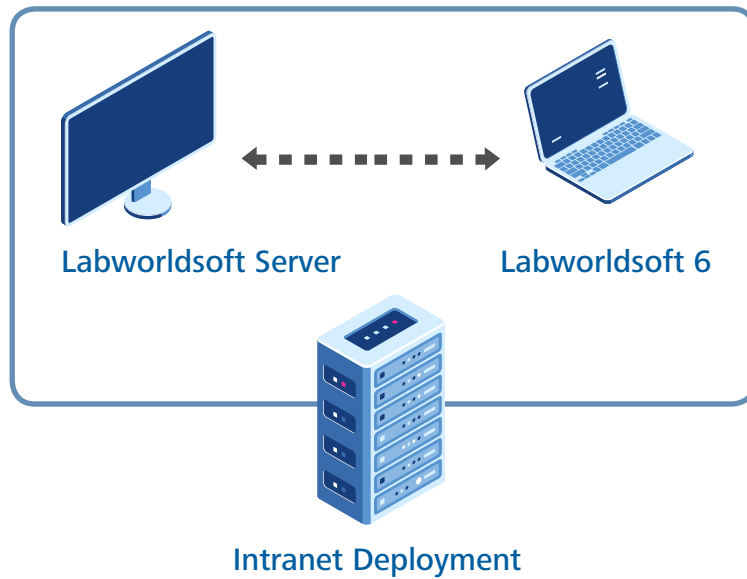
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Deployment Type	Details
Local	<p>Both Labworldsoft Server and Labworldsoft 6 are installed in the same PC.</p> <p>In this configuration, Labworldsoft 6 can use any of Local, Intranet or Internet protocols for connecting to Labworldsoft Server. More details are present in Document 5 User Guide - Using Labworldsoft 6 and Labworldsoft Server.</p>
Intranet or Inside Firewall	<p>Labworldsoft Server and Labworldsoft 6 are installed in 2 different PCs, but both PCs are installed in the same Intranet and inside the same firewall.</p> <p>In this configuration, Labworldsoft 6 can use Intranet or Internet protocol for connecting to Labworldsoft Server.</p>
Internet or Outside Firewall	<p>Labworldsoft Server and Labworldsoft 6 are installed in 2 different PCs. These 2 PCs are installed in 2 different networks.</p> <p>In this configuration, Labworldsoft 6 can use only Internet protocol for connecting to Labworldsoft Server.</p>

Intranet protocol is faster than Internet protocol and Local protocol is the fastest.
Speed of Local > Speed of Intranet > Speed of Internet





The term **Server PC** is used for denoting the PC where Labworldsoft Server is installed and the term **Client PC** is used for denoting the PC where Labworldsoft 6 is installed, throughout the document.

Server PC

PC where **Labworldsoft Server** is installed and run

Client PC

PC where **Labworldsoft 6** is installed and run



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2. Labworldsoft Server quick setup

A user can refer this section if he/she want to setup **Labworldsoft Server** quickly without diving deep into the details.

For setting up Labworldsoft Server quickly, we assume that, the Administrator used the default program installation location (C:\Program Files\Labworldsoft\Labworldsoft Server), default name for Data Source (**LABWORLDSOFTDS**), default name for database (**Labworldsoft**) and default Authentication Mode as **Windows Authentication** Mode.

- a. Download and install **Labworldsoft Server** from www.ika.com/LWS6
- b. Start **Labworldsoft Server**. Log in to Labworldsoft Server using default User ID **serveradmin** and default password **Password@1**.
- c. After successful log in, **Settings** tab will be displayed automatically.
- d. Provide Database Connection String as follows:

```
Data Source=.\LABWORLDSOFTDS;Initial Catalog=Labworldsoft;Integrated Security=true
```

- e. Click **Create And Install Certificate** button for creating and installing self-signed certificate. Certificate will be installed automatically.
The created certificate file **LabworldsoftServer.cer** is copied to **C:\ProgramData\Labworldsoft\LabworldsoftServer\ServerCertificate** folder.
Please install this certificate into the Client PCs as described in the Document **4 User Guide - Setting Labworldsoft 6 and Labworldsoft Server**.
- f. **Accept Client Connections** check box should be checked.
- g. Click **Start Server** button for starting the server.

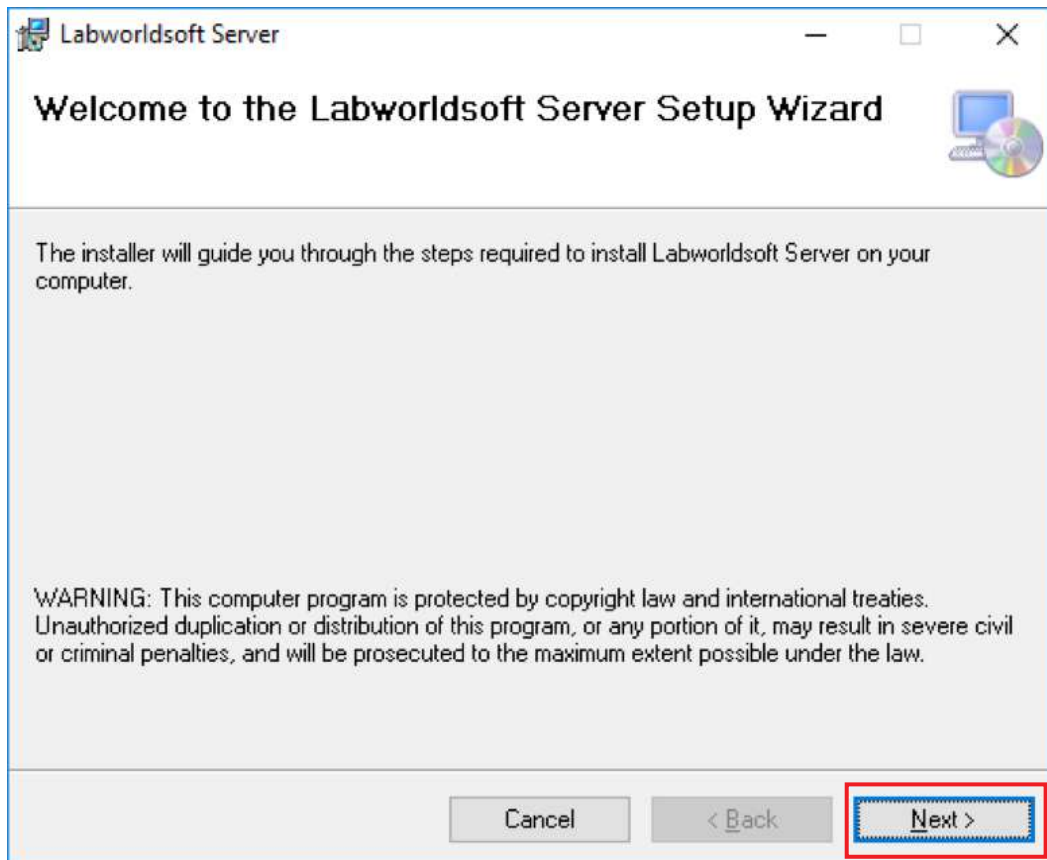
Please refer the below sections for detailed information.

3. Installing Labworldsoft Server

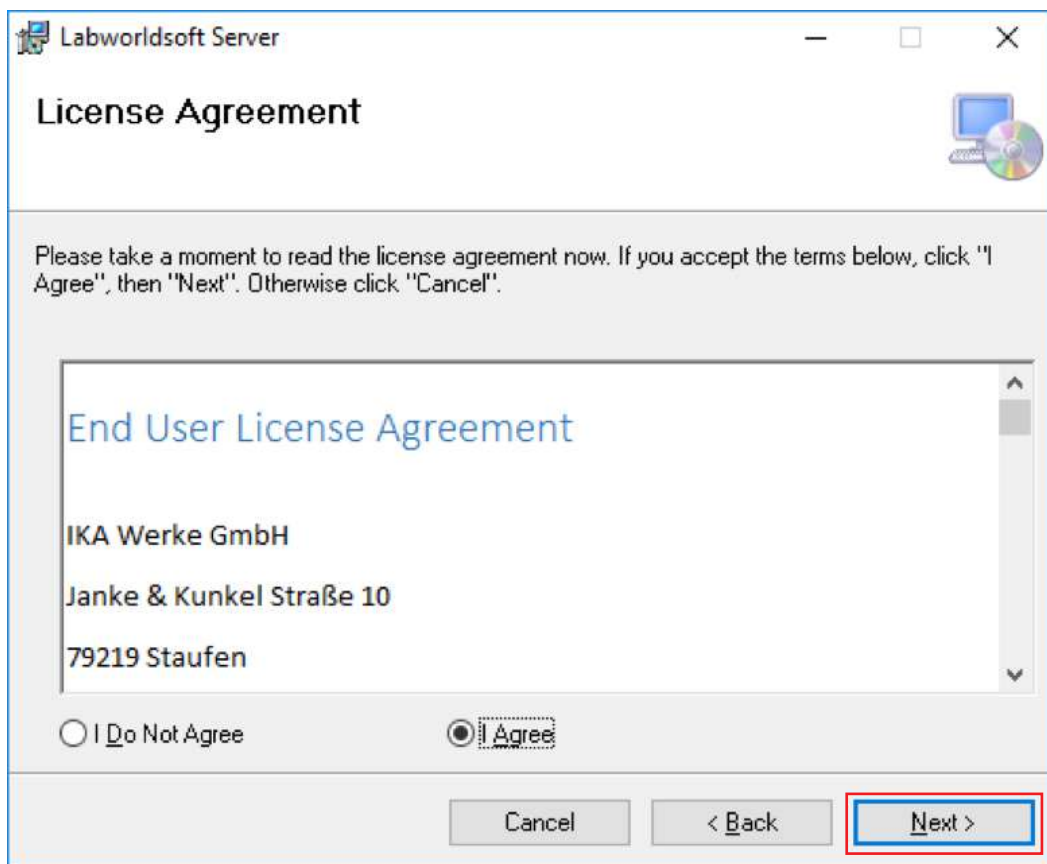
Download Labworldsoft Server from www.ika.com/LWS6

3.1 Installation steps

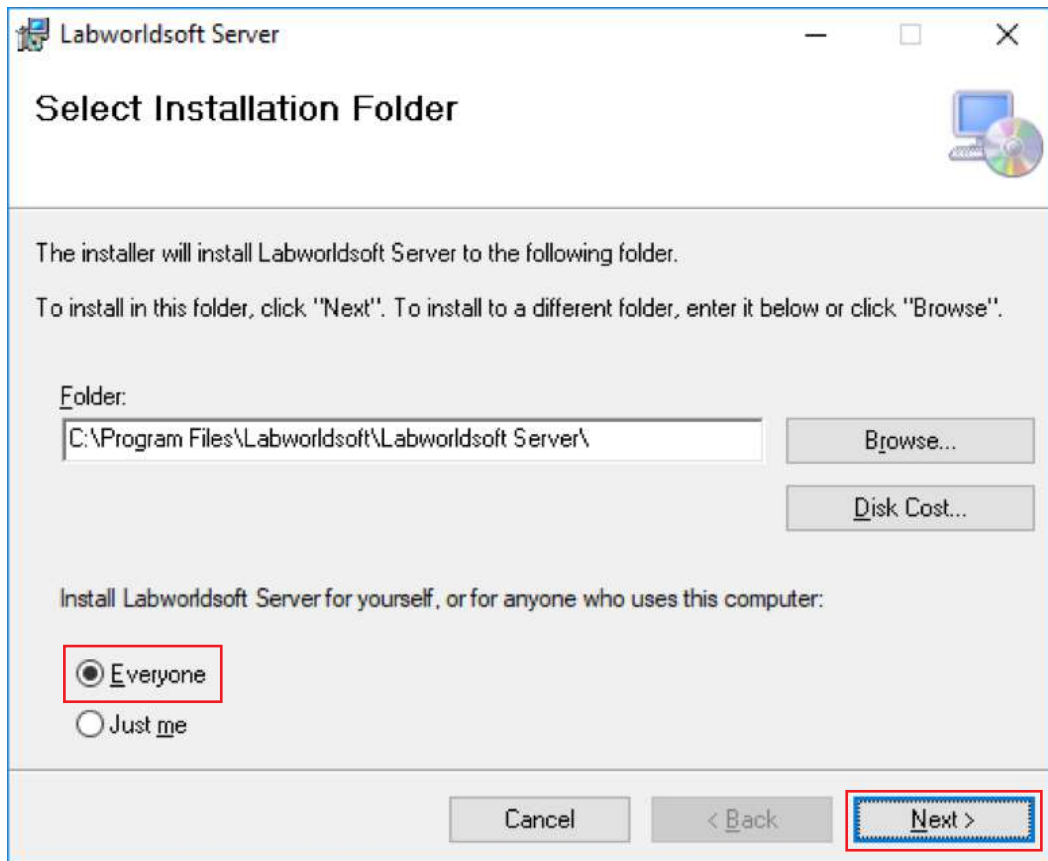
- a. Run **Labworldsoft Server** installer by double clicking LabworldsoftServerInstaller.msi file or setup.exe file.



b. Click **Next >**. Accept license agreement.



c. Click **Next >**. Specify the installation folder. It is recommended to use the default installation folder and install **Labworldsoft Server** for **Everyone**.





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d. Click **Next >**. Provide Windows user credential with **Administrative** privilege in the PC where **Labworldsoft Server** is being installed. The **User Name** should be in the format **Doman\UserName**. In this example, domain is IWB and User Name is Tony.Thomas. If there is no domain, please try single dot (.). For example, if there is no domain try with **.\Tony.Thomas**.

This user credential is used while installing **Labworldsoft Server Measurement Excel File Upload Service, Labworldsoft Server Measurement PDF/A File Upload Service** and **Labworldsoft Server Excel To PDF/A File Converter Service**.

If providing wrong user credential, the installation will fail. Please contact your IT Administrator if you cannot find your domain.

Labworldsoft Server

Labworldsoft Server

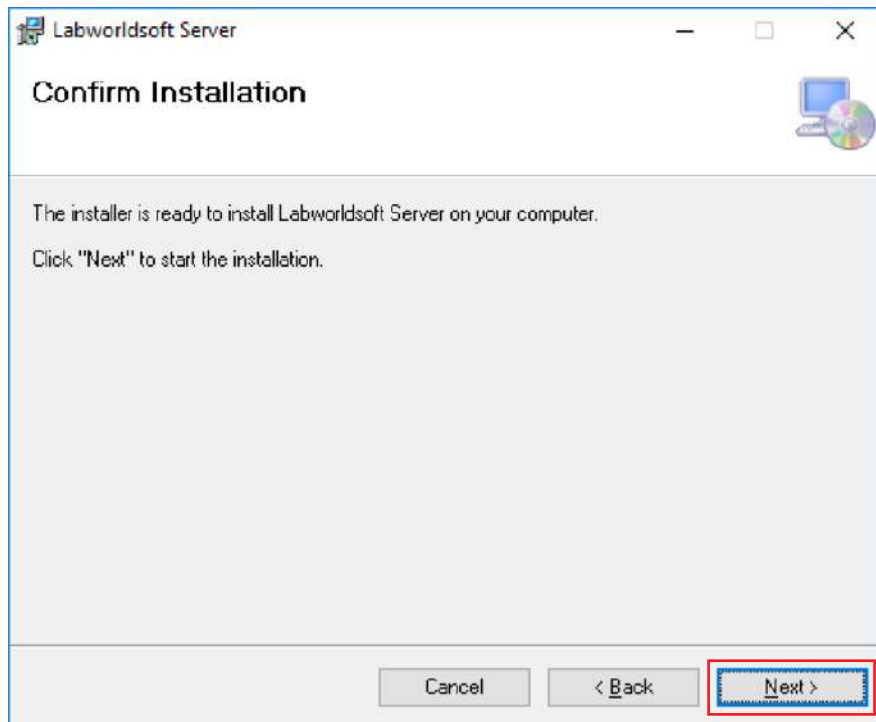
Please provide User Credential with Administrative Privilege. This Administrative User should be added to SQL Server Database Engine Logins with atleast the following Server Roles selected: dbcreator, public, securityadmin, serveradmin, sysadmin

User Name (Domain\UserName)
IWB\Tony.Thomas

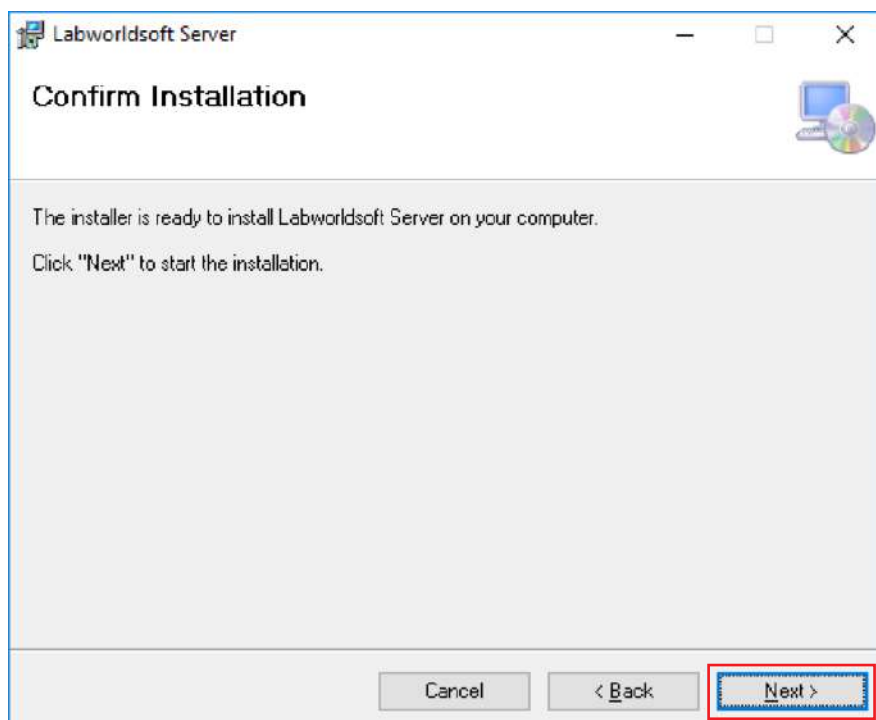
Password
●●●●●●●●

Cancel < Back **Next >**

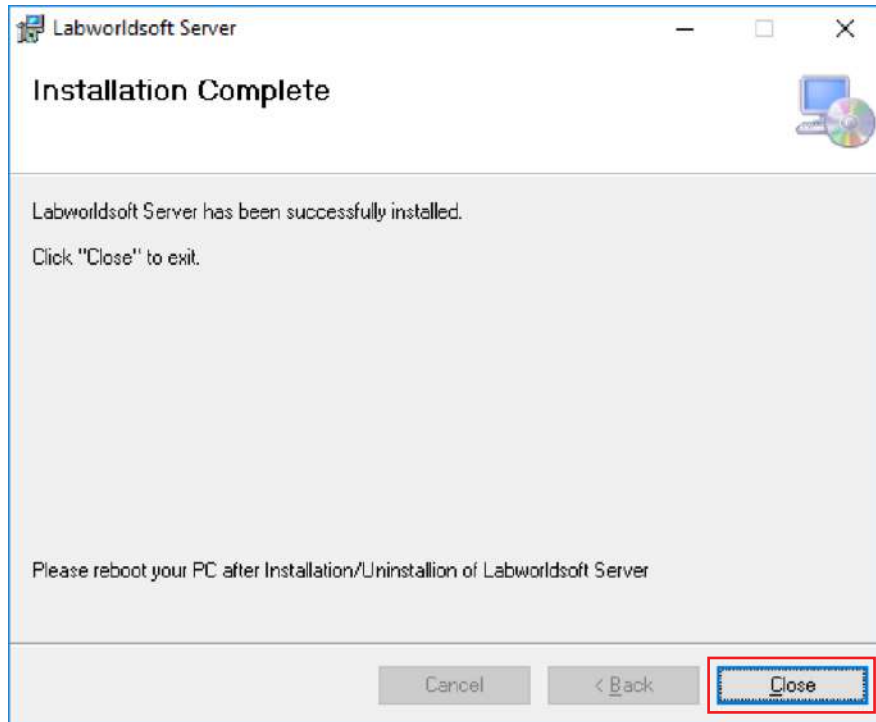
e. Click **Next >**.



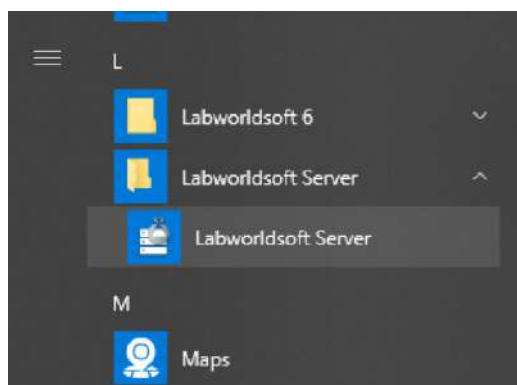
f. Click **Next >**. Labworldsoft Server is being installed.



g. Installation is completed. Click **Close** button.



h. Shortcuts are created in Windows Start Menu and Desktop.



3.2 Deployed package details

If the default installation location is selected, **Labworldsoft Server** will be installed in **C:\Program Files\Labworldsoft\Labworldsoft Server** folder.

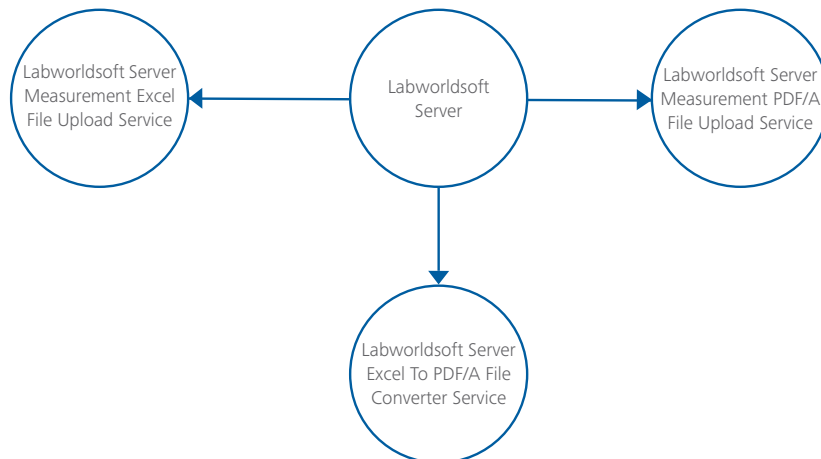
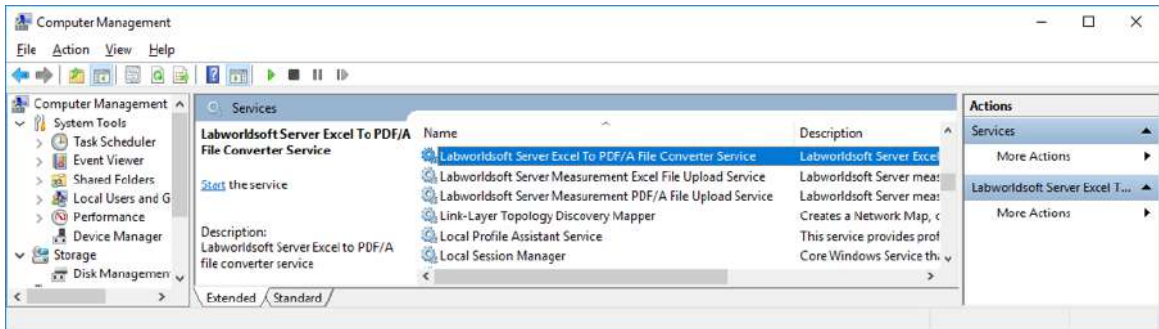
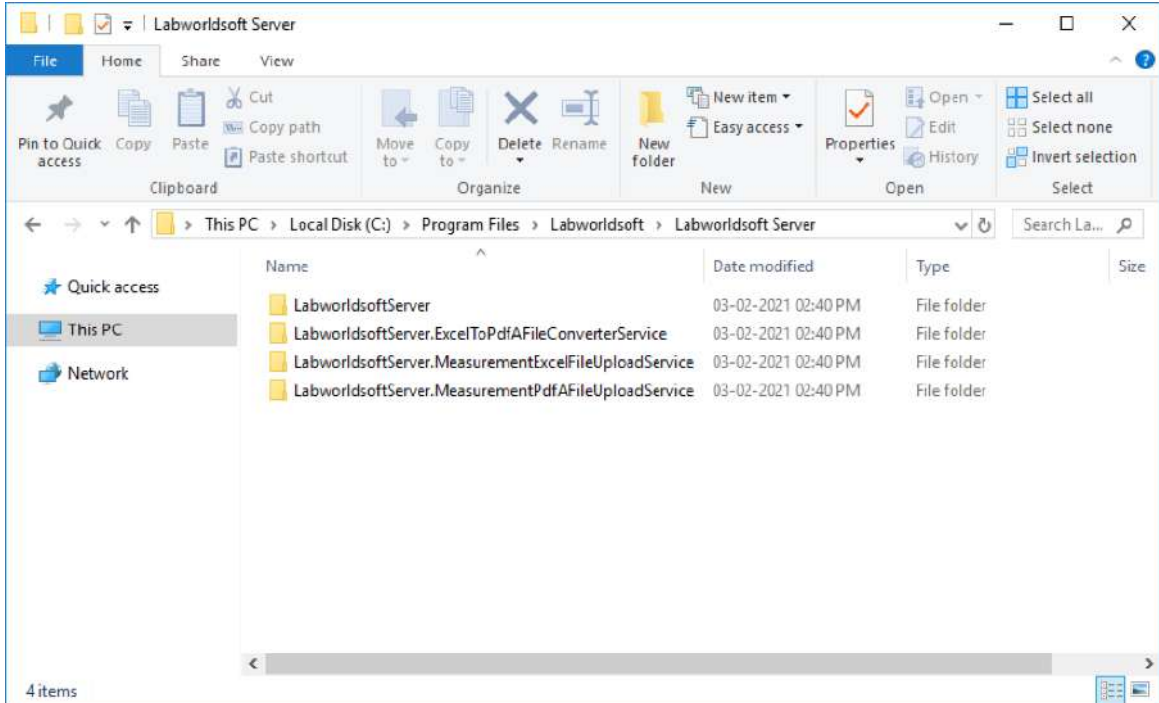


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Labworldsoft Server application suite comprises of 4 program components.

Labworldsoft Server Desktop Main application, **Labworldsoft Server Measurement Excel File Upload Service** windows service, **Labworldsoft Server Measurement PDF/A File Upload Service** windows service and **Labworldsoft Server Excel To PDF/A File Converter Service** windows service.

Program Component	Application Type	Installation Folder
Labworldsoft Server application	Desktop Application	C:\Program Files\Labworldsoft\Labworldsoft Server\LabworldsoftServer
Labworldsoft Server Measurement Excel File Upload Service	Windows Service	C:\Program Files\Labworldsoft\Labworldsoft Server\LabworldsoftServer.MeasurementExcelFileUploadService
Labworldsoft Server Measurement PDF/A File Upload Service	Windows Service	C:\Program Files\Labworldsoft\Labworldsoft Server\LabworldsoftServer.MeasurementPdfAFileUploadService
Labworldsoft Server Measurement Excel To PDF/A File Converter Service	Windows Service	C:\Program Files\Labworldsoft\Labworldsoft Server\LabworldsoftServer.ExcelToPdfAFileConverterService



Labworldsoft Server Processes



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4. Setting up Labworldsoft Server

It is recommended that an **IT Administrator** and a **Database Administrator** have to administer setting up **Labworldsoft Server**.

4.1 Login

Run **Labworldsoft Server**. The **Login** screen will be displayed. User can use the following default **Server Administrator** credential for logging to **Labworldsoft Server**.

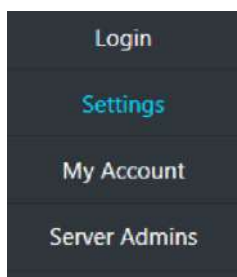
Default User Credential	
User ID	serveradmin
Password	Password@1

Use the default User ID as **serveradmin** and Password as **Password@1** for logging for the first time.

Please refer section 7 for creating additional **Server Administrators**.

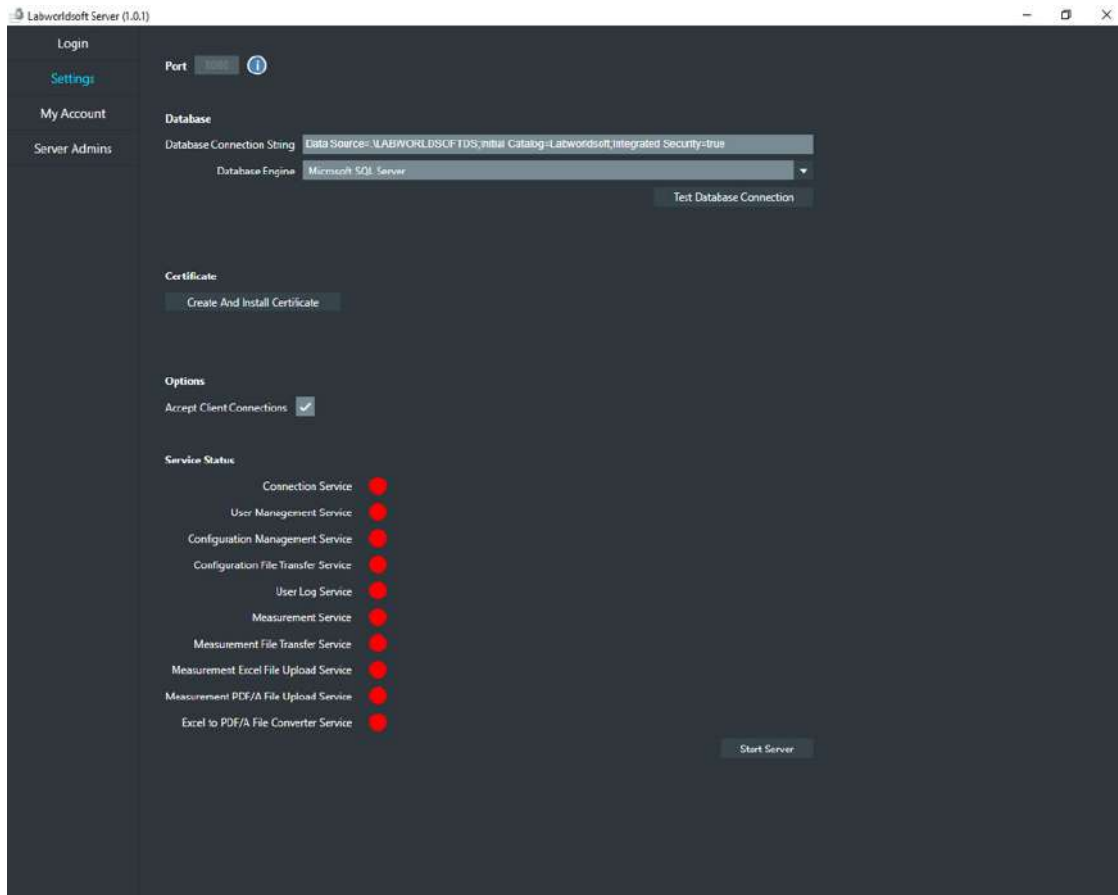
4.2 Server settings

After successful login, **Settings**, **My Account**, **Server Admins** tabs are visible and Settings screen will be displayed by default. Users can use this **Settings** screen for configuring **Labworldsoft Server**.





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4.2.1 Port

As mentioned in section 2.2, **Labworldsoft Server** application suite comprises of 4 program components. **Labworldsoft Server** Desktop Main application, Labworldsoft Server Measurement Excel File Upload **Service windows service**, **Labworldsoft Server Measurement PDF/A File Upload Service windows service** and **Labworldsoft Server Excel To PDF/A File Converter Service windows service**.

Labworldsoft Server Desktop Main Application comprises of 7 Web Service components. These Web Service modules are listening on different TCP Ports from **8080** to **8093** for incoming requests from **Labworldsoft 6**.

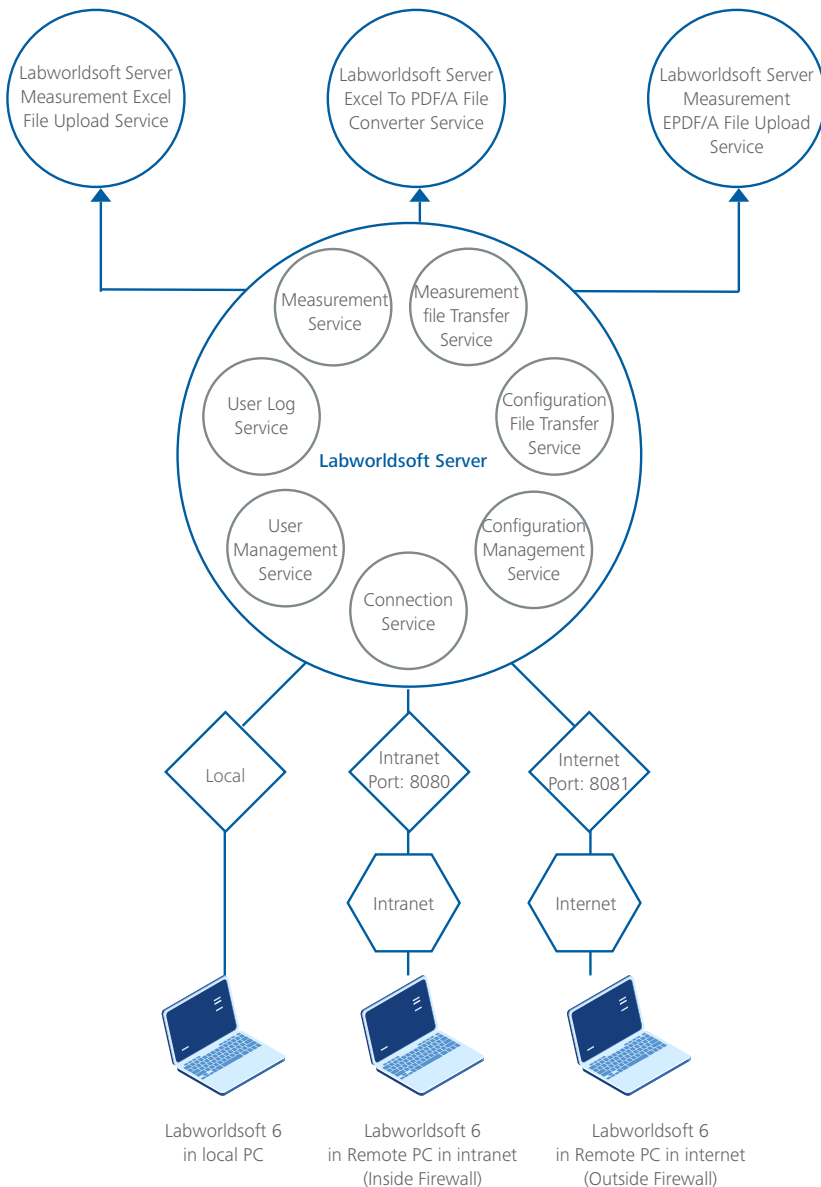
At present, service ports are not configurable. **Therefore, if any software is already listening on TCP ports from 8080 to 8093, stop that software.** By using **netstat** command, it is possible to find port numbers used by all the applications.


```

Select Administrator: Command Prompt - netstat -a -b -o
C:\Windows\system32>netstat -a -b -o

Active Connections

Proto Local Address           Foreign Address         State       PID
TCP   0.0.0.0:80              BL-19-01:0             LISTENING   4
Can not obtain ownership information
TCP   0.0.0.0:135             BL-19-01:0             LISTENING   1500
RpcSs
[svchost.exe]
TCP   0.0.0.0:445             BL-19-01:0             LISTENING   4
Can not obtain ownership information
TCP   0.0.0.0:1433            BL-19-01:0             LISTENING   8980
[sqlservr.exe]
TCP   0.0.0.0:3389            BL-19-01:0             LISTENING   1048
TermService
[svchost.exe]
TCP   0.0.0.0:5357            BL-19-01:0             LISTENING   4
Can not obtain ownership information
TCP   0.0.0.0:8080            BL-19-01:0             LISTENING   10492
[LabworldsoftServer.exe]
TCP   0.0.0.0:8081            BL-19-01:0             LISTENING   4
Can not obtain ownership information
TCP   0.0.0.0:8082            BL-19-01:0             LISTENING   10492
[LabworldsoftServer.exe]
TCP   0.0.0.0:8083            BL-19-01:0             LISTENING   4
Can not obtain ownership information
TCP   0.0.0.0:8084            BL-19-01:0             LISTENING   10492
[LabworldsoftServer.exe]
  
```



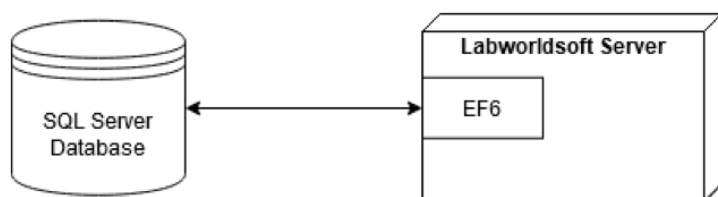
Service Name	TCP Ports Used
Connection Service	8080, 8081
User Management Service	8082, 8083
Configuration Management Service	8084, 8085
Configuration File Transfer Service	8086, 8087
User Log Service	8088, 8089
Measurement Service	8090, 8091
Measurement File Transfer Service	8092, 8093

4.2.2 Database Engine

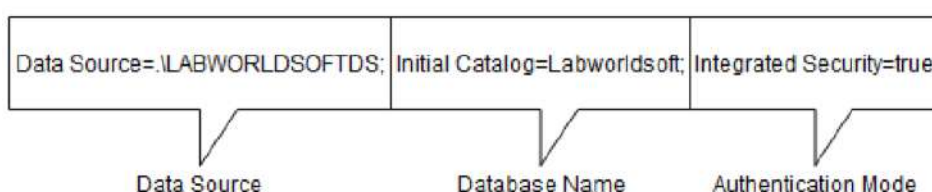
At present, **Labworldsoft Server** supports only **Microsoft SQL Server** database, which is selected by default. In future, it may support multiple databases such as **Oracle** and **MySQL**.

4.2.3 Database Connection String

Database Connection String is a script that specifies information about a data source and means of connecting to it using **Entity Framework 6 (EF6)**. **Labworldsoft Server** uses **Entity Framework 6 (EF6) Object-Relational Mapping (ORM)** framework for accessing database. Since **Labworldsoft Server** supports only **Microsoft SQL Server** database at present, user has to provide connection string to connect to the **SQL Server** database only.



A simplest **SQL Server** database connection string using **Entity Framework 6** has 3 parts, **Data Source**, **Database Name** and **Authentication Mode**. Each part is delimited with semi-colon (;).





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Data Source is the SQL Server **Instance Name** that the **Database Administrator** created during installing **SQL Server** database.

Initial Catalog specifies the **database name**. Suppose the **Data Source** name is **LABWORLDSOFTDS** and database name is **Labworldsoft**. When clicking **Test Database Connection** button or **Start Server** button, Labworldsoft Server checks whether a database with name Labworldsoft exists in the Data Source LABWORLDSOFTDS. If it does not exist, **Labworldsoft Server** will send SQL scripts using EF6 for creating a database with name **Labworldsoft**. Therefore, the creation of the database is automatic with **Labworldsoft Server**.

A **Database Connection String** should be a valid **Entity Framework 6 (EF6)** connection string for **SQL Server** Database. Therefore, any valid **EF6** connection string can be provided in the **Database Connection String text** box.

If the **Database Administrator** used a different name for **Data Source** while installing **SQL Server**, he has to specify that new name in **Data Source** section of the connection string. If the Administrator thinks to choose a different name for database, he has to specify that new name in **Initial Catalog** part of the connection string. If the Database Administrator chose **Mixed** mode authentication instead of **Windows authentication** while installing SQL Server, do appropriate changes in the Authentication Mode section of the connection string.

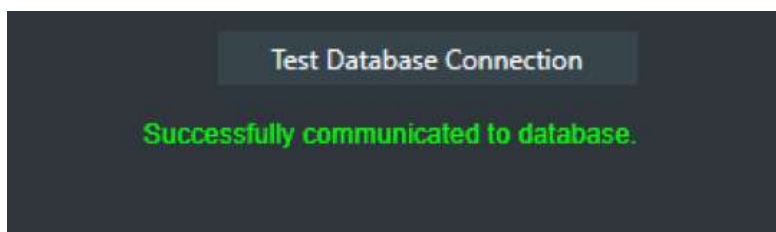
A **Database Administrator** may refer **Microsoft** website or **Google** search for finding more advanced **Database Connection Strings** to satisfy their requirements.

If the Administrator chose the default Data Source name **LABWORLDSOFTDS**, choosing the default database name **Labworldsoft** and chose the default authentication mode **Windows Authentication**, he can use the default **Database Connection String** shown below.

```
Data Source=.\LABWORLDSOFTDS;Initial Catalog=Labworldsoft;Integrated Security=true
```

4.2.4 Test Database Connection

After providing a valid **Database Connection String** and selected the **Database Engine**, Administrator can check the database communication status by clicking **Test Database Connection** button. When clicking **Test Database Connection** button, **Labworldsoft Server** will try to connect to the Data Source specified, using the authentication mode specified, and checks whether the database name specified exists. If the database does not exist in the data source, it will be created automatically first. After that, the database will be opened and closed immediately as a test to find the status. The following message will be displayed if the communication is successful.



If communication fails, an appropriate error message will be displayed.

4.2.5 Accept Client Connections

Accept Client Connections check box should be **checked** to enable **Labworldsoft 6** client connections to **Labworldsoft Server**. If **Labworldsoft Server** is started by clicking **Start Server** button after checking **Accept Client Connections** check box, all the 10 services (7 Web Service Modules + 3 Windows Services) will be started and the service status indicators will turn into **green** colour. On the other hand, if **Labworldsoft Server** is started with **unchecking** the **Accept Client Connections** check box, none of the services will be started and all the indicator lights remain in red colour.

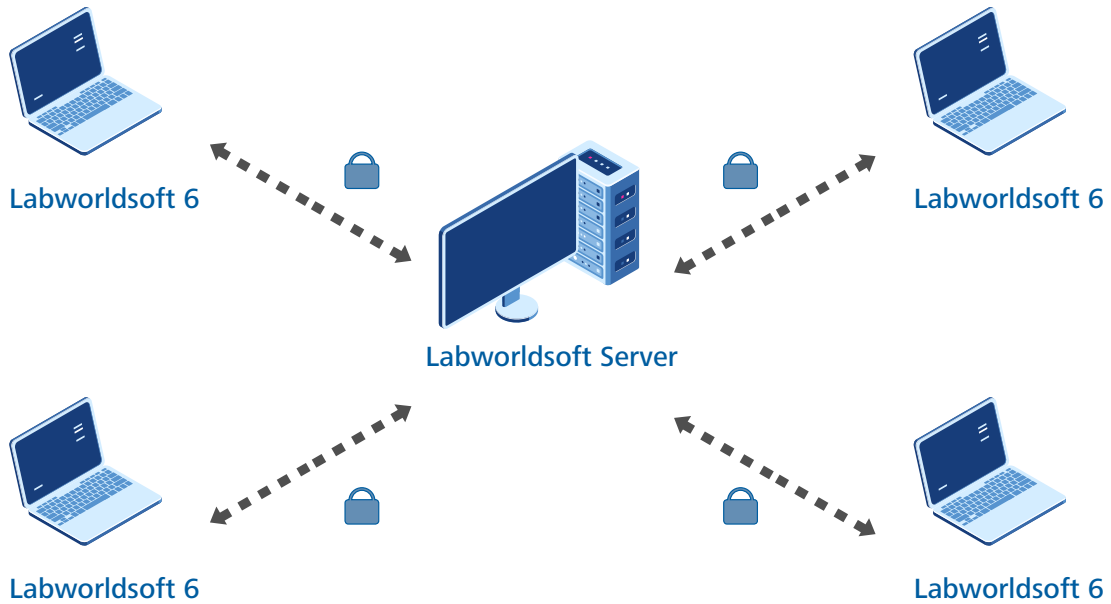
If an Administrator wants to work on **Labworldsoft Server** directly without any interruptions from **Labworldsoft 6** clients, **start server** by clicking Start Server button after unchecking **Accept Client Connections** check box. The usage of this option is explained with an example. Suppose an Administrator wants to modify users. If other Administrators also modify the same users remotely by connecting **Labworldsoft 6** clients at the same time, the result will be inconsistent. Therefore, the Administrator can temporarily disable **Labworldsoft 6** client connections by unchecking **Accept Client Connections** check Box and later after finishing his/her work, enable it back.

4.2.6 Certificate

A standard X. 509 digital certificate (self-signed certificate) with the name **LabworldsoftServer** has to be created and installed in Server PC and the same certificate has to be installed in all Client PCs to secure the communication.

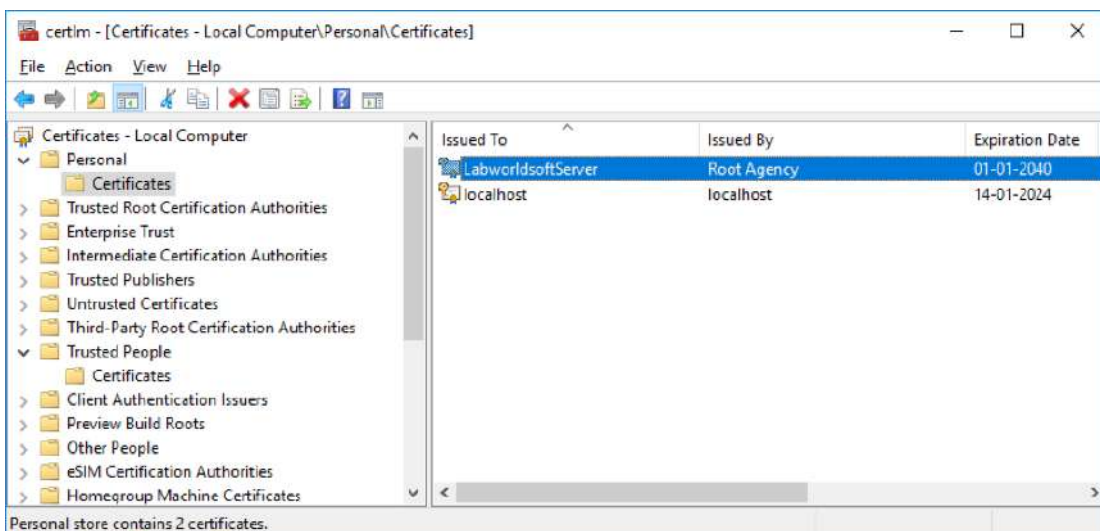
The certificate in Server PC can be created and installed automatically by clicking **Create And Install Certificate** button and the installation location is **Local Computer\Personal** store in Server PC. This self-signed certificate has to be installed in all Client PCs manually and the installation location is **Local Computer\Trusted People** store.

Labworldsoft Server Certificate

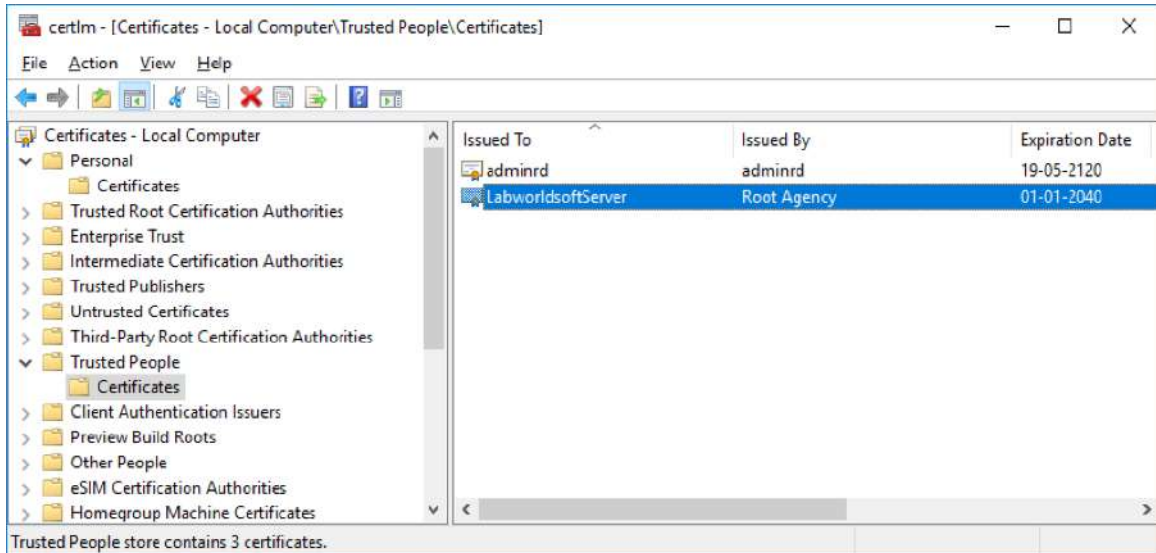


4.2.6.1 Creating and installing Certificate


Labworldsoft Server queries for certificate with name **LabworldsoftServer** in Local Computer\Personal Store.

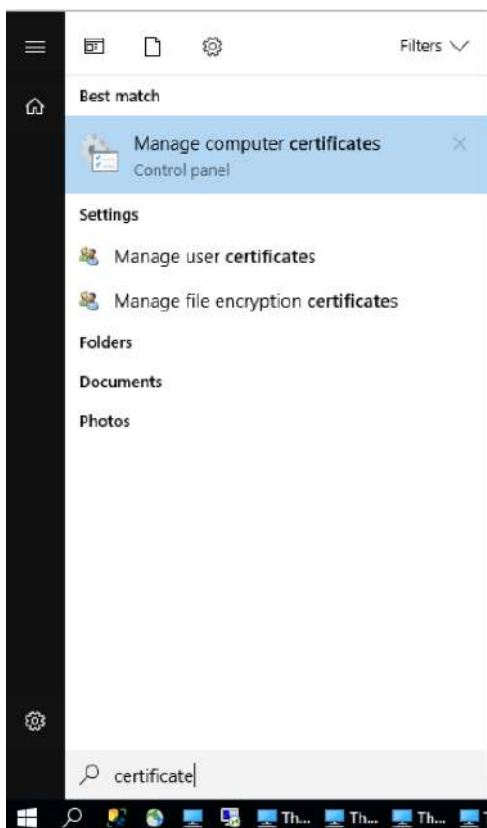


Labworldsoft 6 client queries for certificate with name **LabworldsoftServer** in Local Computer\Trusted People store.

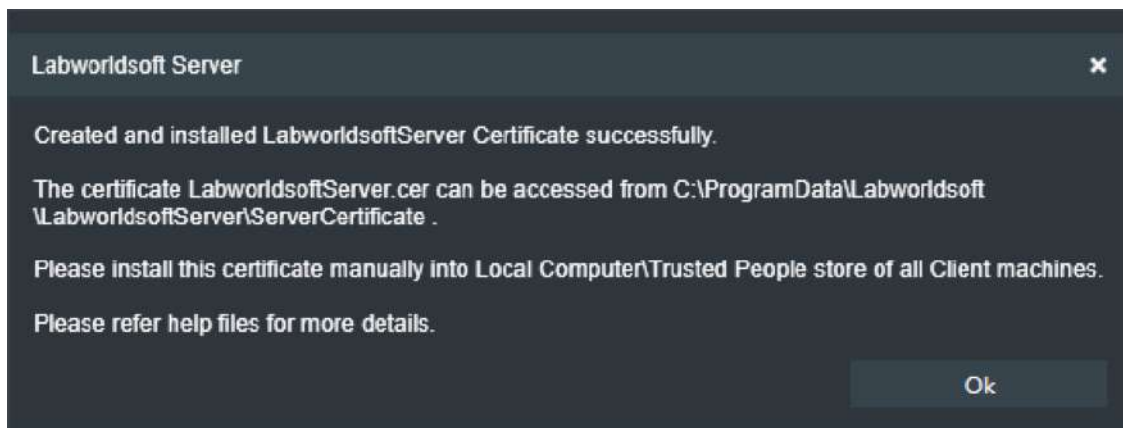


To access the Computer Certificate store, do the following:

Select the **Start**  button and start typing the text **certificate**. Search opens automatically as typing the text. In search results, click **Manage computer certificates**, which will open **Computer Certificate** store.



Administrator has to click **Create and Install Certificate** button to create and install a self-signed certificate with name **LabworldsoftServer**. If the installation operation is successful, the following message will be displayed.



When clicking **Create and Install Certificate** button, following events will occur.

- a. **Labworldsoft Server** deletes all certificates with the name **LabworldsoftServer** from all the stores. It just clears the Certificate store.
- b. Create a new self-signed certificate with name **LabworldsoftServer** and install this certificate in **Local Computer\Personal** store and **Local Computer\Trusted People** store in Server PC.
- c. Copies the certificate file **LabworldsoftServer.cer** into **C:\ProgramData\Labworldsoft\LabworldsoftServer\ServerCertificate** directory.

4.2.6.2 Why automatic installation in Local Computer\Trusted People store in Server PC?

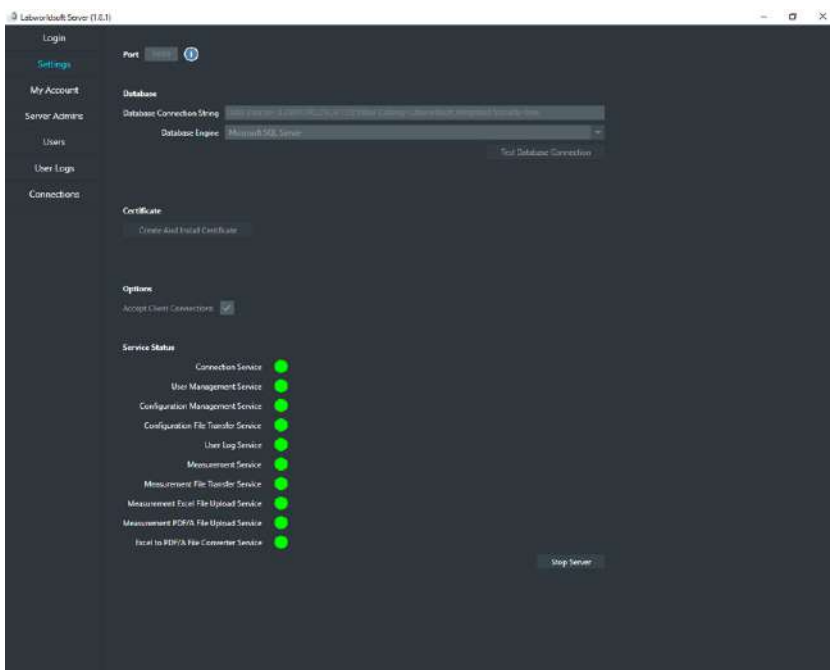
It is possible to install Labworldsoft Server and Labworldsoft 6 in the same PC. In this scenario, we say that Labworldsoft 6 communicates to Labworldsoft Server locally and is called **Local Deployment**. As mentioned in Section 1, Labworldsoft 6 can use any of **Local**, **Intranet** or **Internet** protocols to connect to Labworldsoft Server in **Local Deployment**. Here Intranet and Internet protocols require this self-signed certificate to communicate to Labworldsoft Server. That is why the certificate is installed automatically in **Local Computer\Trusted People** store as well, when clicking **Create And Install Certificate** button. However, users have to install this self-signed certificate created in **Server PC**, to all remote Client PCs manually. Please refer Document 4 **User Guide - Setting Labworldsoft 6 and Labworldsoft Server** for more details about how to install the certificate in remote Client PCs.

4.2.7 Starting and stopping Server

a. Initially, the Server is in stopped state and service status indicators of all the services are in **Red** colour.



b. The server is started by clicking **Start Server** button. If the server is started successfully, service status indicators of all the services will be turned into **Green** colour, **Start Server** button is deactivated, **Stop Server** button is activated and all the tabs (including Users, User Logs and Connections) are visible.



c. If Server is in started state, it can be stopped by clicking the **Stop Server** button.



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5. Server Admin Users and Labworldsoft 6 Users

Labworldsoft Server manages 2 types of users, **Server Admin Users** and **Labworldsoft 6 Users**. **Server Admin Users** are simply called **Server Admins** and **Labworldsoft 6 Users** are simply called **Users**. **Server Admins screen** manages **Server Admin users** and **Users screen** manages **Labworldsoft 6 users**.

5.2 Server Admins

Server Admins are managed in Server Admins screen. Server Admins are used for logging in to Labworldsoft Server from Labworldsoft Server application.

When Labworldsoft Server is accessed first time, a local **Microsoft SQL Server Compact** database **LabworldsoftServerAdminUsers_1_0_0_0.sdf** is created and stored in **C:\ProgramData\Labworldsoft\LabworldsoftServer\LocalDatabaseFiles** folder in Server PC. In addition, default **serveradmin** user with password **Password@1** is added into this database. All Server Admins are stored in this database.

If you forget Server Admins, close Labworldsoft Server application and delete **LabworldsoftServerAdminUsers_1_0_0_0.sdf** database file. Start Labworldsoft Server again and the database will be created again automatically with user **serveradmin** and password **Password@1**. Now you may use the default **serveradmin** user with password **Password@1**.

5.3 Labworldsoft 6 Users

Labworldsoft 6 Users are used for logging in to Labworldsoft Server from Labworldsoft 6 application. Labworldsoft 6 Users are stored in Microsoft SQL Server database mentioned in **Settings tab >> Database Connection String**.

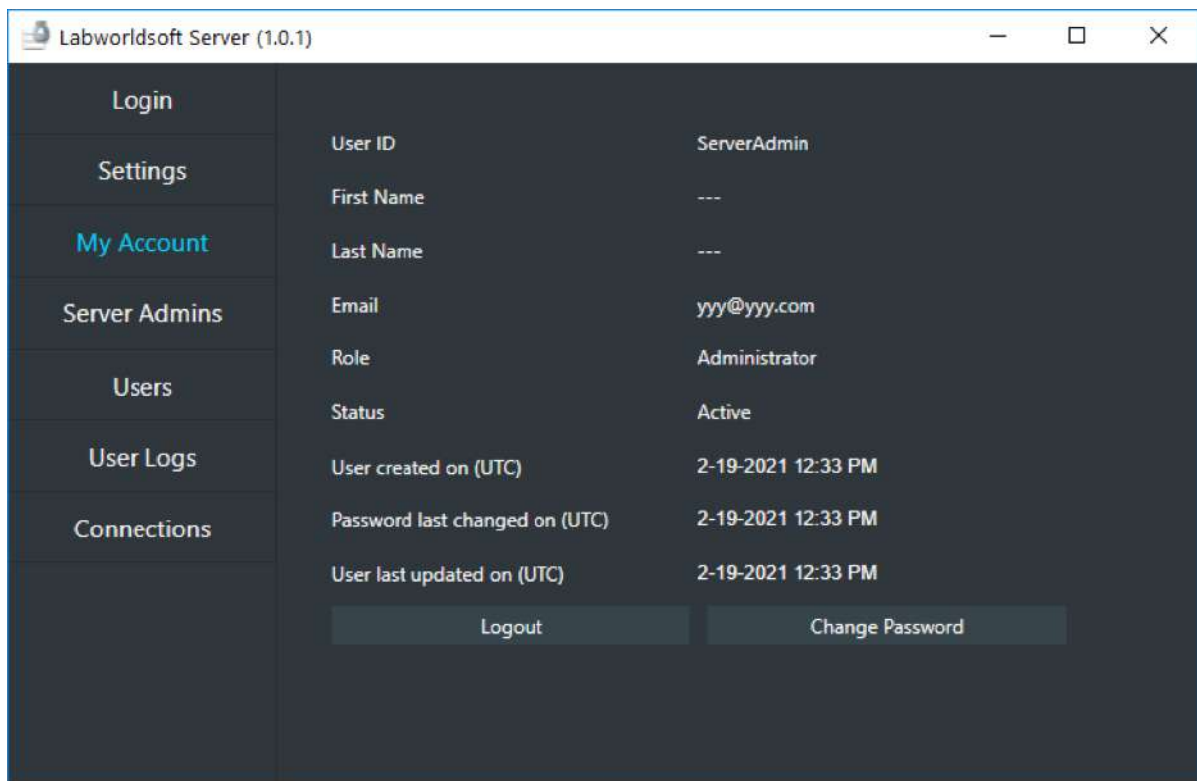
Users screen is used for managing **Labworldsoft 6 Users**. After the installation, when Labworldsoft Server is access first time, log in to Labworldsoft Server using default Server Admin user **serveradmin** and password **Password@1**. After this, start Labworldsoft Server by clicking **Start Server** button in **Settings** screen. After server is started successfully, **Users** tab is visible. Access **Users** screen for adding/modifying **Labworldsoft 6 Users**.



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6. My Account screen

After successful login, **My Account** screen will be displayed by default, which shows details about the logged in **Server Admin** user.



6.1 Changing password

Password can be changed by clicking **Change Password** button. When **Change Password** button is clicked, **Change Password** screen will be popped up.

Change Password ✕

Current Password

New Password

Confirm New Password

Password must contain:

- Minimum 8 characters
- Maximum 15 characters
- At least 1 capital letter
- At least 1 small letter
- At least 1 number
- At least 1 special character ! @ # \$ % ^ & * ; + -

Ok

Provide the new password with the password criteria as mentioned in this screen. If password is changed successfully, the following screen will be popped up.

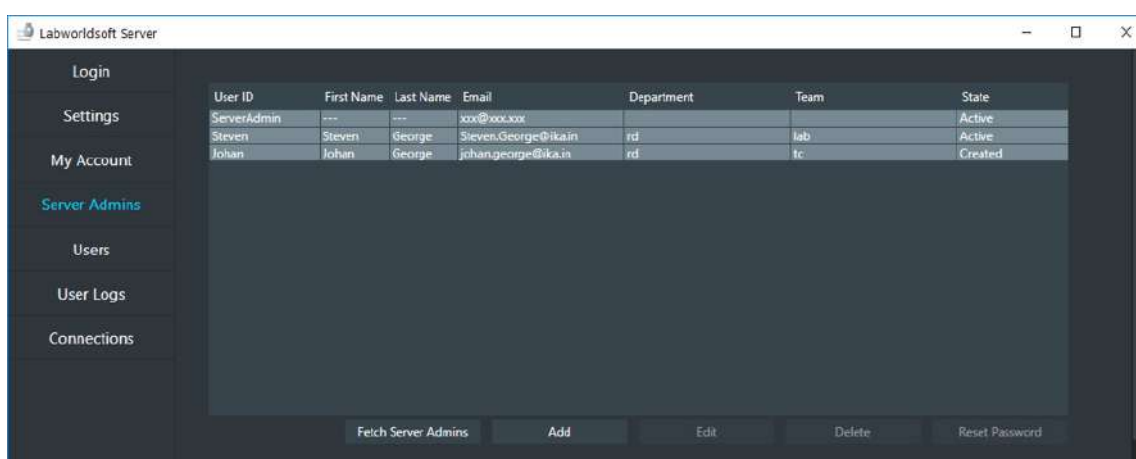
Change Password ✕

Password changed successfully.

Ok

7. Server Admins screen

Server Admins screen manages Server Admin users.



Please refer Document **3 User Guide - Using Labworldsoft Server** for more details about how to fetch, add, edit or delete a Server Admin User.

7.1 Managing default serveradmin user

A user can use the default Server Admin user **serveradmin** with **Password@1** for log in to Labworldsoft Server first time. A user account has 5 different states (**Active, Inactive, Created, Locked and Password Resetted**). When a user is added, it is in **Created** state at first. If a user account with **Created** state uses for log in to Labworldsoft Server, **Change Password** screen will be popped up to change the password for Activating the user.

The **serveradmin** user is in **Activated** state by default.

We recommend 2 methods to make the system more secure:

- Change the password of **serveradmin** user after logged in first time.
- Log in using **serveradmin** user. Create a new **Server Admin** user. Log out from the default **serveradmin**. Login with the new **Server Admin** user. Delete the default **serveradmin** user. Please refer Document **3 User Guide - Using Labworldsoft Server** for details about how to add a new Server Admin user.

8. Database internals

We assume that the Administrator used the default Data Source name **LABWORLDSOFTDS** and Database name **Labworldsoft**. In addition, we assume that both SQL Server and Labworldsoft Server are installed in the same PC.

Each time when clicking **Test Database Connection** button or Start Server button in Settings screen, **Labworldsoft Server** checks whether **Labworldsoft** database exists in **LABWORLDSOFTDS** data source. If Labworldsoft database does not exist, **Labworldsoft Server** will create a new database with name **Labworldsoft** in **LABWORLDSOFTDS** data source.

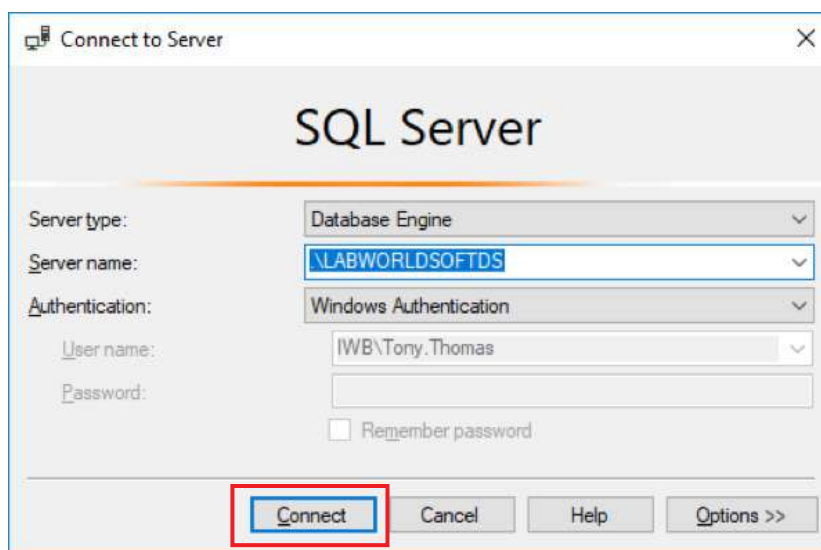
A user can view the database and tables created using **SQL Server Management Studio (SSMS)**. For more details about SSMS, please refer the document **1 Download and Install SQL Server for Labworldsoft Server**.

For viewing created database tables, access SSMS as follows:

a. Start **SSMS**. **Connect to Server** window is popped up.

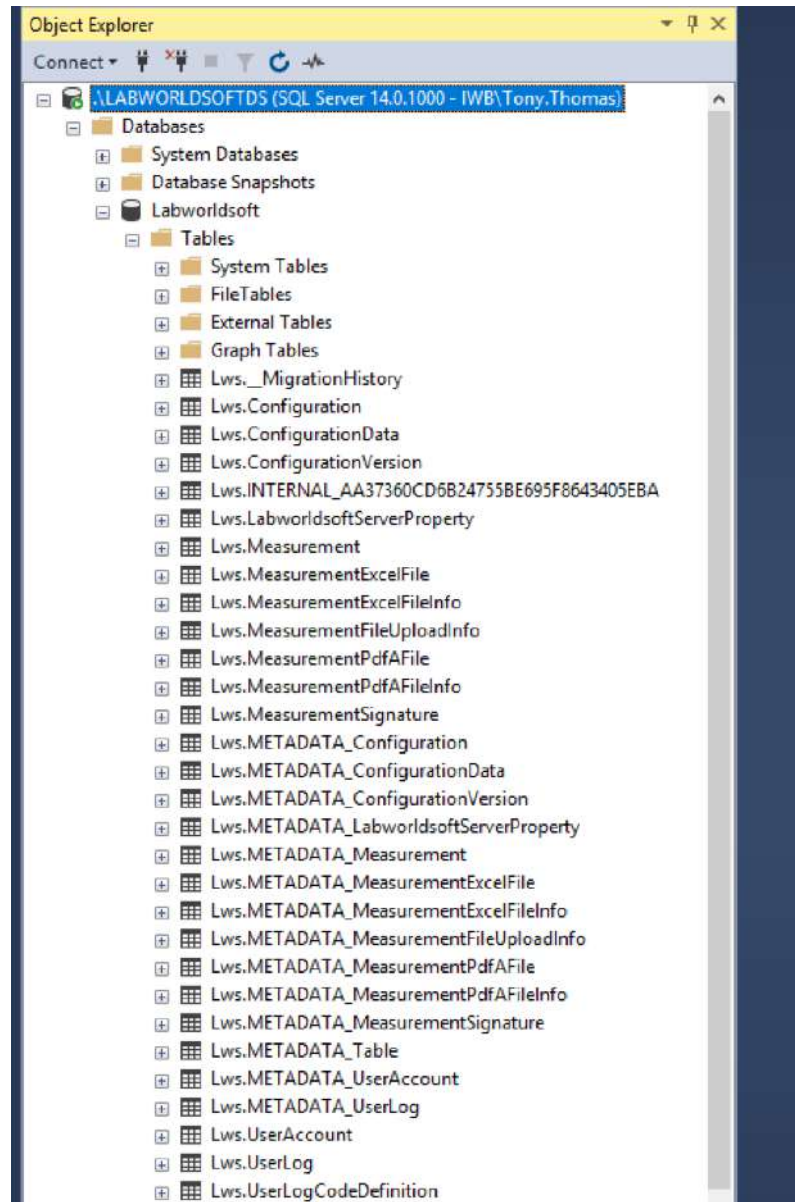
We assume the following:

- > Suppose the Server name or Data source name is **LABWORLDSOFTDS**.
- > Logged in windows user to PC is **IWB\Tony.Thomas**
- > **IWB\Tony.Thomas** was added to the Administrators list while installing SQL Server.



Click the **Connect** button.

b. **Object Explorer** will be opened by default. Expand **Databases\Labworldsoft\Tables** as shown below:



Labworldsoft Server creates **Labworldsoft** database with several tables to store the data. Tables started with name **METADATA_** contains metadata information. For example **METADATA_Measurement** table contains details about the **Measurement** table.



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9. Log files

A log file is a computer generated data file which contains information about various application activities. Labworldsoft Server comprises with 1 Desktop application and 3 Windows service applications. Therefore, Labworldsoft Server application suite has 4 log files.

Component	Type	Log file location
Labworldsoft Server	Desktop Application	C:\Users\Public\Documents\Labworldsoft\Labworldsoft Server\Logs
Labworldsoft Server Measurement Excel File Upload Service	Windows Service application	C:\Users\Public\Documents\Labworldsoft\LabworldsoftServer.MeasurementExcelFileUploadService\Logs
Labworldsoft Server Measurement PDF/A File Upload Service	Windows Service application	C:\Users\Public\Documents\Labworldsoft\LabworldsoftServer.MeasurementPdfAFileUploadService\Logs
Labworldsoft Server Excel To PDF/A File Converter Service	Windows Service application	C:\Users\Public\Documents\Labworldsoft\LabworldsoftServer.ExcelToPdfAFileConverterService\Logs

When raising bugs, please send all the 4 respective log files together to **Licensing, R&D** rdlicensing@ika.de

10. Trouble shooting and FAQs

Question 1.

I had only one Server Admin user. I have forgotten the password. How can I access Labworldsoft Server again?

Answer 1.

Server Admin user is stored in local SQL Server Compact database

C:\ProgramData\Labworldsoft\LabworldsoftServer\LocalDatabaseFiles\ LabworldsoftServerAdminUsers_1_0_0_0.sdf file.

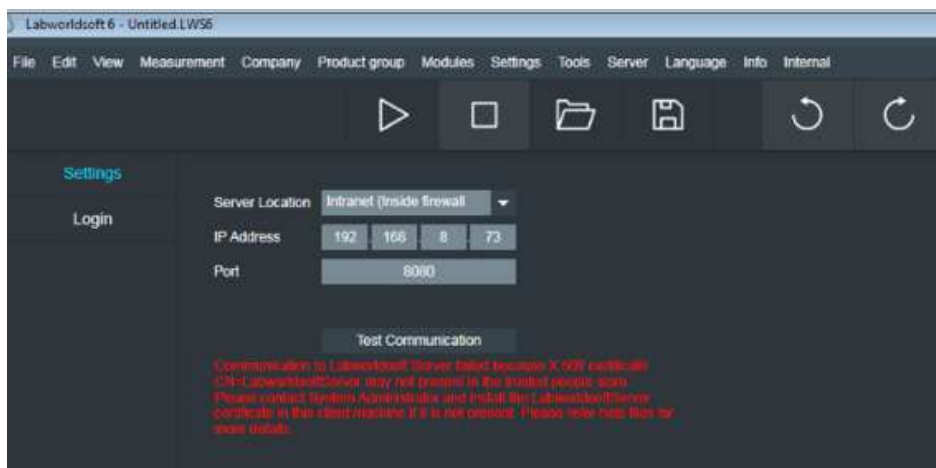
Do the following steps:

- Close **Labworldsoft Server**
- Go to the folder **C:\ProgramData\Labworldsoft\LabworldsoftServer\LocalDatabaseFiles**
- Delete the database file **LabworldsoftServerAdminUsers_1_0_0_0.sdf**
- Start **Labworldsoft Server** again.
- Log in to **Labworldsoft Server** again using the default Server Admin user **serveradmin** and password **Password@1**.

When **Labworldsoft Server** is started each time, it will check whether the database file **LabworldsoftServerAdminUsers_1_0_0_0.sdf** exists or not. If it does not exist, it will create a new database file and add the default credential **serveradmin** and **Password@1**.

Question 2.

While connecting to Labworldsoft Server, I am getting the following certificate error. How can I resolve this issue?



Communication to Labworldsoft Server failed because X509 certificate CN=LabworldsoftServer may not present in the trusted people store. Please contact System Administrator and install the LabworldsoftServer certificate in this client machine if it is not present. Please refer help files for more details.

Answer 2.

You have to install the self-signed certificate **LabworldsoftServer.cer** created by **Labworldsoft Server**, into all the Client PCs as well. Please refer section 4.2.6 of this document and **3 User Guide - Using Labworldsoft Server** document for getting more details.

Question 3.

My Labworldsoft 6 was connecting to a remote Labworldsoft Server earlier using Intranet protocol. After I setup a Labworldsoft Server in my PC so that I can connect Labworldsoft 6 locally as well, I am not able to connect to the remote Labworldsoft Server anymore.

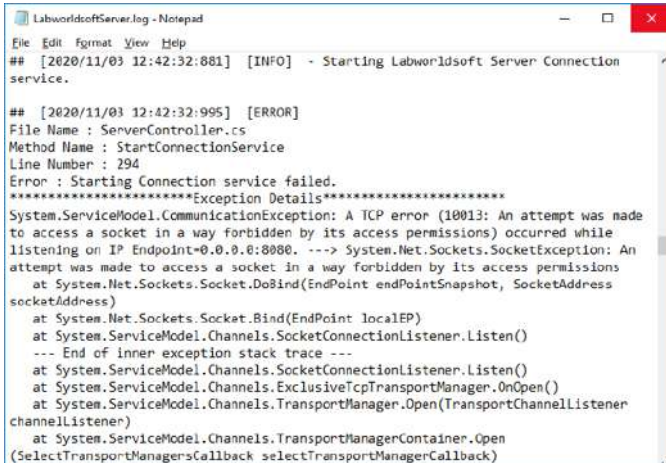
Answer 3.

After **Labworldsoft Server** is installed in your PC, you clicked **Create and Install Certificate** button in **Settings** screen for setting up **Labworldsoft Server**. Before creating a new certificate with name **LabworldsoftServer**, it will clear certificate store by deleting all the certificates with the name **LabworldsoftServer**. Therefore, you lost the remote **Labworldsoft Server** certificate from the certificate store and you will not be able to connect to the remote Labworldsoft Server anymore.

If you want to connect to multiple Labworldsoft Servers from your Labworldsoft 6 client, you have to setup your local **Labworldsoft Server** first. After that, you may import your remote Labworldsoft Server certificates into the certificate store in your Labworldsoft 6 Client PC.

Question 4.

I have installed Labworldsoft Server. I have setup Labworldsoft Server as mentioned in the document. When starting Labworldsoft Server by clicking **Start Server** button, I get **Starting Labworldsoft Server failed** error. I got the following error information from log file:



```
LabworldsoftServer.log - Notepad
File Edit Format View Help
## [2020/11/03 12:42:32:881] [INFO] - Starting Labworldsoft Server Connection
service.

## [2020/11/03 12:42:32:995] [ERROR]
File Name : ServerController.cs
Method Name : StartConnectionService
Line Number : 294
Error : Starting Connection service failed.
*****Exception Details*****
System.ServiceModel.CommunicationException: A TCP error (10013: An attempt was made
to access a socket in a way forbidden by its access permissions) occurred while
listening on IP Endpoint=0.0.0.0:8080. --> System.Net.Sockets.SocketException: An
attempt was made to access a socket in a way forbidden by its access permissions
at System.Net.Sockets.Socket.DoBind(EndPoint endPointSnapshot, SocketAddress
socketAddress)
at System.Net.Sockets.Socket.Bind(EndPoint localEP)
at System.ServiceModel.Channels.SocketConnectionListener.Listen()
--- End of inner exception stack trace ---
at System.ServiceModel.Channels.SocketConnectionListener.Listen()
at System.ServiceModel.Channels.ExclusiveTcpTransportManager.OnOpen()
at System.ServiceModel.Channels.TransportManager.Open(TransportChannelListener
channelListener)
at System.ServiceModel.Channels.TransportManagerContainer.Open
(SelectTransportManagersCallback selectTransportManagerCallback)
```

Answer 4.

There are mainly 3 reasons for this problem. At present, **Labworldsoft Server** is using 14 ports from port number **8080** to **8093**.

1. One or more ports from 8080 to 8093 are being used by another application.

```
C:\>netstat -a -b -o
```

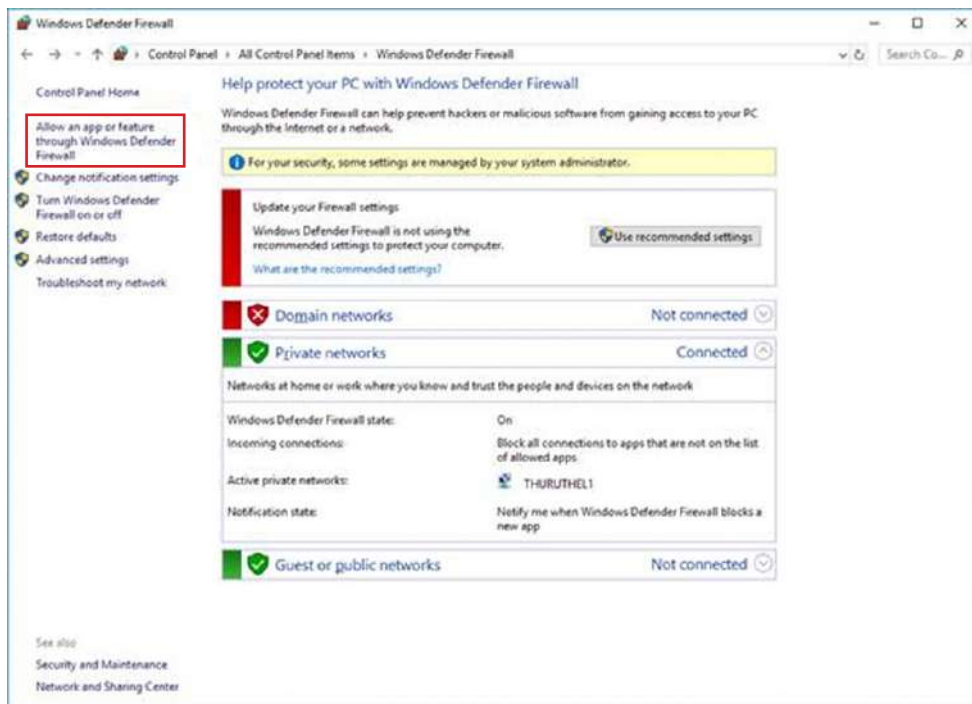
By executing **netstat -a -b -o** command, we can find the port numbers used by all the applications. If the port 8080 - 8093 is being used by another app, please stop that application and start **Labworldsoft Server** again. In future we will make this port configurable.

2. The port is blocked by Windows firewall.

We have to add **Labworldsoft Server** into **Windows Firewall**. The steps are as follows:

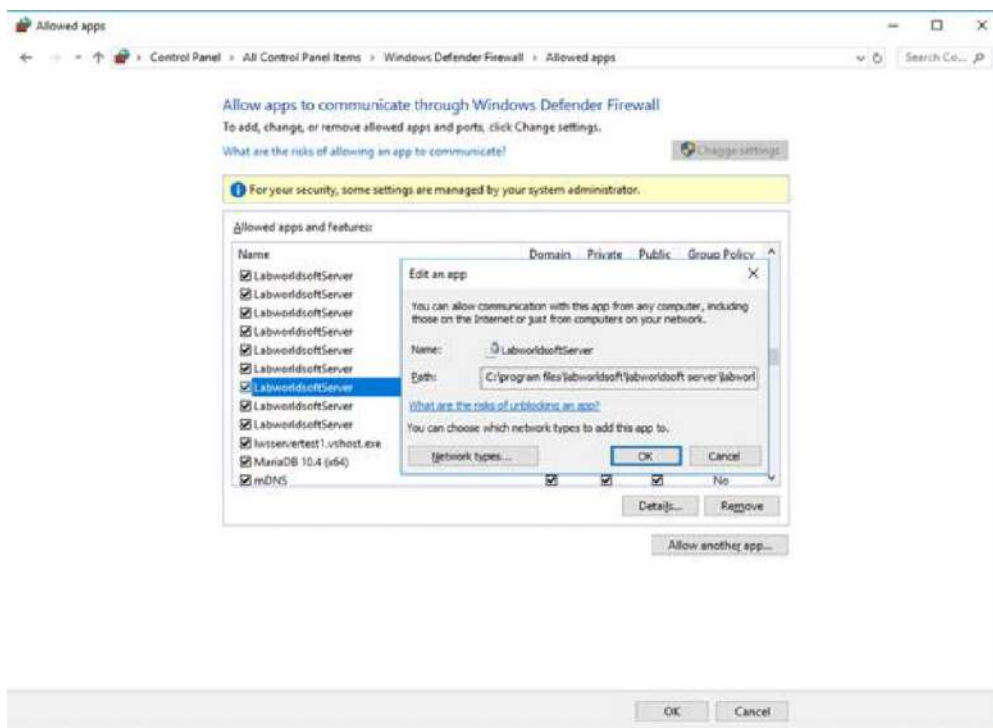
a. Go to Control Panel. Click **Windows Defender Firewall**.

b. Click **Allow an app or feature through Windows Defender Firewall**.



c. Click **Change Settings** button.

d. Check whether **Labworldsoft Server** is listed in **Allowed apps and feature** list box. If it is listed, select the row and click the **Details...** button and make sure that the path is the installation path. If path is correct, click **Network types...** button and select all the network types **Domain**, **Private** and **Public**.



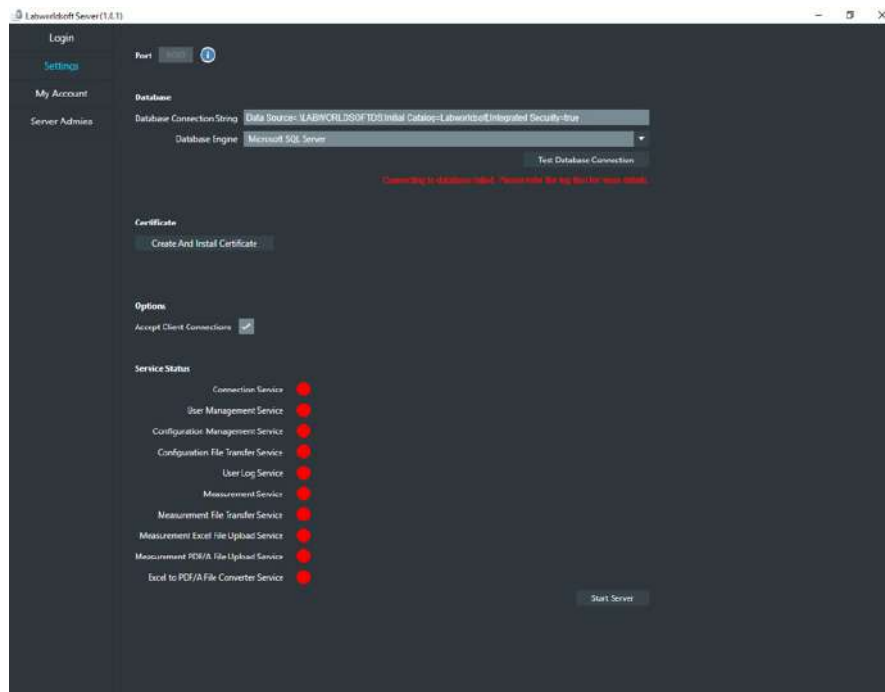
e. If Labworldsoft Server is not listed, click **Allow another app...** button and add the app **C:\Program Files\Labworldsoft\Labworldsoft Server\LabworldsoftServer\LabworldsoftServer.exe** (if you installed Labworldsoft Server in the default path) to the list and select all the network types as mentioned in d.

3. Organizations firewall is blocking the port.

Please talk to your IT Administrator and enable access to this port in company firewall.

Question 5.

I installed and setup Labworldsoft Server. I used the default Database Connection String as mentioned in this document. When clicking Test Database Connection button, I got Connecting to database failed. Please refer the log files for more details error.



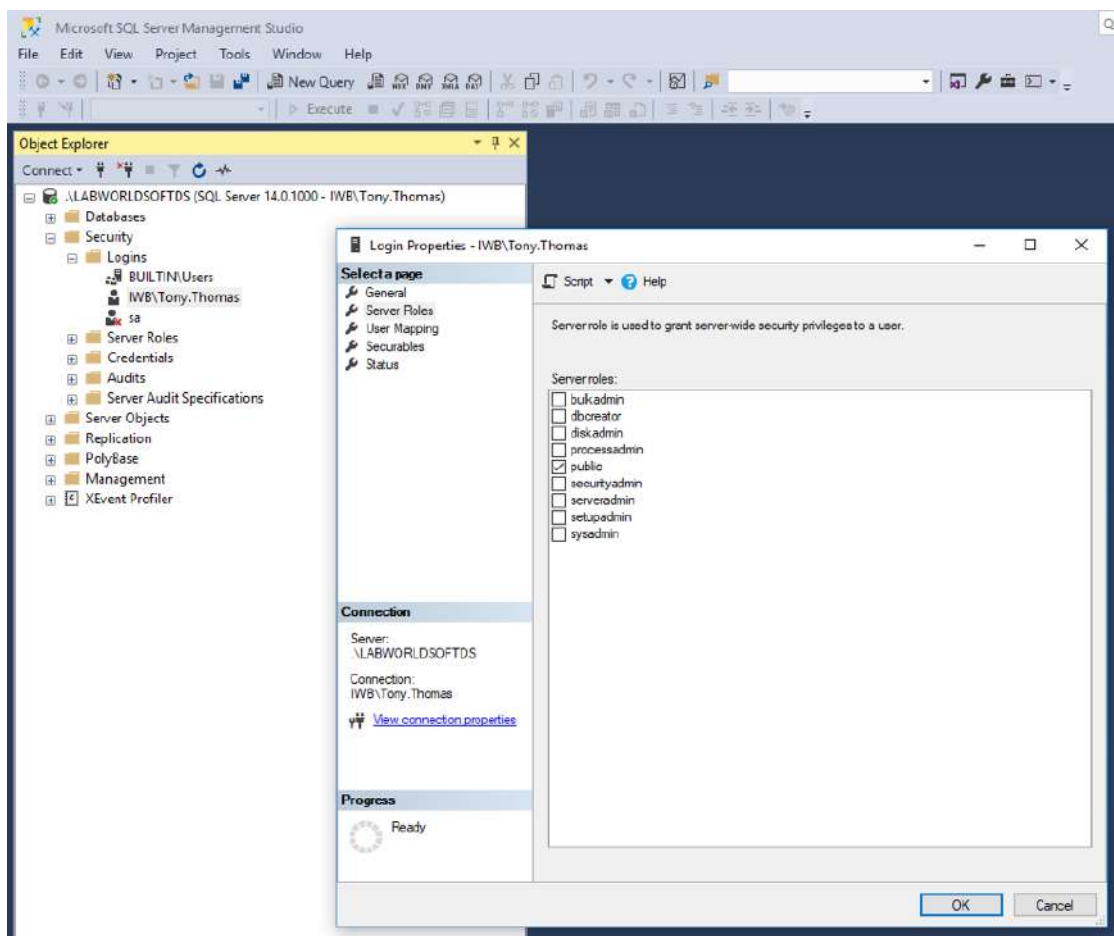
When I refer the log file, I got the following error:

```
LabworldsoftServer.log - Notepad
File Edit Format View Help

## [2021-02-12 18.19.36.030] [ERROR]
File Name : ServerController.cs
Method Name : InitializeLabworldsoftDatabaseConnection
Line Number : 87
Error : An error occurred.
*****Exception Details*****
System.Data.SqlClient.SqlException (0x80131904): CREATE DATABASE permission denied in database
'master'.
   at System.Data.SqlClient.SqlConnection.OnError(SqlException exception, Boolean
breakConnection, Action`1 wrapCloseInAction)
   at System.Data.SqlClient.TdsParser.ThrowExceptionAndWarning(TdsParserStateObject stateObj,
Boolean callerHasConnectionLock, Boolean asyncClose)
   at System.Data.SqlClient.TdsParser.TryRun(RunBehavior runBehavior, SqlCommand cmdHandler,
SqlDataReader dataStream, BulkCopySimpleResultSet bulkCopyHandler, TdsParserStateObject
stateObj, Boolean& dataReady)
   at System.Data.SqlClient.SqlCommand.RunExecuteNonQueryTds(String methodName, Boolean async,
Int32 timeout, Boolean asyncWrite)
   at System.Data.SqlClient.SqlCommand.InternalExecuteNonQuery(TaskCompletionSource`1
completion, String methodName, Boolean sendToPipe, Int32 timeout, Boolean& usedCache, Boolean
asyncWrite, Boolean inRetry)
   at System.Data.SqlClient.SqlCommand.ExecuteNonQuery()
   at System.Data.Entity.Infrastructure.Interception.InternalDispatcher`1.Dispatch
[TTarget,TInterceptionContext,TResult](TTarget target, Func`3 operation, TInterceptionContext
```

Answer 5.

Suppose the logged in Windows user is **IWB\Tony.Thomas**. Since **Windows Authentication** is used in **Database Connection String**, Labworldsoft Server uses **IWB\Tony.Thomas** as the SQL Server user as well. Please check **Server Roles** of the user **IWB\Tony.Thomas** using **SQL Server Management Studio (SSMS)** as shown below:



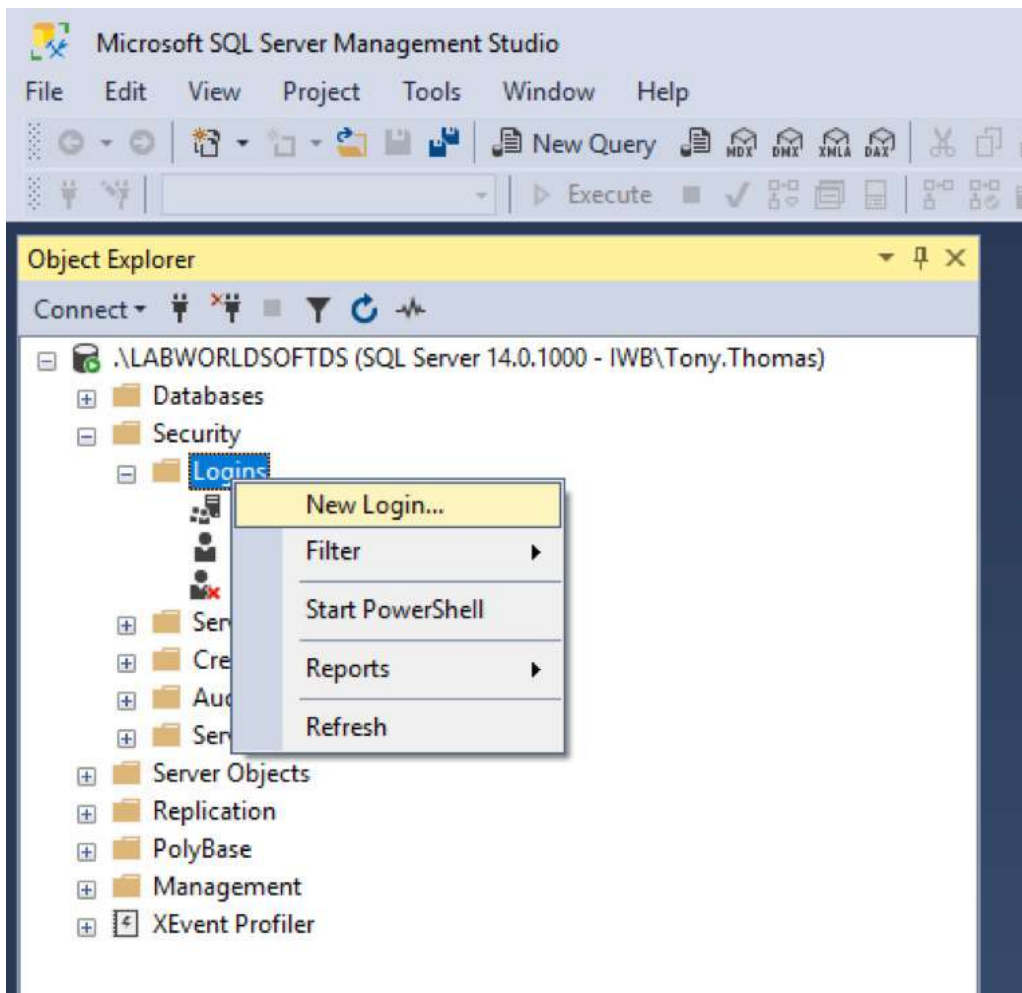
Please talk to your **Database Administrator** and select all the **Server Roles**.

Question 6.

I have added a new Windows user to my PC. He logged in to Labworldsoft Server, but when clicking Test Database Connection button, database connection is failing.

Answer 6.

You have to add this new Windows user to your SQL Server Data Source using SQL Server Management Studio (SSMS) and select all the Server Roles as mentioned in the Answer 5.





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03. User Guide

Using Labworldsoft Server

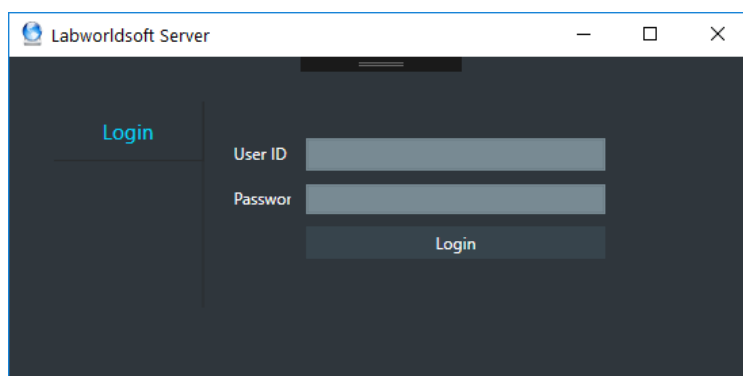
Using Labworldsoft Server	2
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Using Labworldsoft Server

Download and install the latest version of Labworldsoft Server from www.ika.com/LWS6

Login

1. Run the Labworldsoft server. The following screen will display. Enter the login credentials of **Server Admin** user and press **Login**.



Logging for first time

1. When logging for the first time use the **default server administrator** credentials, which is

User ID: serveradmin

Password: Password@1

Please do remember to create new server administrator accounts for further server usage and change the password of the default **serveradmin** account.

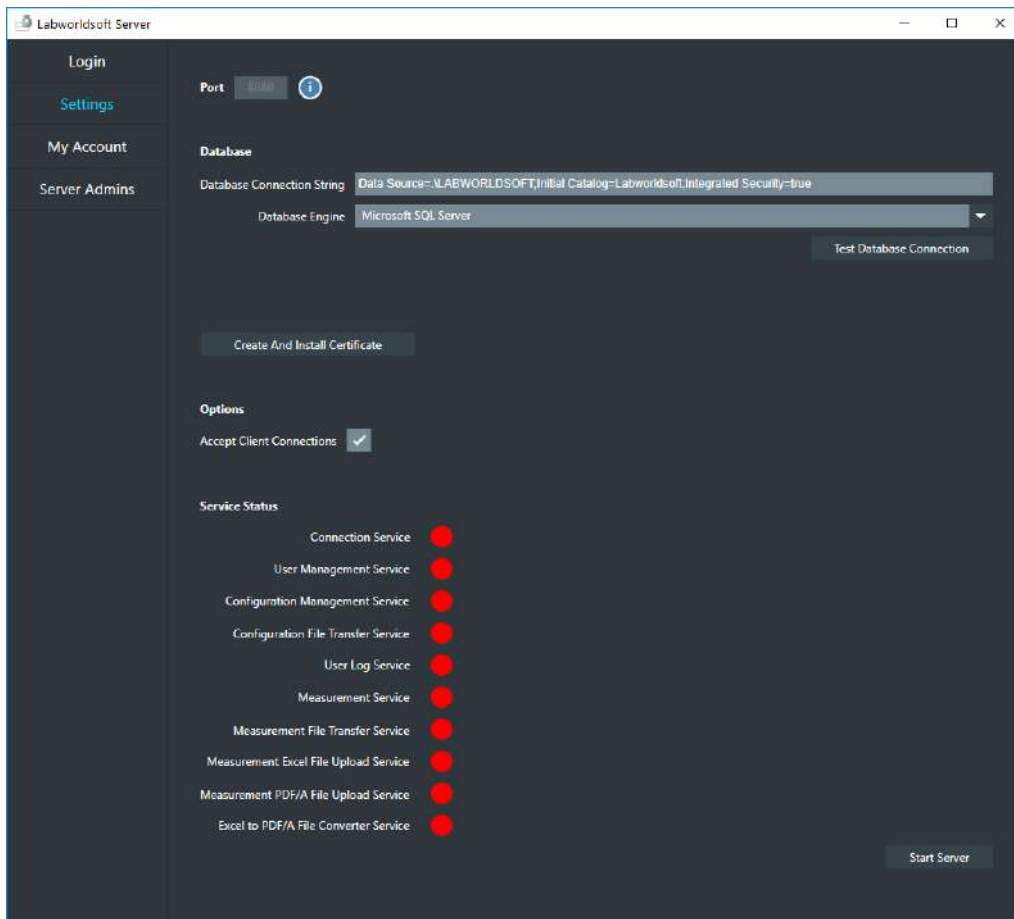
2. Change the password screen will be shown after the first login of user.

3. Do remember the password as it is the default account and server will be inaccessible if you forget this password and only this user account is present in the server.

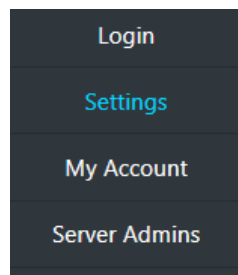
Server Settings

After successful login, **Settings** screen will display. This screen will display all the settings information of the server.

1. Use the **Settings** tab to configure the server.



2. Labworldsoft server will display only the following tabs before starting the service.

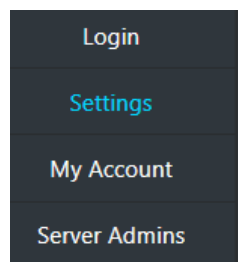


3. When the server is started from this section, it will display all other tabs too.

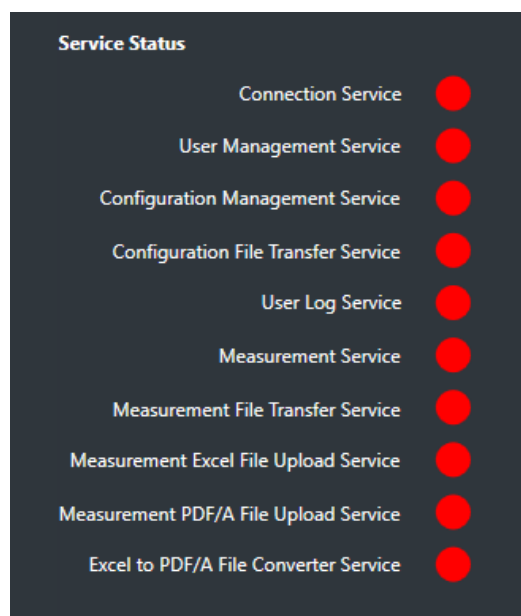
Start or stop server

Start / stop server button is used to start or stop the server

1. Labworldsoft server will display only the following tabs before starting the service.



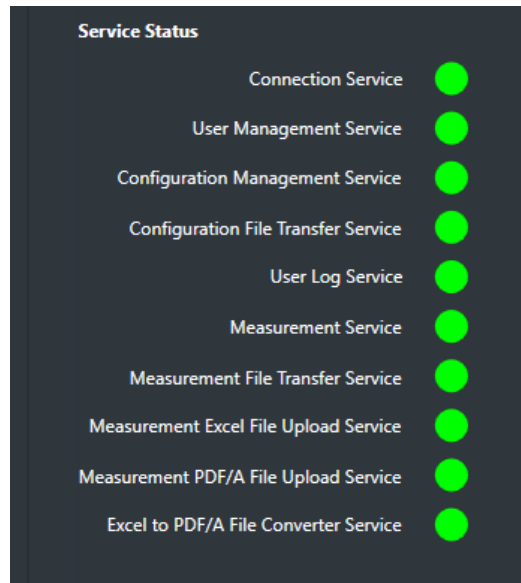
2. When the server is in stopped state, each service status is indicated in red colour.





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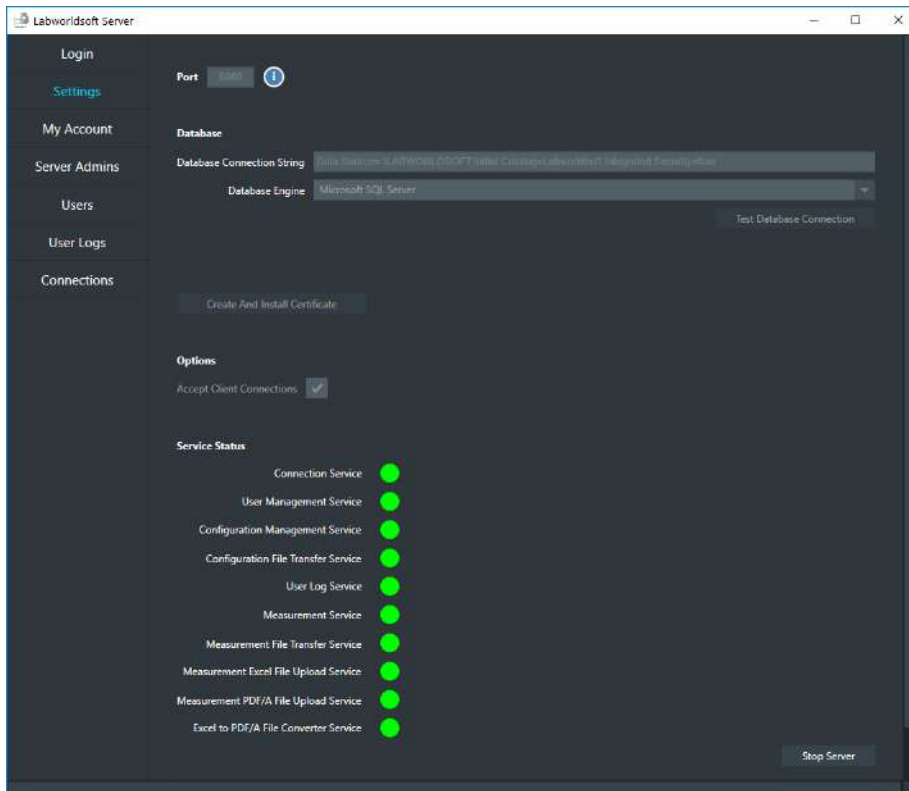
3. When the server is in started state, each service status is indicated in green colour.





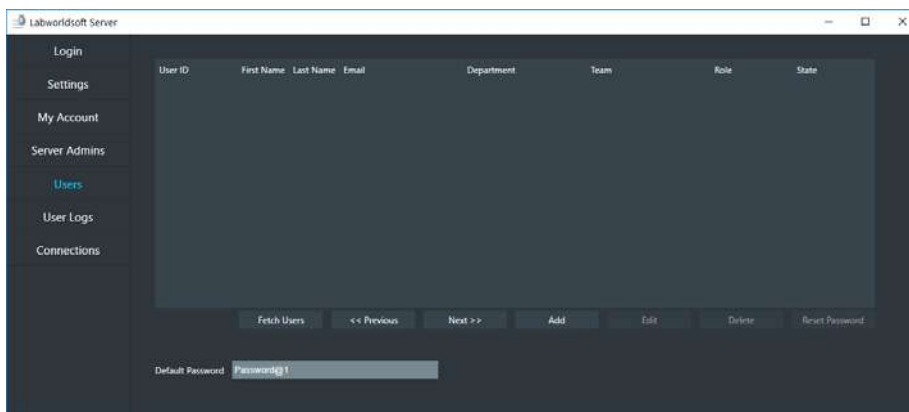
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4. When Labworldsoft Server is started by clicking **Start Server** button, all other tabs including Users, User Logs and Connections are visible.



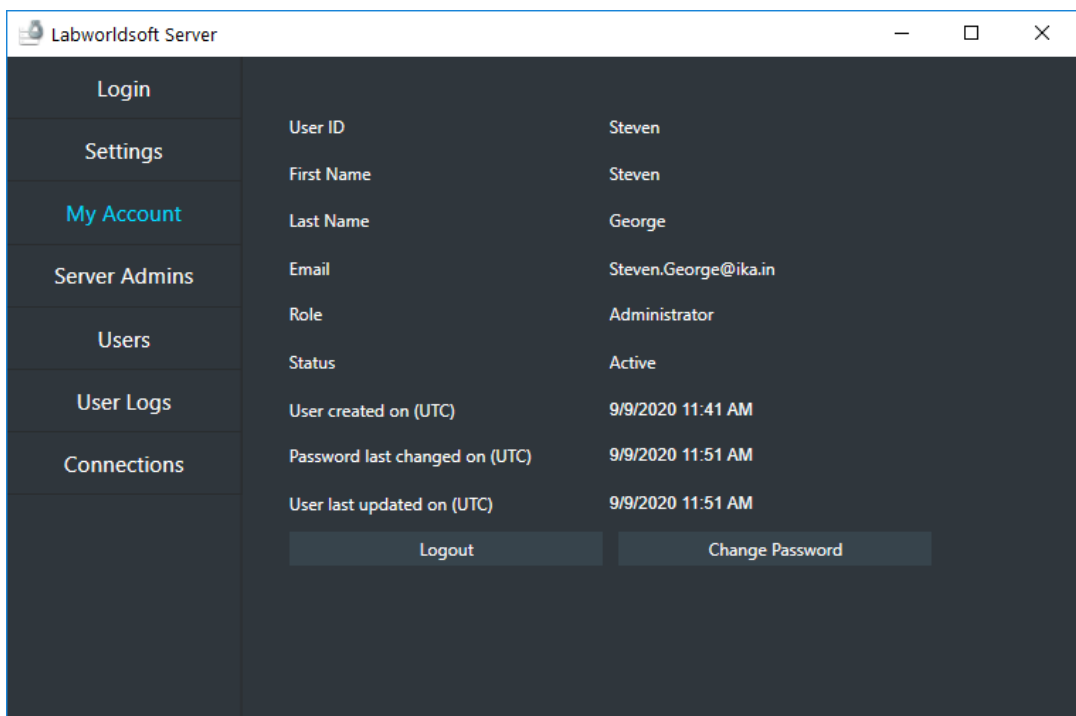
5. Use the **Users** tab to create the users which can be used from Labworldsoft 6. We can edit, delete or reset the password of the user account from this screen.

Please refer [Labworldsoft 6 client users \(Users\)](#) for details.



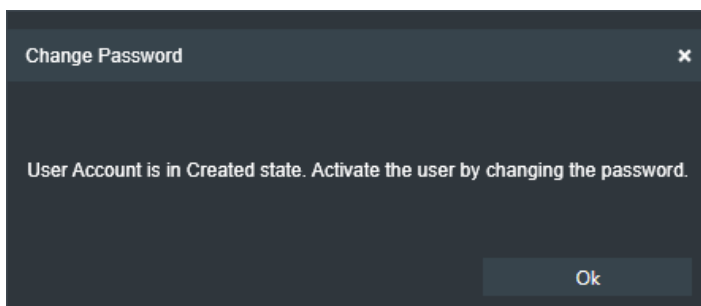
My Account

1. After successful login, the following screen will display for **Login** tab. This screen will display all the information about the logged in user.

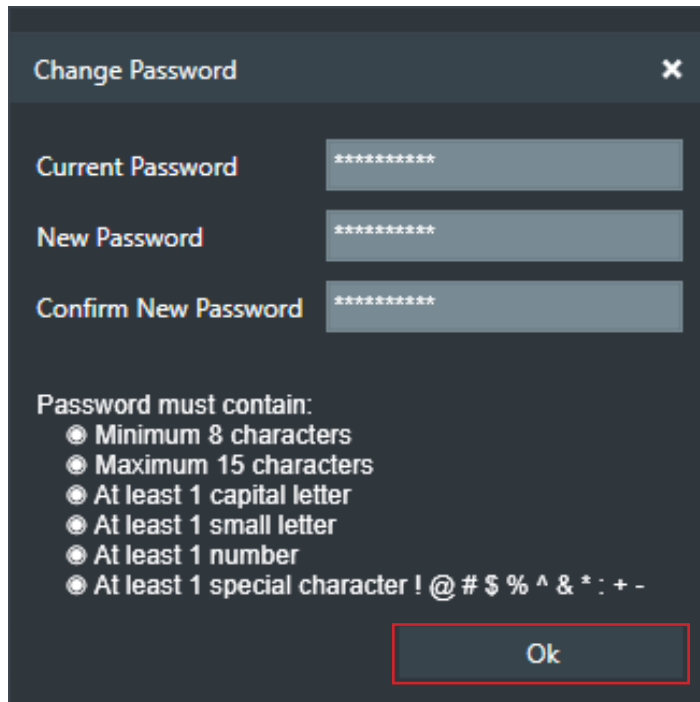


Changing the password

1. Change the password message will be shown after the first login of user.



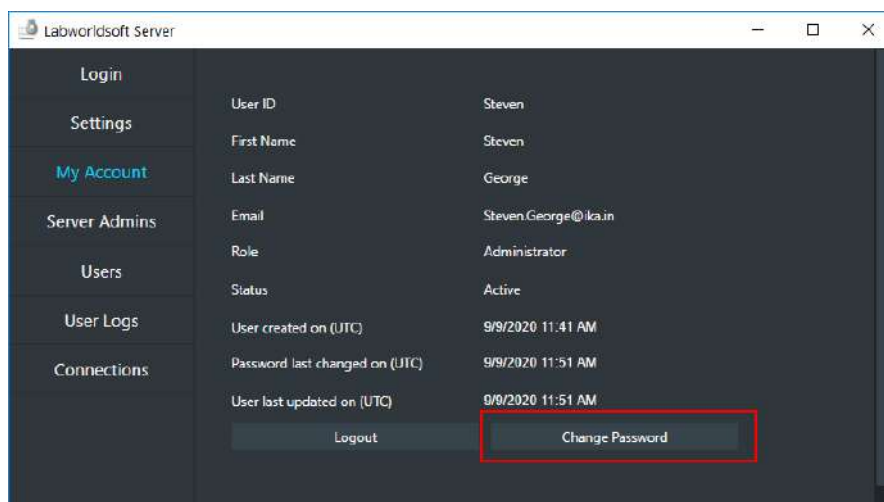
2. Change the password screen will be shown after user acceptance. Fill the current password, and new passwords in the fields and press **Ok**



A dark-themed dialog box titled "Change Password" with a close button (X) in the top right corner. It contains three input fields: "Current Password", "New Password", and "Confirm New Password", each filled with eight asterisks. Below the fields, a section titled "Password must contain:" lists five requirements, each with a radio button: "Minimum 8 characters", "Maximum 15 characters", "At least 1 capital letter", "At least 1 small letter", and "At least 1 number". The final requirement is "At least 1 special character ! @ # \$ % ^ & * ; + -". At the bottom right, there is an "Ok" button highlighted with a red border.

3. Do remember the password as it is the default account and server will be inaccessible if you forget this password and only this user account is present in the server.

4. A logged in user can change his own password directly from **Change Password** option.



A screenshot of the "Labworldsoft Server" application window. The window title is "Labworldsoft Server". On the left is a navigation menu with items: "Login", "Settings", "My Account" (highlighted in blue), "Server Admins", "Users", "User Logs", and "Connections". The main content area shows user details for "Steven George" (User ID: Steven, First Name: Steven, Last Name: George, Email: Steven.George@ika.in, Role: Administrator, Status: Active). Below the details are three timestamps: "User created on (UTC): 9/8/2020 11:41 AM", "Password last changed on (UTC): 9/9/2020 11:51 AM", and "User last updated on (UTC): 9/9/2020 11:51 AM". At the bottom, there are two buttons: "Logout" and "Change Password", with the "Change Password" button highlighted by a red border.

5. Fill the current password, and new passwords in the fields and press **Ok**

Change Password ✕

Current Password

New Password

Confirm New Password

Password must contain:

- Minimum 8 characters
- Maximum 15 characters
- At least 1 capital letter
- At least 1 small letter
- At least 1 number
- At least 1 special character ! @ # \$ % ^ & * + - :

Ok

6. Password criteria for **Server User** is that password must contain,

Minimum 8 characters

Maximum 15 characters

Atleast 1 capital letter

Atleast 1 small letter

Atleast 1 number

Atleast 1 special character from ! @ # \$ % ^ & * + - :

7. The following screen will displayed after password is changed.

Change Password ✕

Password changed successfully.

Ok

Types of Users

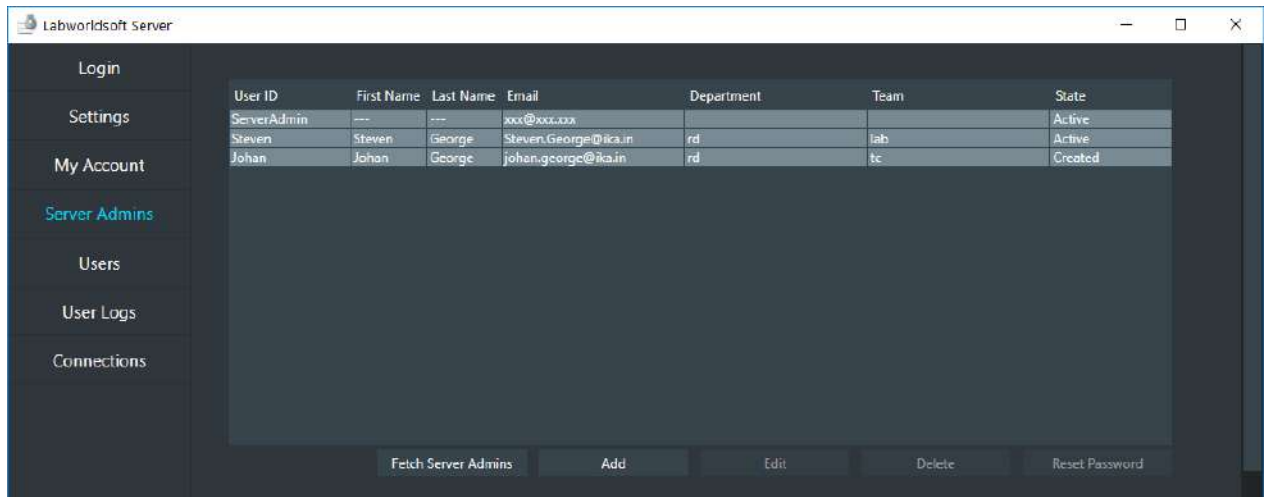
There are two kinds of users related to **Labworldsoft server**, which are

Server Admins
User

Server Admins

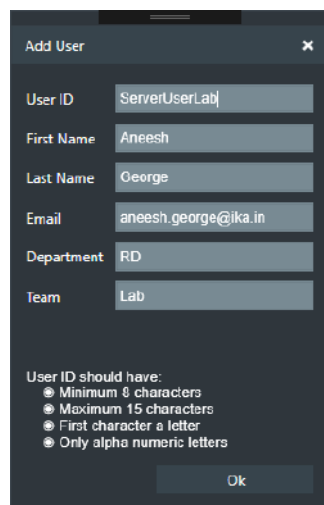
Server Admins are the users in **Labworldsoft server** to manage the complete server. They are administrators for a **Labworldsoft server**.

1. We can create new server administrator accounts in the Server Admins tab. We can view, edit, delete or reset the password of the **Server Admins** account from this screen.



Create new Server Admins

1. Click on **Add** button to create a new user. It will display the following screen. Fill the input fields and press the **OK** button.



The screenshot shows a dark-themed 'Add User' dialog box with a close button (X) in the top right corner. It contains the following fields and values:

- User ID: ServerUserLab
- First Name: Aneesh
- Last Name: George
- Email: aneesh.george@ika.in
- Department: RD
- Team: Lab

Below the fields, the following criteria are listed:

- User ID should have:
 - Minimum 4 characters
 - Maximum 15 characters
 - First character a letter
 - Only alpha numeric letters

An 'Ok' button is located at the bottom right of the dialog box.

2. User ID criteria for **Server Admins** is that it should have

Minimum 4 characters

Maximum 40 characters

First character a letter

Allowed special characters . @ - _

3. Default password for a newly created **Server Admin** user is

Password@1

4. It is required to change the default password of the newly created user on his first login.

5. There are different states for a **Server Admins**, they are

Created Initial state when the user is newly created.

Active State of an active user.

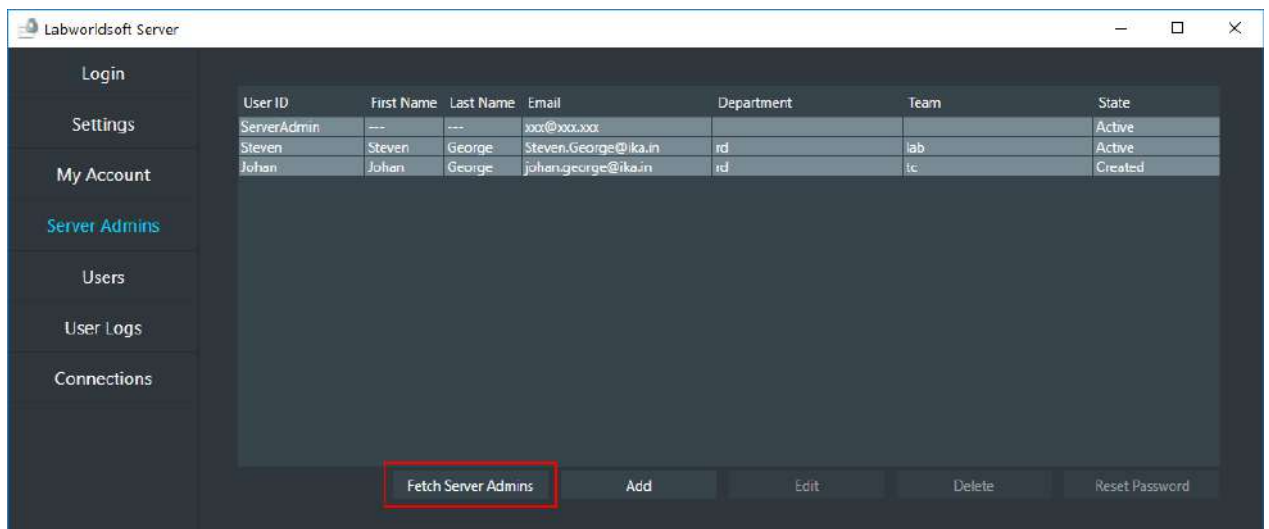
Inactive State of an inactive user.

Password Resetted Password Resetted state.

6. Whenever a new **Server Admin** is created, the account is in **Created** state. When this user logs in for the first time and successfully changes the password, the account state will be changed to **Active**.
7. Only those **Server Admins** whose state is **Active** or **Created** is allowed to login to server.
8. A **Server Admins** can change an **Active** server user to **Inactive** state and vice versa.

List Server Admins

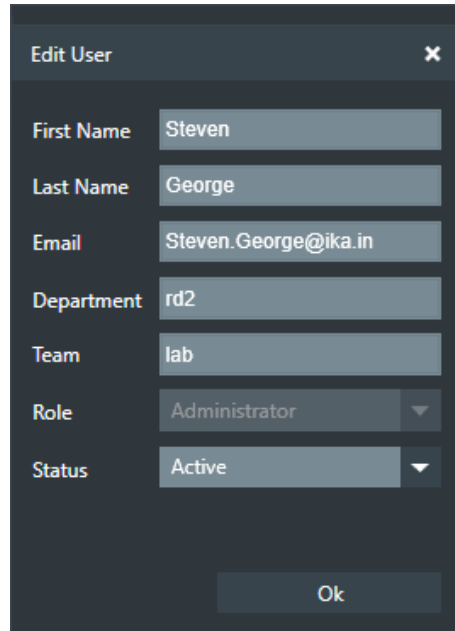
1. Click on the **Fetch Server Admins** button to list out the **Server Admins** account.
2. All **Server Admins** accounts and their details will be displayed as in the following screen.



3. When a new **Server Admin** account added in the server, it will be added to the list automatically.

Edit Server Admin

1. We can edit **Server Admin** accounts using **Edit** option.
2. We can not edit **Server Admin** account's state using **Edit** option, if this account is newly created and the **state** is **Created**. When he logs in for the first time and successfully changes the password, his state will be changed to **Active**.



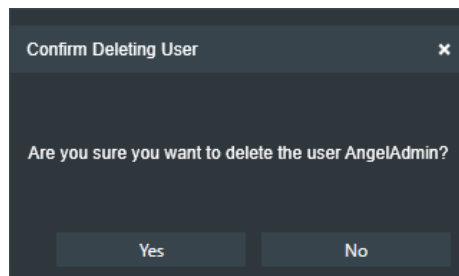
The screenshot shows a dark-themed 'Edit User' dialog box. It has a title bar with 'Edit User' and a close button. The fields are as follows:

Field	Value
First Name	Steven
Last Name	George
Email	Steven.George@ika.in
Department	rd2
Team	lab
Role	Administrator
Status	Active

An 'Ok' button is located at the bottom right of the dialog box.

Delete Server Admin

1. We cannot delete one **Server Admin** account from its own **Login**.
2. Use the **Delete** button to delete **Sever Admin** account other than own account. The following warning screen will display.



The screenshot shows a dark-themed 'Confirm Deleting User' dialog box. It has a title bar with 'Confirm Deleting User' and a close button. The main text asks: 'Are you sure you want to delete the user AngelAdmin?'. At the bottom, there are two buttons: 'Yes' and 'No'.

3. Upon acceptance, the user will be deleted from the server.

Reset Password of Server Admin

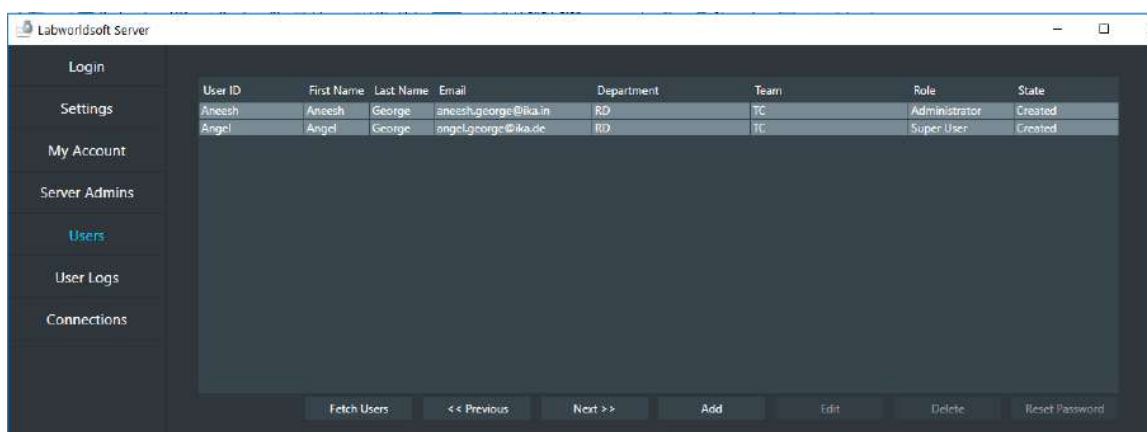
1. We cannot reset the password of one **Server Admin** account from its own **Login**. You can use the **Change Password** option provided in **My Account** section for this purpose. When changing the password, new password should not be same as previous and current password.

2. To reset the password of another **Server Admin** account than own account, use the option **Reset Password**.
3. The new password will be **Password@1** and this password should be changed in the next login.

Labworldsoft client user (Users)

Labworldsoft client user (called as **Users**) are the users who will login to **the Labworldsoft server** from **Labworldsoft software** (i.e., Labworldsoft client).

1. Labworldsoft client user can be created in **Labworldsoft server** from the **Users** tab when the server is in **Started state**.
2. Use the **Users** tab to list, create, edit, delete or reset the password of the **users** which can be used from Labworldsoft.



User roles

There are different categories of Users based on the access rights they have. The privileges and rights they have categorize these users, they are called Role of a user. The different user roles are,

User	Read-only permissions
Super User	Read and limited write permissions
Administrator	Full access rights



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User management capabilities based on User roles

Function	Administrator	Super User	User
View own user details present in server in My Account section	Yes	Yes	Yes
Create a new user of normal user role	Yes	Yes	No
View all normal user's user details present in server	Yes	Yes	No
Change other users details of normal user role	Yes	Yes	No
Reset other user's Password of normal user role	Yes	Yes	No
Change other user's user state (Active / Inactive) of normal user role	Yes	Yes	No
Create a new user of any user role	Yes	No	No
Delete a user	Yes	No	No
View all users user details present in server	Yes	No	No
Reset other user's Password of any user role	Yes	No	No
Change other user's user state (Active / Inactive) of any user role	Yes	No	No
Change other users details of any user role	Yes	No	No
Change other users role	Yes	No	No
Reset own password	No	No	No
Change own details (First Name, Last Name and Mail Address)	No	No	No
Change own user state (Active / Inactive)	No	No	No
Change own role	No	No	No

Labworldsoft measurement functionalities based on User roles

Function	Administrator	Super User	User
Save a measurement to server	Yes	Yes	Yes
Download a measurement in excel	Yes	Yes	Yes
Download a measurement in PDF/A	Yes	Yes	Yes
Change status of a measurement from Active to Inactive	Yes	Yes	No
Change status of a measurement from Inactive to Active	Yes	No	No
Signing a measurements	Yes	Yes	No
Delete a measurement permanently	Yes	No	No

Labworldsoft configuration functionalities based on User roles

Function	Administrator	Super User	User
Open an existing Labworldsoft configuration from server	Yes	Yes	Yes
Create a new Labworldsoft configuration	Yes	Yes	No
Change an existing Labworldsoft configuration	Yes	Yes	No
Upload a Labworldsoft configuration to server	Yes	Yes	No

Labworldsoft User Logs functionalities based on User roles

Function	Administrator	Super User	User
Saving the User Logs to server	Yes	Yes	Yes
Viewing the User Logs	Yes	Yes	No

Add User

1. Click on **Add** button to create a new user in **Users** tab. It will display the following screen.

2. User ID criteria for a User is that it should have

Minimum 4 characters

Maximum 40 characters

First character a letter

Allowed special characters . @ - _

The screenshot shows a dark-themed 'Add User' dialog box with the following fields and values:

- User ID: aneeshuser
- First Name: Aneesh
- Last Name: George
- Email: aneesh.george@ika.in
- Department: RD
- Team: Lab
- Role: Administrator (dropdown menu)

Below the fields, there are four radio buttons under the heading 'User ID should have:':

- Minimum 8 characters
- Maximum 15 characters
- First character a letter
- Only alpha numeric letters

An 'Ok' button is located at the bottom right of the dialog.



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3. Fill all the fields and select the proper Role on this screen and press **OK**.

4. There are different states for a **User**, they are

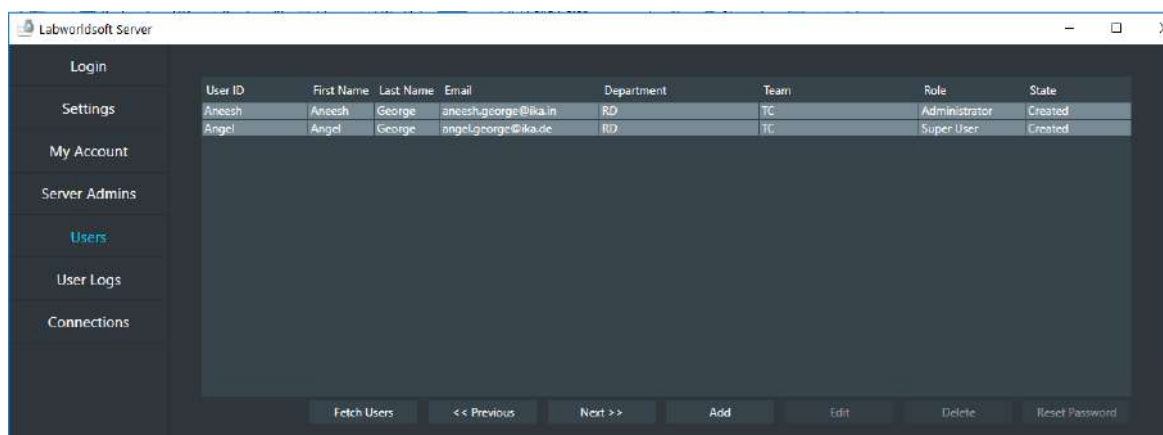
Created	Initial state when the user is newly created.
Active	State of an active user.
Inactive	State of an inactive user.
Password Resetted	Password Resetted state.

5. Whenever a new **User** is created, his state is **Created**. When he logs in for the first time from **Labworldsoft** and successfully changes the password, his state will be changed to **Active**.

6. Only those **User** whose state is **Active** or **Created** is allowed to login to server from **Labworldsoft**.

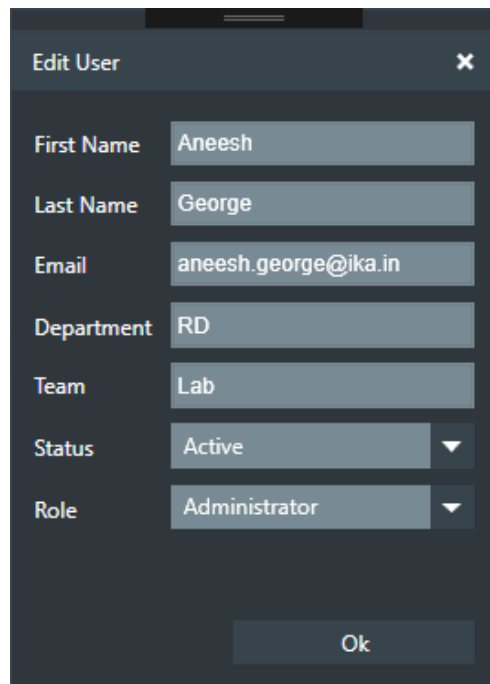
7. A **Server Admin** can change an **Active** user to **Inactive** state and vice versa.

8. The default password of the newly created user will be the password, which is provided in the **Users** tab, **Default Password** field.



Edit User

1. We can edit user account from this **Users** tab screen. The following screen will be displayed.



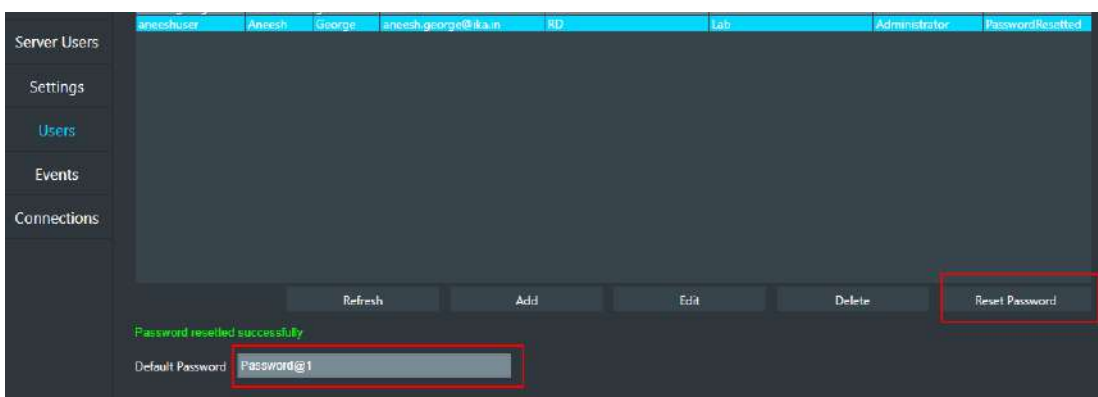
The 'Edit User' dialog box displays the following information:

First Name	Aneesh
Last Name	George
Email	aneesh.george@ika.in
Department	RD
Team	Lab
Status	Active
Role	Administrator

Buttons: Ok

Reset Password of User

1. To reset the password of a user to the password which is provided in the **Users** tab, **Default Password** field, use the option **Reset Password**



The 'Users' tab displays the following table:

aneeshuser	Aneesh	George	aneesh.george@ika.in	RD	Lab	Administrator	PasswordResetted

Buttons: Refresh, Add, Edit, Delete, **Reset Password**

Message: Password resetted successfully

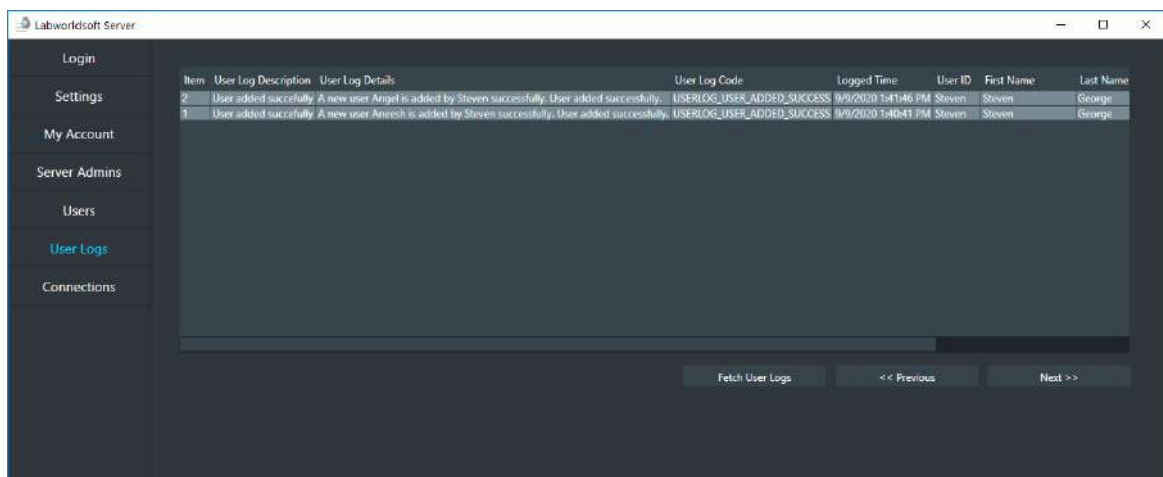
Default Password: **Password@1**

Delete User

1. Use the **Delete** button to delete user, who is not in **Active** state.

User Logs

User can view the User Logs in this section. Click on the **Fetch User Logs** button to display the User Logs. Maximum of 50 User Logs will be displayed in the screen. Use the Next >> and Previous << button to view the desired group of User Logs.





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The following User Logs and details about these User Logs are covered for better understanding the server activity. The User Log Code definitions are described in the table below

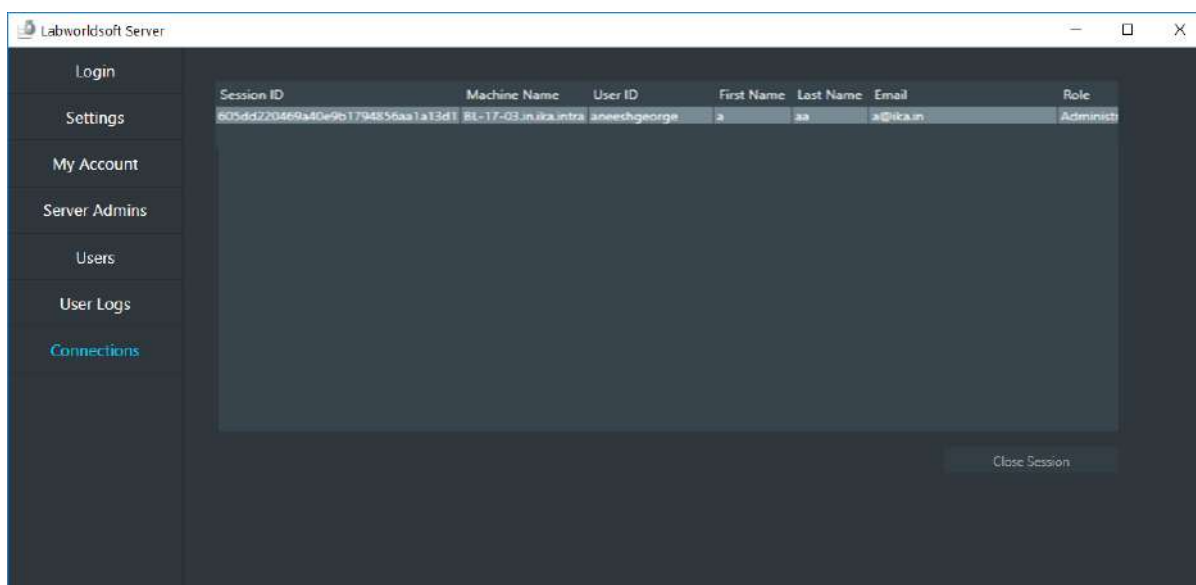
USERLOG_USER_ADDED_SUCCESS	User added successfully.
USERLOG_USER_ADDED_FAILED	Adding a user failed.
USERLOG_USER_DELETED_SUCCESS	User deleted successfully.
USERLOG_USER_DELETED_FAILED	Deleting a user failed.
USERLOG_USER_MODIFIED_SUCCESS	User modified successfully.
USERLOG_USER_MODIFIED_FAILED	Modifying user failed.
USERLOG_PASSWORD_RESETTED_SUCCESS	Password resetted successfully.
USERLOG_PASSWORD_RESETTED_FAILED	Resetting password failed.
USERLOG_USER_LOGGED_IN_SUCCESS	User logged in successfully.
USERLOG_USER_LOGGED_IN_FAILED	User login failed.
USERLOG_USER_LOGGED_OUT_SUCCESS	User logged out successfully.
USERLOG_USER_LOGGED_OUT_FAILED	User logout failed.
USERLOG_PASSWORD_CHANGED_SUCCESS	Password changed successfully.
USERLOG_PASSWORD_CHANGED_FAILED	Password changing failed
USERLOG_MEASUREMENT_STARTED_SUCCESS	Measurement started successfully.
USERLOG_MEASUREMENT_STARTED_FAILED	Measurement starting failed.
USERLOG_MEASUREMENT_SIGNED_SUCCESS	Measurement signed successfully.
USERLOG_MEASUREMENT_SIGNED_FAILED	Measurement signing failed.
USERLOG_MEASUREMENT_ACTIVATED_SUCCESS	Measurement activated successfully.
USERLOG_MEASUREMENT_ACTIVATED_FAILED	Measurement activation failed.
USERLOG_MEASUREMENT_INACTIVATED_SUCCESS	Measurement inactivated successfully.
USERLOG_MEASUREMENT_INACTIVATED_FAILED	Measurement inactivation failed.
USERLOG_MEASUREMENT_DELETED_SUCCESS	Measurement deleted successfully.
USERLOG_MEASUREMENT_FILE_EXCEL_DOWNLOADED_SUCCESS	Measurement file excel downloaded successfully.
USERLOG_MEASUREMENT_FILE_EXCEL_DOWNLOADED_FAILED	Measurement file excel downloading failed.
USERLOG_MEASUREMENT_FILE_PDFA_DOWNLOADED_SUCCESS	Measurement file pdfa downloaded successfully.
USERLOG_MEASUREMENT_FILE_PDFA_DOWNLOADED_FAILED	Measurement file pdfa downloading failed.
USERLOG_MEASUREMENT_FILE_EXCEL_UPLOADED	Measurement file excel uploaded successfully.
USERLOG_MEASUREMENT_FILE_PDFA_UPLOADED	Measurement file pdfa uploading successfully.
USERLOG_MEASUREMENT_FILE_UPLOAD_ABORTED_SUCCESS	Measurement file upload aborted successfully.
USERLOG_MEASUREMENT_FILE_UPLOAD_ABORTED_FAILED	Measurement file upload aborting failed.



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Connections

User can view the active connection of **Labworldsoft 6** and this server in this section.



It is possible to close an existing connection of **Labworldsoft server** with a **Labworldsoft 6**.



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04. User Guide

Setting up Labworldsoft 6 and Labworldsoft Server

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Accessing Labworldsoft Server from Labworldsoft 6

Labworldsoft 6 implements FDA 21 CFR Part 11 with the support of Labworldsoft Server. Labworldsoft Server can be accessed from Labworldsoft 6 by selecting the Server menu or from View >> Server menu.

We may use the term Client PC or Labworldsoft 6 Client PC, in this document, to denote the computer where Labworldsoft 6 is installed and run.

We may use the term Server PC, in this document, to denote the computer where Labworldsoft Server is installed and run.

Installing Certificate in Labworldsoft 6 for connecting to Labworldsoft Server

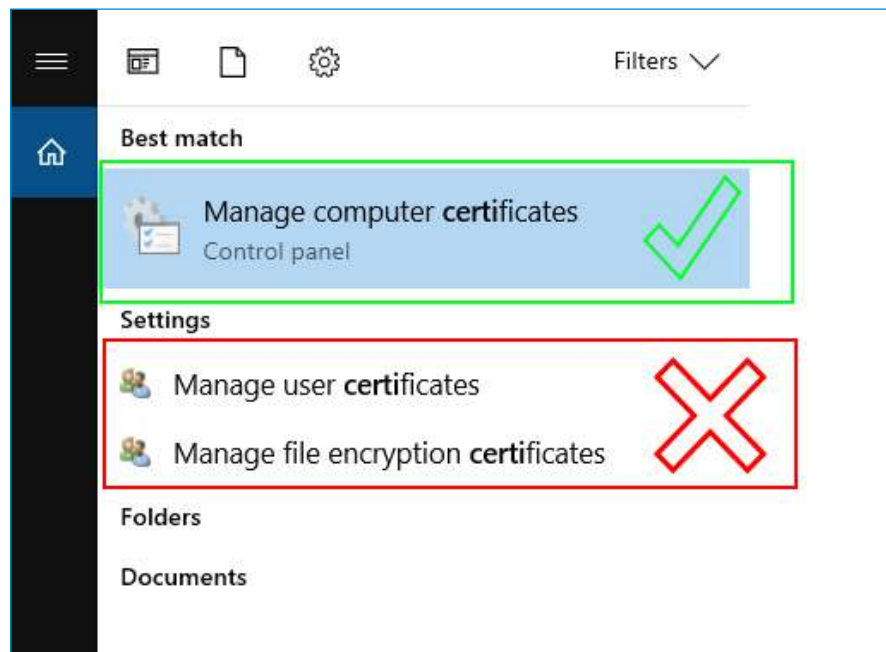
While setting up Labworldsoft Server, a self-signed digital certificate is created and installed in Server PC. This certificate is copied into C:\ProgramData\Labworldsoft\LabworldsoftServer\ServerCertificate folder in Server PC. We have to install this certificate in Client PC for connecting Labworldsoft 6 successfully to Labworldsoft Server.

Installing Certificate in Client PC

The steps to install the digital certificate in **Client PC** are as follows:

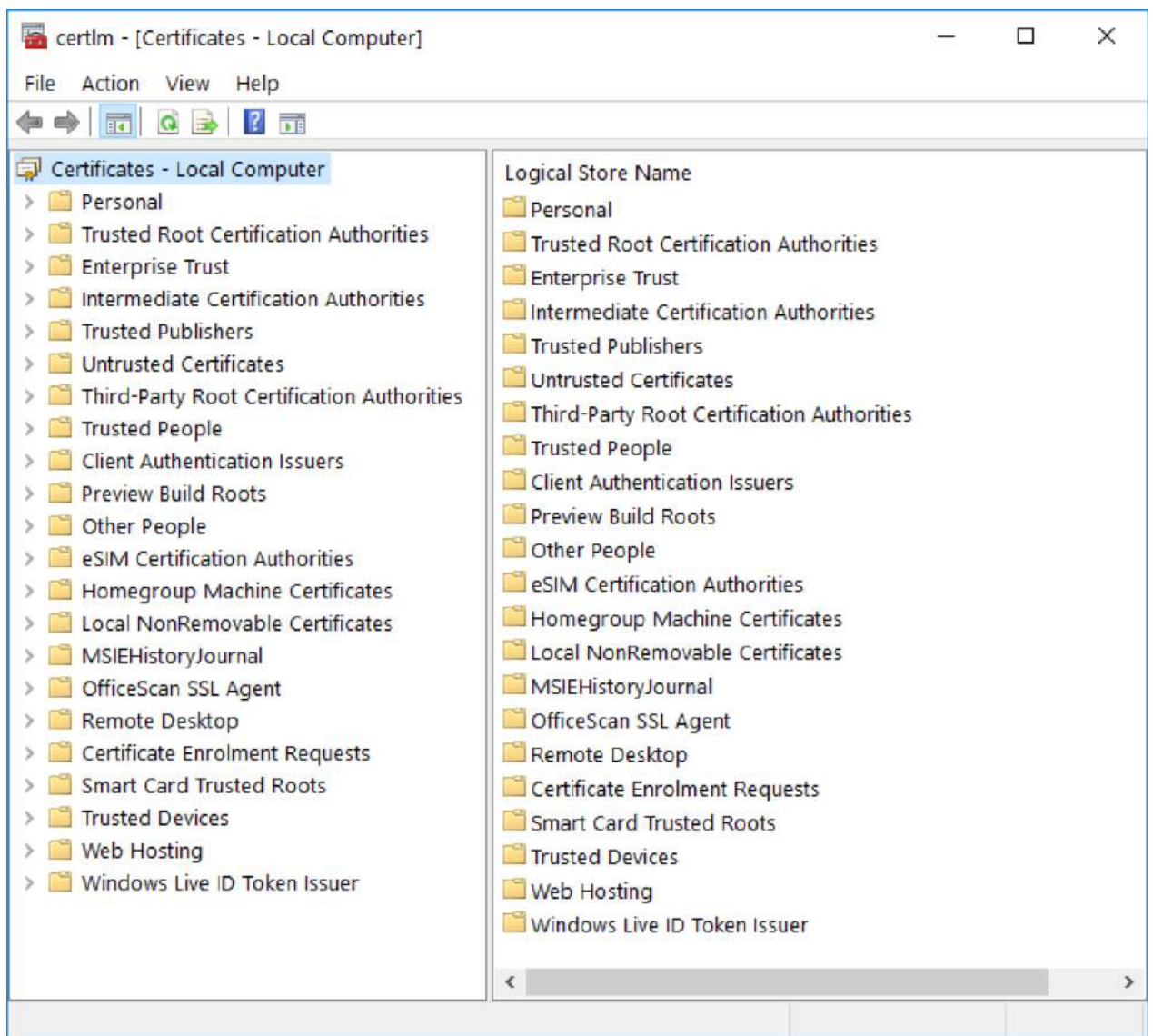
1. Run **Manage computer certificates** console, which is marked in green box in the following screen shot.

Make sure that you are using the certificate manager for Local Machine, not the Local User or anything else.

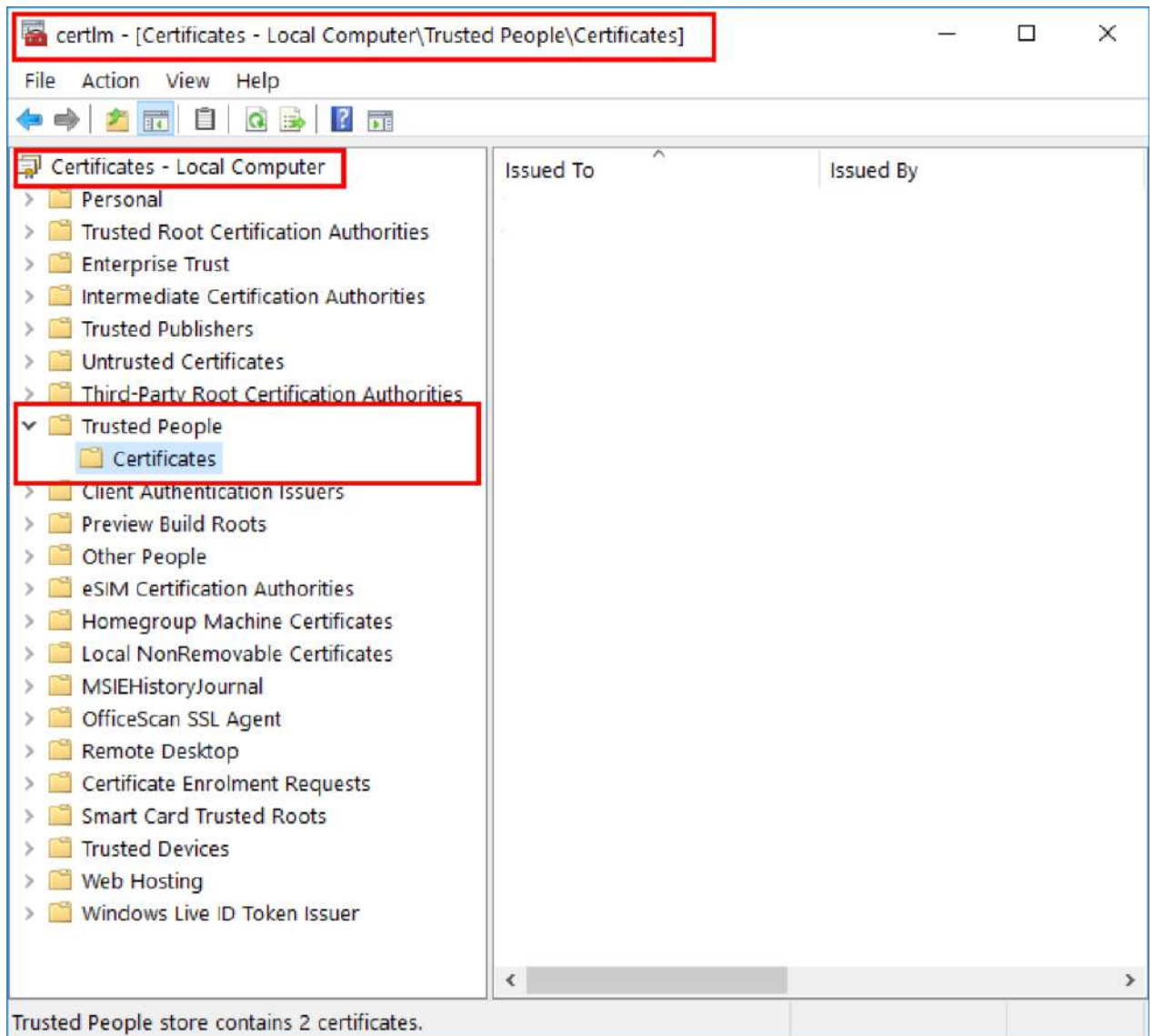


2. Alternatively, you can use `certlm.msc` command for this purpose.

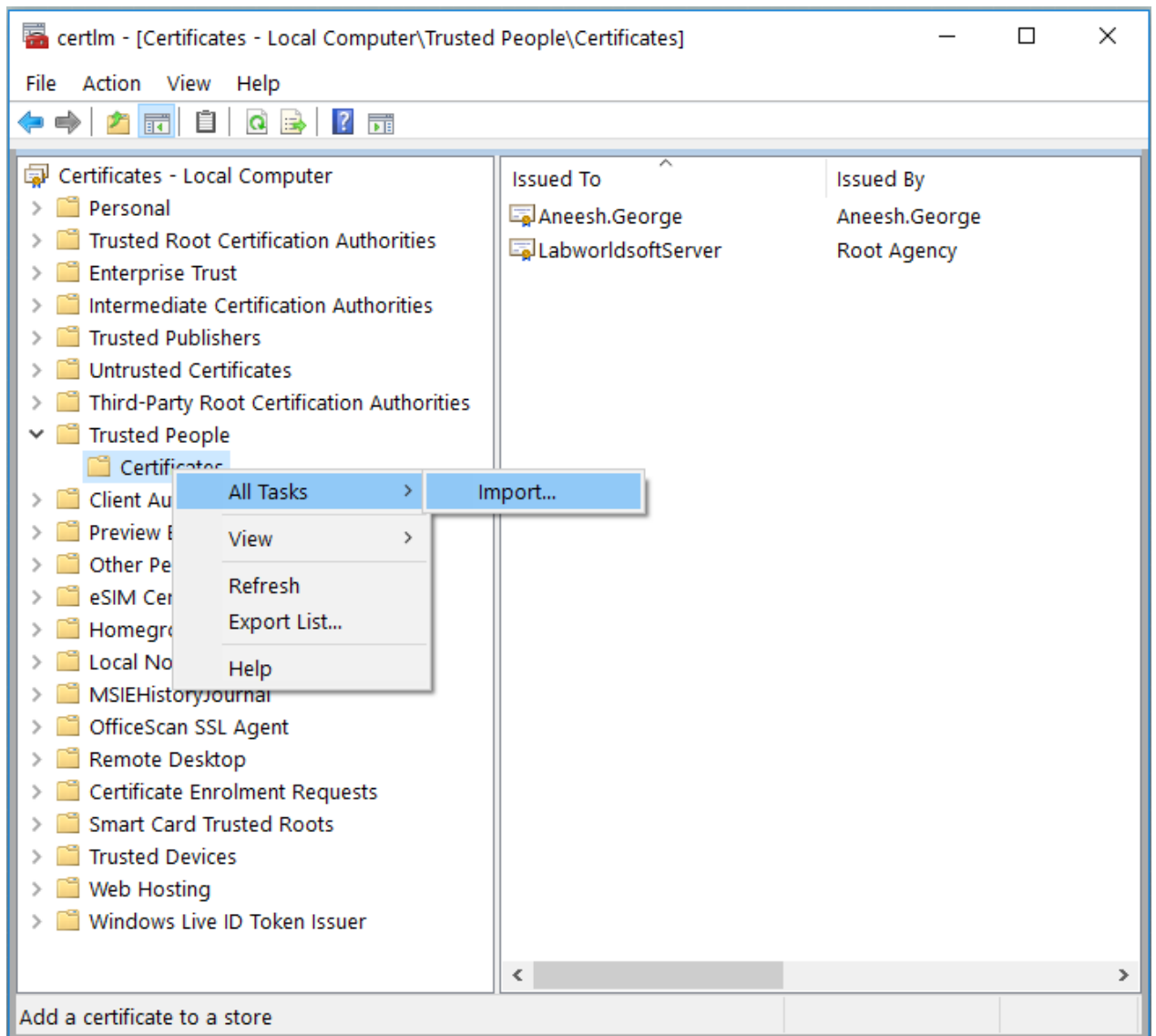
3. This will open the management console for certificates of Local Computer.



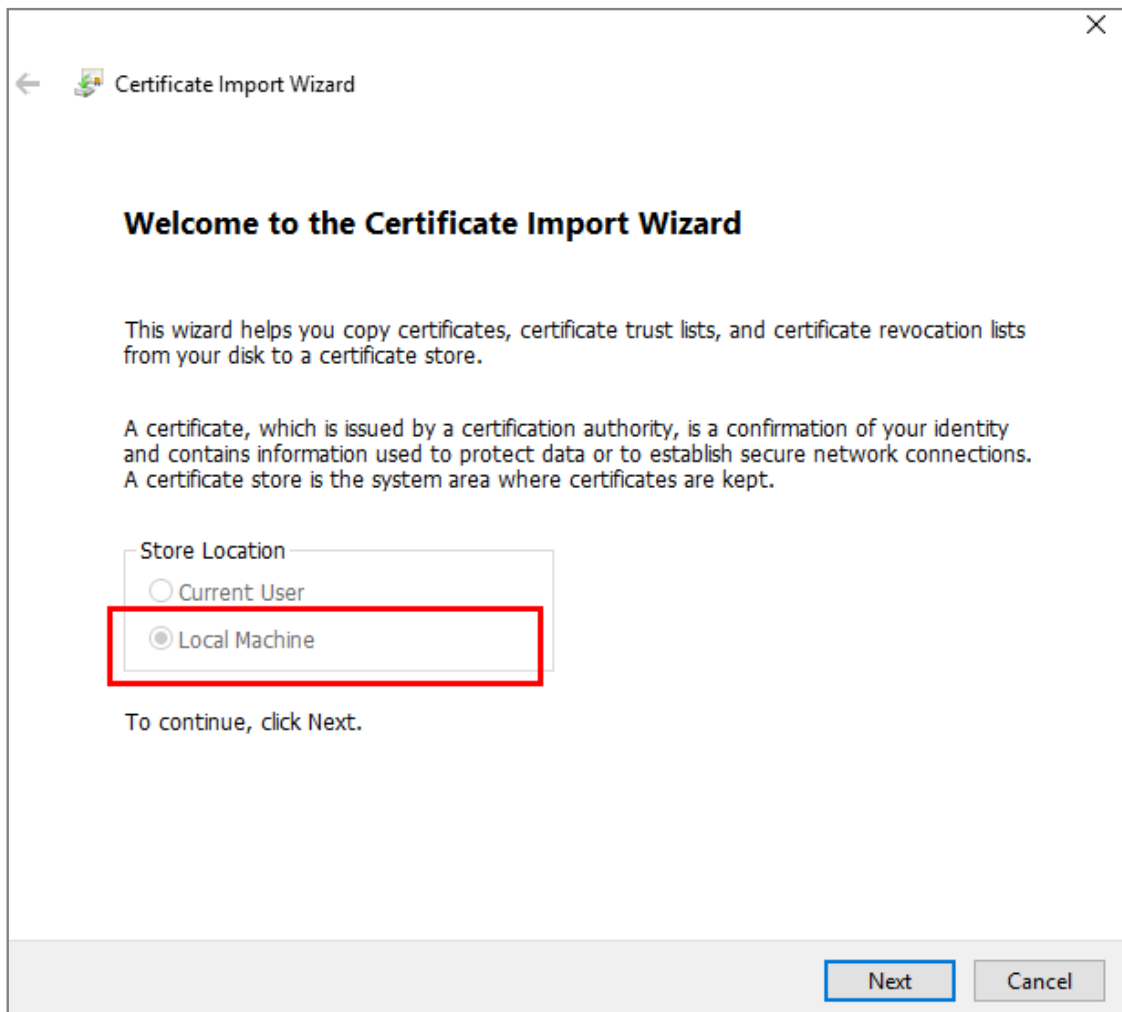
4. Select the location **Certificates (Local Computer)/Trusted People/Certificates**. This is the location where **Labworldsoft 6** looking for the certificate.



5. Right click on **Certificates (Local Computer)/Trusted People/Certificates** and select **All Tasks >> Import...**

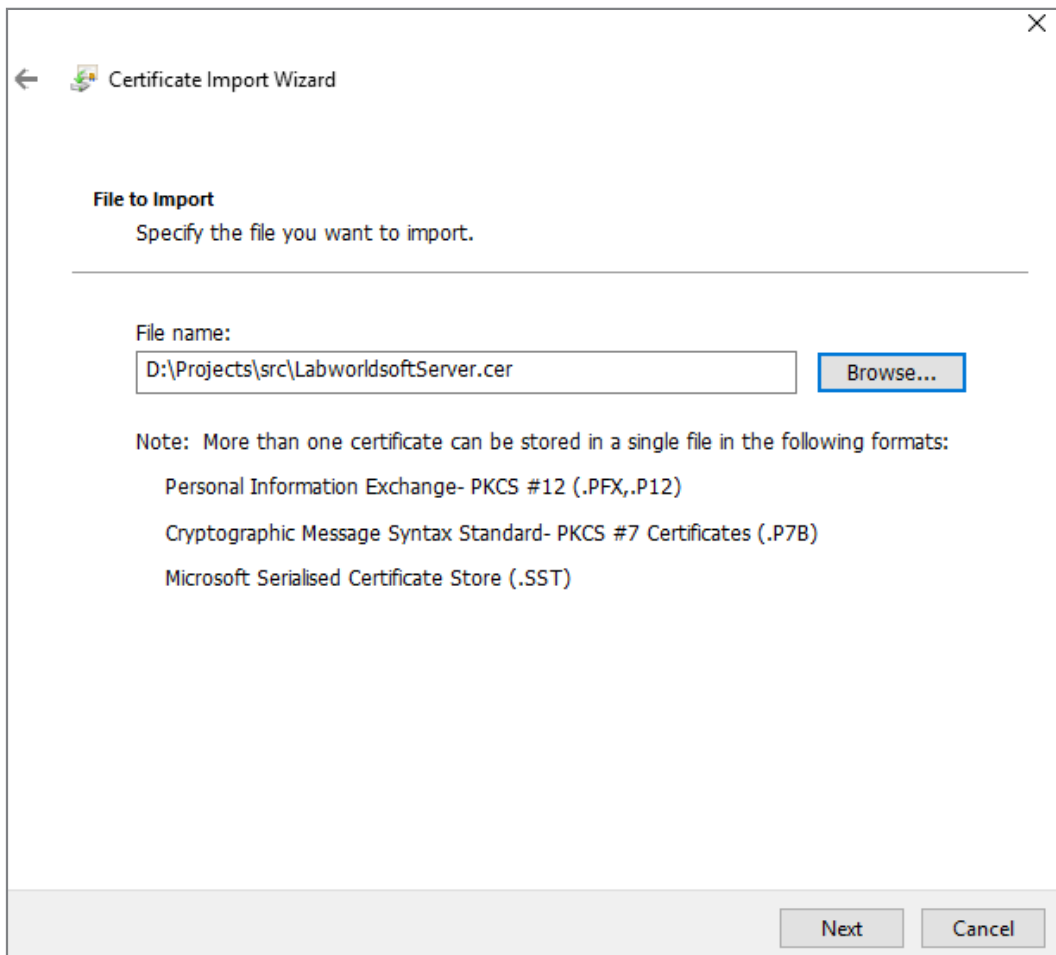


6. Clicking Import... will open Certificate Import Wizard. Store Location is automatically selected as Local Machine. Click **Next**.



7. Provide the certificate location in the File name: text box and Click next.

Certificate is created by the makecert.exe tool in the Server.



8. Follow the instructions, Certificate will be installed in the client machine in the location **Certificates (Local Computer)/Trusted People/Certificates**.



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05. User Guide

Using Labworldsoft 6 and Labworldsoft Server

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User Guide - Using Labworldsoft 6 and Labworldsoft Server

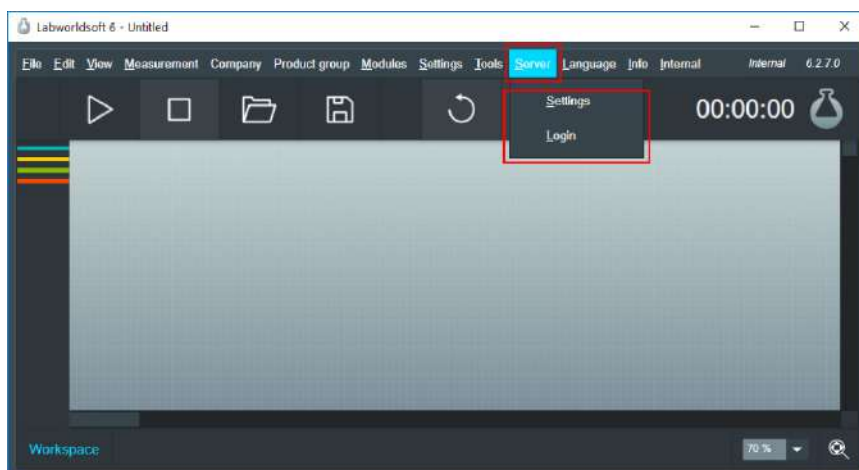
Labworldsoft Server makes it possible for you to store generated configurations and measurement results centrally in your company network. Your data is safely stored in your own database in your own company network and not on third-party servers.

Integrated user administration allows you easy and simple access to your configurations and measurement results from anywhere in your network. Manipulation of the measurement results is therefore excluded. Share your configurations and measurement results with your colleagues. Generate configurations and easily make them available to others. Your configurations are also protected from modification when doing so.

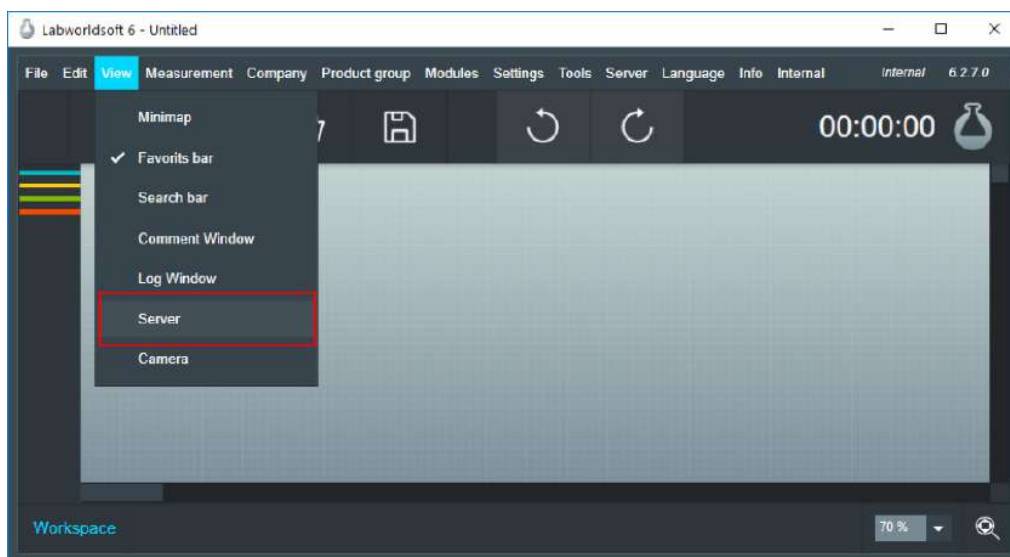
- Central storage of all configurations and measurement results in the network
- All the data are safely located in your own network
- No connection to the Internet required
- Protected from manipulation
- Rapid access from anywhere in the network
- Simple sharing of configurations
- Integrated user administration

Accessing Labworldsoft Server

1. You can access **Labworldsoft Server** from the **Labworldsoft 6** main menu and sub menu **Settings/Login**

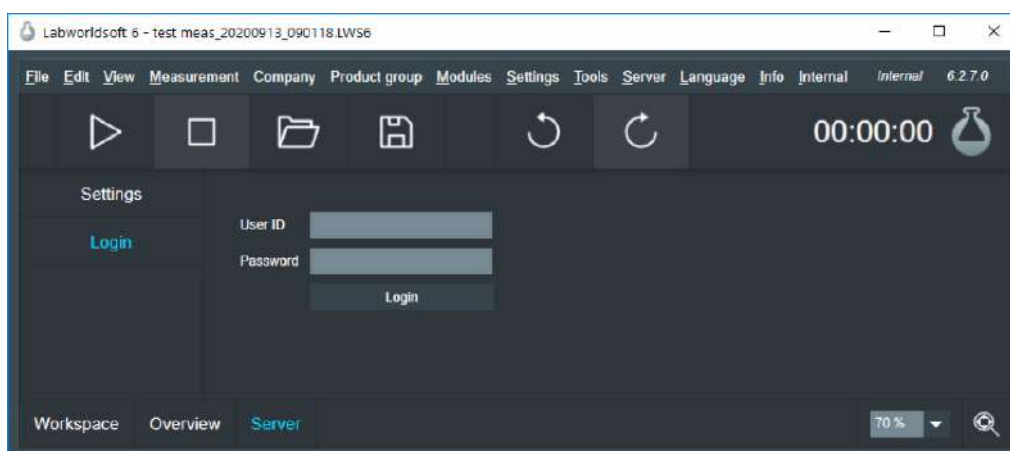


2. Alternatively, you can access **Labworldsoft Server** from the **Labworldsoft 6** main menu Item **View** and then,



3. Server tab is displayed on Labworldsoft 6. User can navigate among other tabs like workspace by using these tabs.

4. Double click on tab to display it as a separate window. Closing this separate window will again add this tab to the bottom as displayed earlier.



Settings

Use the **Settings** tab to configure the server.

Server Location

Type	Description
Local Machine	Labworldsoft 6 and Labworldsoft server are running in the same PC .
Intranet (Inside firewall)	Labworldsoft 6 and Labworldsoft server are running in the same or different PC in same network within the firewall.
Internet (Outside firewall)	Labworldsoft 6 and Labworldsoft server are running in the same or different PC in different network outside the firewall. Use this option when Labworldsoft 6 is connecting to Labworldsoft server through internet .

IP Address

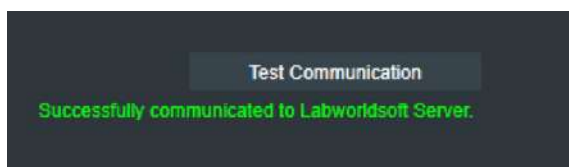
Provide the **IP Address** of the server. It is applicable only if **Server Location** is other than **Local Machine**

Port

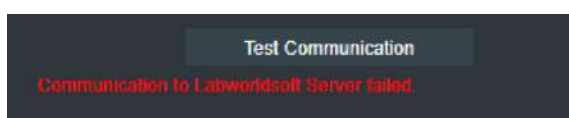
Provide the same **Port** number specified in **Labworldsoft Server**. At present, **Port** number is **8080** in **Labworldsoft Server**, which is not configurable. Therefore, provide the same number **8080** in **Labworldsoft 6** as well. In future Port number will be configurable. Please refer **Section 4.2.1** in Document **User Guide – Setting up Labworldsoft Server** for more details.

Test Communication

Use this option to test the Labworldsoft 6 and Labworldsoft server connectivity with the provided server settings. It will show the result message in the same window as shown below in case all the settings are correct and server is working.



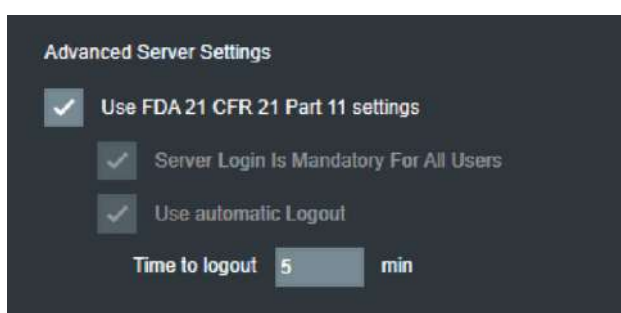
It will show the result message in the same window as shown below in case settings are incorrect or server is not working.



Advanced Sever setting

Advanced server setting is for **FDA 21 CFR 21 Part 11** compliance.

Advanced server setting is provided in the **Settings** tab. These settings will be available only to an **Administrator** level user when he is logged in.



Options in **Advanced server settings** described in following sections

Use FDA 21 CFR Part 11 settings

Use this option to make compliance with FDA 21 CFR Part 11. If we enable this option, all the sub options will be activated automatically.

Note: If this option is selected it is not possible to work with Labworldsoft 6 any more without logging to server.

Server Login is Mandatory for all users.

Check this option to insist for a login to **Labworldsoft server** to work with **Labworldsoft 6**.

Note: If this option is selected it is not possible to work with Labworldsoft 6 any more without logging to server.

Use automatic Logout

This option is used to set a time out to automatically logout from **server** in case of inactivity in the **PC**. User need to login again to work with **Server**.

Time to Logout

Use this option to specify the timeout duration in minutes in case of inactivity in the **PC**.



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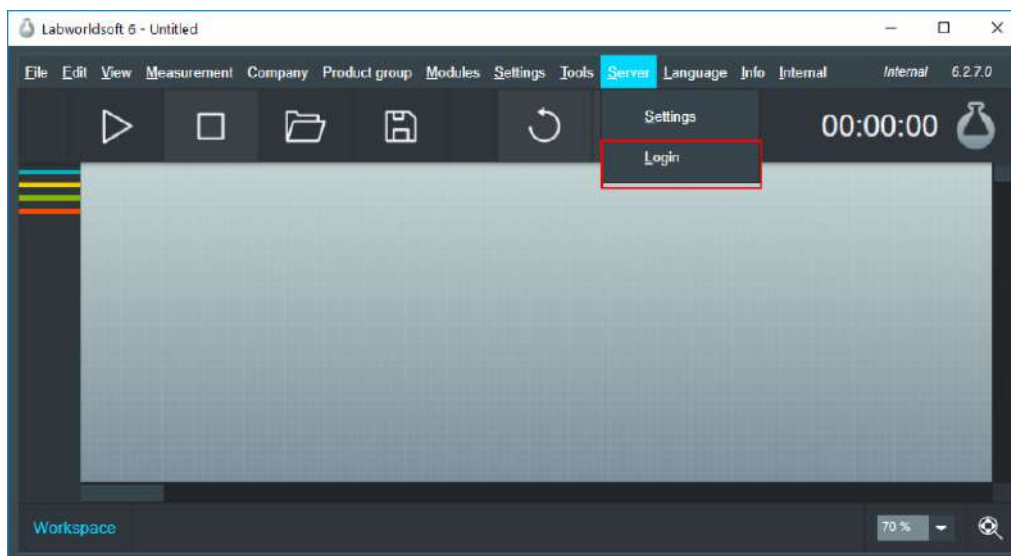
Login

User has to login to **Labworldsoft server** to make use of the Server functionalities and features in **Labworldsoft 6**. Server functionalities may differ according to the different logins based on their defined capabilities.

The following screen will display. Enter the login credentials and press **Login**

Login from Labworldsoft 6

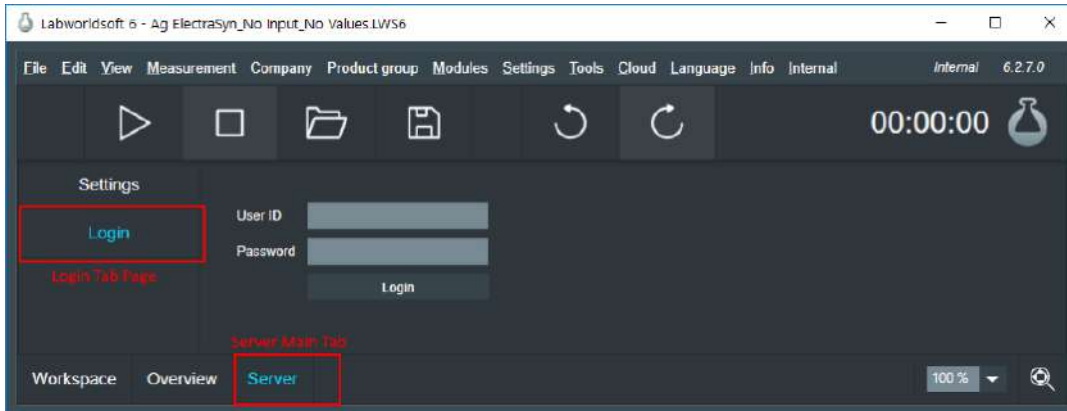
1. You can **Login** from the **Labworldsoft 6** main menu and sub menu **Login**.



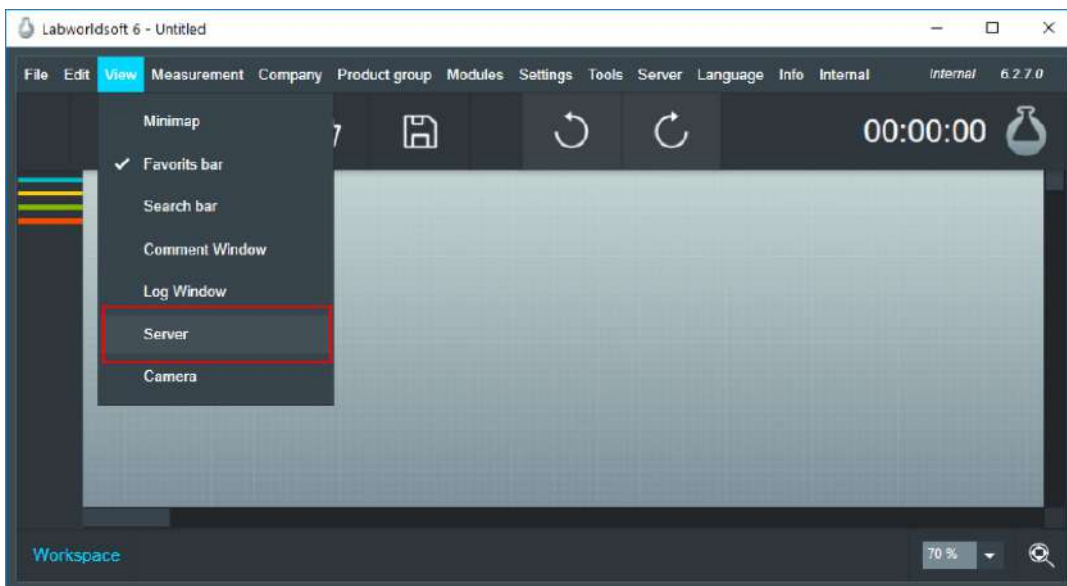
2. And then Workspace Server Tab's Login Tab.

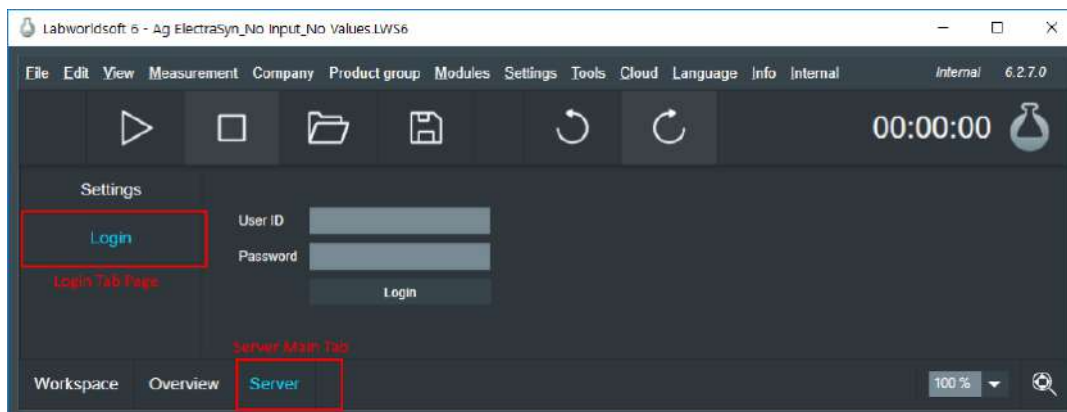


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3. Alternatively, you can **Login** from the **Login Tab** section of **Labworldsoft server main tab**. Main Server tab can be displayed from clicking menu Item **View** and then selecting **Server**.

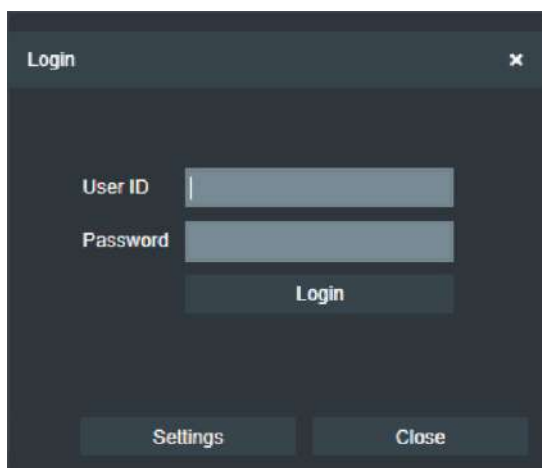




4. Provide the Login credentials and click on **Login** button.
5. **Labworldsoft 6** will prompt you in case of any issues with the Login.

Mandatory Server Login on Labworldsoft 6 startup

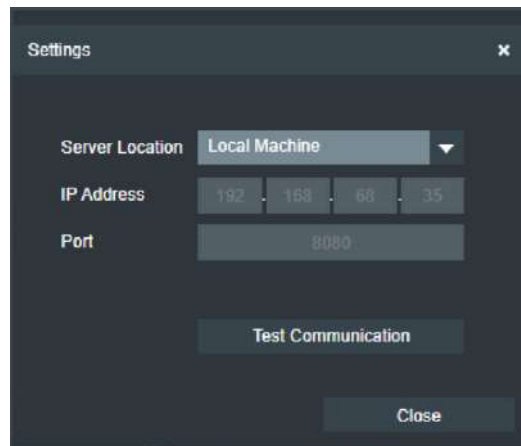
1. If the option **Server Login is Mandatory for all users** is selected in **Labworldsoft 6**, login window will show when **Labworldsoft 6** starts up. It is not possible to work with Labworldsoft 6 without logging to server.



2. **Labworldsoft 6** will close with a warning dialog if we close this window.
3. Provide the Login credentials and click on **Login** button.
4. **Labworldsoft 6** will prompt you in case of any issues with the Login.
5. **Server settings** can be done by clicking the **Settings** button.



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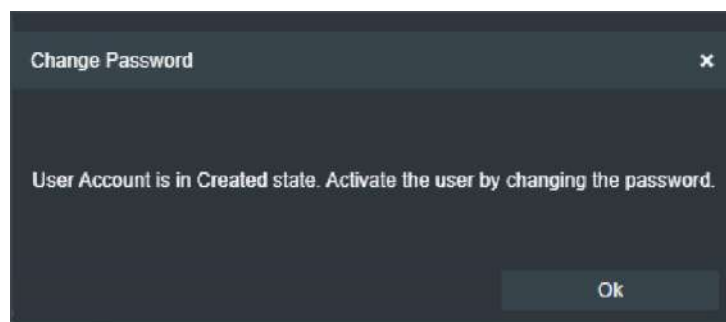
Logging a user for first time

1. When logging for the first time use the credentials provided to you by your Administrator.

User ID: Your user ID provided by Administrator

Password: Your initial password provided by Administrator

2. Change the password of your account is mandatory after your first login. **Labworldsoft 6** will prompt you for changing the password as shown as below.



3. Change Password screen will display.

Change Password

Current Password

New Password

Confirm New Password

Password must contain:

- Minimum 8 characters
- Maximum 15 characters
- At least 1 capital letter
- At least 1 small letter
- At least 1 number
- At least 1 special character ! @ # \$ % ^ & * + - :

Ok

4. Password criteria is that password must contain

- New password should not be same as previous and current password
- Minimum 8 characters
- Maximum 15 characters
- Atleast 1 capital letter
- Atleast 1 small letter
- Atleast 1 number
- Atleast 1 special character from ! @ # \$ % ^ & * + - :

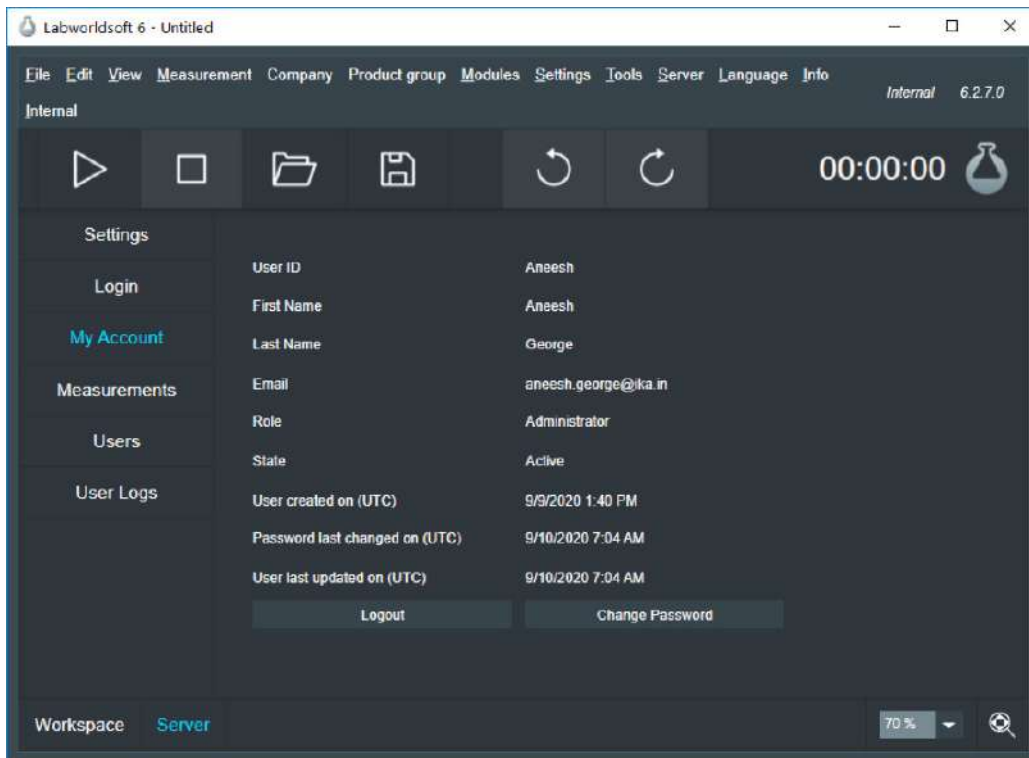
5. After changing the Password, Login again with new Password.

Logout

Click on the **Logout** button to logout from the server.

My Account

1. After successful login, the following screen will display. This screen will display all the information about the logged in user account.



Changing the password

1. A logged in user can change his own password directly from **Change Password** option.

The 'Change Password' dialog box contains three input fields: 'Current Password', 'New Password', and 'Confirm New Password', each with a red border. Below the fields, the text 'Password must contain:' is followed by a list of requirements: 'Minimum 8 characters', 'Maximum 15 characters', 'At least 1 capital letter', 'At least 1 small letter', 'At least 1 number', and 'At least 1 special character ! @ # \$ % ^ & * ; + -'. An 'Ok' button is located at the bottom right of the dialog.

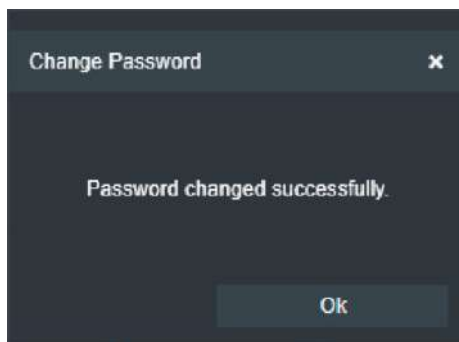
Note: Change password screen will be shown after the first login of a user.

2. Fill the current password, and new passwords in the fields and press Ok

3. Password criteria for user is that password must contain

- New password should not be same as previous and current password
- Minimum 8 characters
- Maximum 15 characters
- Atleast 1 capital letter
- Atleast 1 small letter
- Atleast 1 number
- Atleast 1 special character from ! @ # \$ % ^ & * + - :

4. The following screen will displayed after password is changed.



Password expiry

Set passwords will expire after a defined duration of 90 days. Change the password of a user in particular intervals.

Logout

Click on the **Logout** button to logout from the server.

Measurements

Measurements running in **Labworldsoft 6** can be stored in **Labworldsoft Server**. **Administrator** and **Super User** level users can create **Labworldsoft 6 configurations** and run the measurements using these **Labworldsoft 6 configuration** files. It will possible for them to save these **Labworldsoft 6 configurations** in the **Labworldsoft Server** in future release.



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Normal **user** can open this **Labworldsoft 6 configuration** and run the **measurement** of it. This **Labworldsoft 6 Measurement** files can be saved in to **Labworldsoft Server** and can be downloaded as **Excel** or **PDAF/A** format by a user based on his provided access rights. Further validation and certification functionalities can be applied to the **Measurement** files saved in the server.

Saving a measurement to server

Labworldsoft 6 Measurements are saved in **Labworldsoft Server** after setting up the necessary settings. User must **login** to the server before setting up the measurement to be saved to server. **Large Measurement files, which is more than 86400 Excel rows will be splitted to sub files containing of maximum 86400 Excel rows.**

There are two ways to save the measurement to server.

1. Using **Save Module**.
2. Using **Record function**.

Saving a measurement to server

Measurements running in **Labworldsoft 6** can be stored in **Labworldsoft Server** using the **Save Module**

1. **Login** to the server. **login** to the server is mandatory to save the measurement to **Labworldsoft Server**
2. Use **Save Module** in the **Labworldsoft 6 Configuration** for setting up the Measurement to be saved to the server.
3. Create number of input pins (channels) in **Save Module** as per the number of parameters to save to Server.
4. Connect all the Output pins of other modules and devices which has to be saved, to input pins (channels) of a save module.
5. Open the Configuration dialog of Save Module.
6. Use any of the measurement file naming options.
 - a. Provide the measurement **file name** in the field [Marked as ***A** in the following figure]
 - b. Select the option **Create automatic file** name to auto generate a file name based on the current date and time along with Configuration name. [Marked as ***B** in the following figure]

- c. Select the option **Change file name when measurement starts** to provide a file name manually when the measurement starts [Marked as *C in the following figure]
- d. Select the option **Save to server**. Keep this check box checked. [Marked as *D in the above figure]

The screenshot shows the 'Save' dialog box with the following settings:

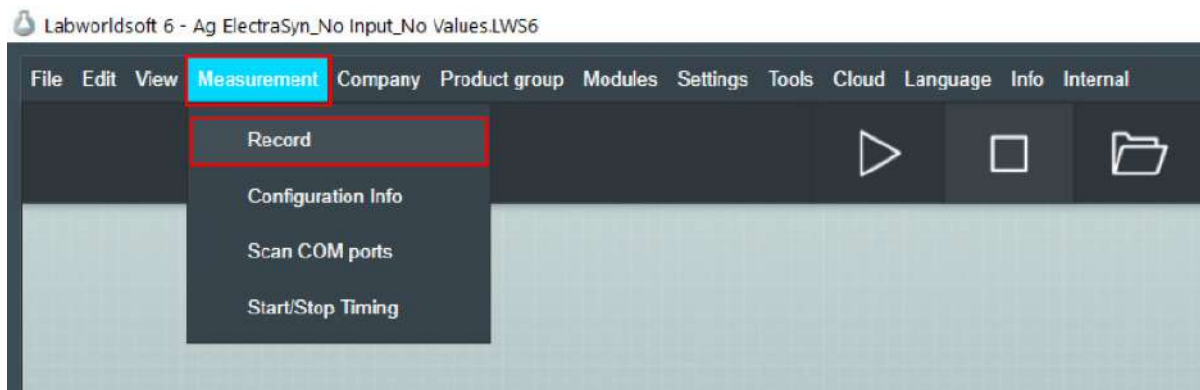
- Module name:** Save
- No. of channels:** 8
- Path:** D:\TestfServer
- File Name:** ElectoSynthesisSubstanceCode101 (labeled *A)
- File Name options:** Create automatic file name (labeled *B) and Change file name when measurement starts (labeled *C, checked)
- Sample rate:** 100 ms
- File format:** CSV, Excel (checked), ASCII (LWS 5)
- Save to server:** checked (labeled *D)
- Current channel:** 1
- Color:** Light blue
- Trigger:** 0

7. It is possible to select any of the provided **File format** options along with **Save to server** option.

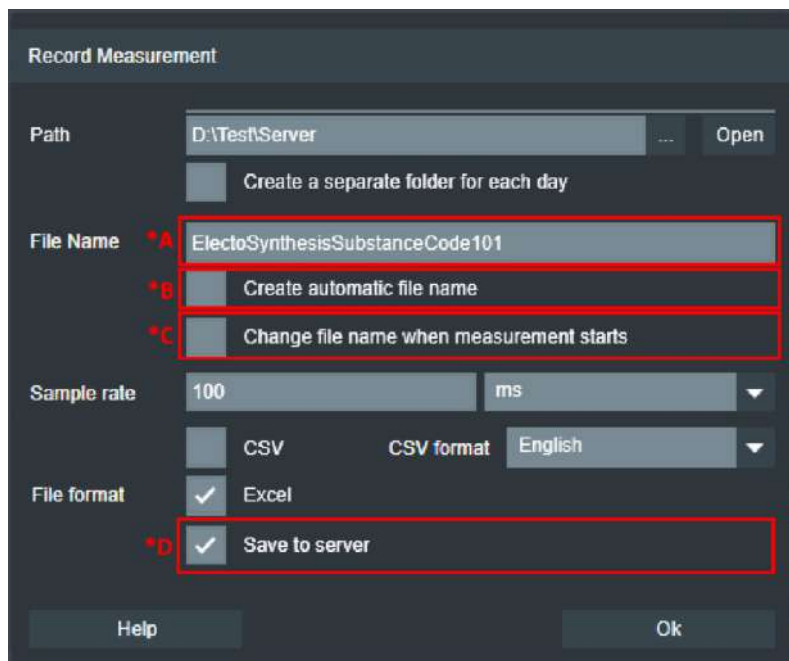
Saving a measurement using Record function

Record functionality is used to save the **measured values** of all **output pins** of all the **modules** and **devices** in a measurement to files in a specified path. The file format can be either **CSV**, **Excel**, **Save to server** or all of them.

1. **Login** to the server. **Login to the server** is mandatory to save the measurement to **Labworldsoft Server**.
2. Select the **Record** function from Labworldsoft 6 main menu **Measurement** and the sub menu **Record**.



3. Configuration dialog for **Record measurement** will display. Configure the functionality.
4. Set any of the file naming options.
 - a. Provide the **file name** in the field [Marked as ***A** in the following figure]
 - b. Select the option **Create automatic file name** to auto generate a file name based on the current date and time along with Configuration name. [Marked as ***B** in the following figure]
 - c. Select the option **Change file name when measurement starts** to provide a file name manually when the measurement starts [Marked as ***C** in the following figure]



5. Select the option **Save to server**. Keep this check box checked.
[Marked as *D in the above figure]

6. It is possible to select any of the provided **File format** options along with **Save to server** option.

View measurements saved in server

Click on the Measurements tab page to list out the measurements saved in server. Further validation and certification functionalities can be applied to the **Measurement** files saved in the server from this section.

Click on the **Fetch Measurements button** page to list out the measurements saved in server. File listing is depending upon the access rights, user has.

For normal user

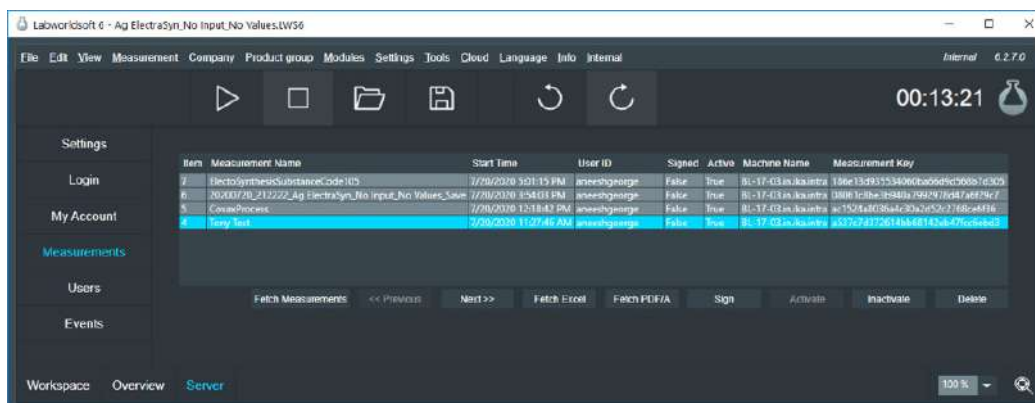
Displays only his own measurements.

For Super user

Displays only the measurements having the **state Active**.

For Administrator user

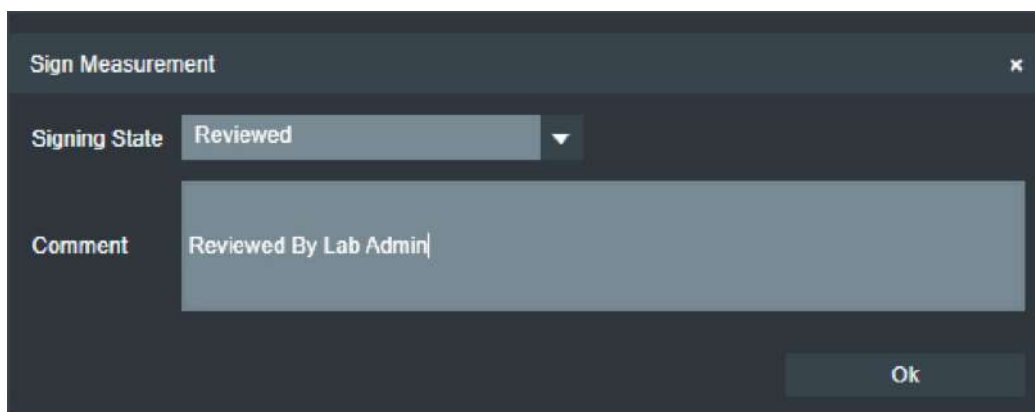
Displays all the measurements



A **Measurement** file, which is more than **86400 Excel rows**, will be spited to sub files containing of maximum **86400 Excel rows**. So, Multiple measurement excel files will be created as file size increases when a measurement runs for long time.

Signing a measurement

Only **Administrator** level users can sign a measurement. Click on the **Sign** button, following screen will display.



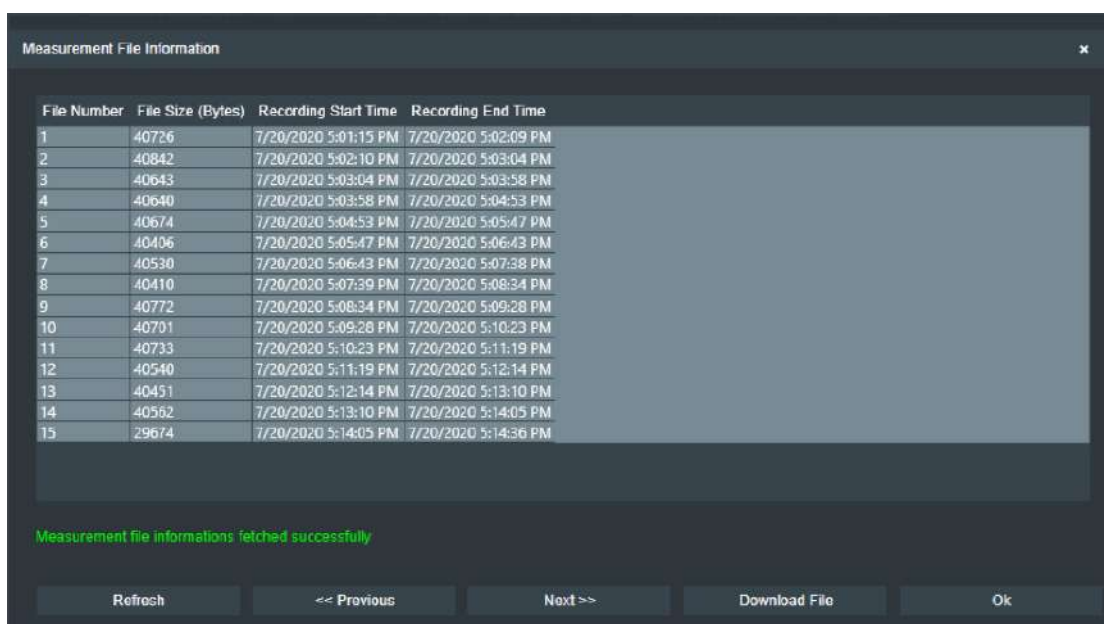
1. Select the **Signing State**.

Unsigned	Initial state of signing.
Reviewed	Measurement is in reviewed state.
Authorship	Measurement is in authorized state.
Approved	Measurement is in approved state.
Responsibility	Assigning the responsibility of measurement.

2. Enter the comments in provided place and click **Ok** button.

Downloading a measurement in Excel format

Select the Measurement from the list and click on **Fetch Excel** button. All the measurement Excel files associated with the particular measurement will be displayed.



Select the desired file and click **Download File** button. Provide the file path to save the **Excel** file in the local disk.

Use the << **Previous** and **Next**>> button to navigate through the file listing.

Downloading a measurement in PDF/A format

Select the Measurement from the list and click on **Fetch PDF/A** button. All the measurement PDF/A files associated with the particular measurement will be displayed.

File Number	File Size (Bytes)	Recording Start Time	Recording End Time
1	40726	7/20/2020 5:01:15 PM	7/20/2020 5:02:09 PM
2	40842	7/20/2020 5:02:10 PM	7/20/2020 5:03:04 PM
3	40643	7/20/2020 5:03:04 PM	7/20/2020 5:03:58 PM
4	40640	7/20/2020 5:03:58 PM	7/20/2020 5:04:53 PM
5	40674	7/20/2020 5:04:53 PM	7/20/2020 5:05:47 PM
6	40406	7/20/2020 5:05:47 PM	7/20/2020 5:06:43 PM
7	40530	7/20/2020 5:06:43 PM	7/20/2020 5:07:38 PM
8	40410	7/20/2020 5:07:39 PM	7/20/2020 5:08:34 PM
9	40772	7/20/2020 5:08:34 PM	7/20/2020 5:09:28 PM
10	40701	7/20/2020 5:09:28 PM	7/20/2020 5:10:23 PM
11	40733	7/20/2020 5:10:23 PM	7/20/2020 5:11:19 PM
12	40540	7/20/2020 5:11:19 PM	7/20/2020 5:12:14 PM
13	40451	7/20/2020 5:12:14 PM	7/20/2020 5:13:10 PM
14	40562	7/20/2020 5:13:10 PM	7/20/2020 5:14:05 PM
15	29674	7/20/2020 5:14:05 PM	7/20/2020 5:14:36 PM

Select the desired file and click **Download File** button. Provide the file path to save the **PDF/A** file in the local disk.

Use the **Next** and **Previous** button to navigate through the file listing.

States of measurement

State of a measurement used for administrative purpose. There are two different states for a measurement and described below.

Active	<ul style="list-style-type: none"> It is the default state of a measurement when it is saved to server. When an Administrator user changes an Inactive measurement to Active.
Inactive	<ul style="list-style-type: none"> State when an Administrator or Super User changes an Active measurement to Inactive. Measurement state, then it is possible to delete the measurement by an Administrator

When a new measurement is saved in server, measurement state is **Active**.

Deleting a measurement

Administrator user can delete a measurement from server. Only **Inactive** measurement can be deleted from server.

If we want to delete an **Active** measurement, change its state to **Inactive** first. Then delete it.



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Users

Labworldsoft 6 users are the users who will login to the **Labworldsoft server** from **Labworldsoft 6** software (i.e., Labworldsoft 6 client).

1. Use the **Users** tab to create, edit, delete or reset the password of the **users** which can be used from Labworldsoft 6.

User Roles

There are different categories of **Users** based on the access rights they have. The privileges and rights they have categorize these users, they are called **Role** of a user. The different user roles are,

User	Read-only permissions and Least privileges.
Super User	Read and limited write permissions. They have All User role privileges and some of the Administrator privileges.
Administrator	Full access rights. They have highest level of privileges.

User management capabilities based on User roles

Function	Administrator	Super User	User
View own user details present in server in My Account section	Yes	Yes	Yes
Create a new user of normal user role	Yes	Yes	No
View all normal user's user details present in server	Yes	Yes	No
Change other users details of normal user role	Yes	Yes	No
Reset other user's Password of normal user role	Yes	Yes	No
Change other user's user state (Active / Inactive) of normal user role	Yes	Yes	No
Create a new user of 'Super User' user role	Yes	No	No
Create a new user of 'User' user role	Yes	No	No
Delete a user	Yes	No	No
View all users user details present in server	Yes	No	No
Reset other user's Password of any user role	Yes	No	No
Change other user's user state (Active / Inactive) of any user role	Yes	No	No
Change other users details of any user role	Yes	No	No
Change other users role	Yes	No	No



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Labworldsoft 6 measurement functionalities based on User roles

Function	Administrator	Super User	User
Save a measurement to server	Yes	Yes	Yes
Download a measurement in excel	Yes	Yes	Yes
Download a measurement in PDF/A	Yes	Yes	Yes
Change status of a measurement from Active to Inactive	Yes	Yes	No
Change status of a measurement from Inactive to Active	Yes	No	No
Signing a measurements	Yes	Yes	No
Delete a measurement permanently	Yes	No	No

Labworldsoft 6 configuration functionalities based on User roles

Function	Administrator	Super User	User
Open an existing Labworldsoft configuration from server	Yes	Yes	Yes
Create a new Labworldsoft configuration	Yes	Yes	No
Change an existing Labworldsoft configuration	Yes	Yes	No
Upload a Labworldsoft configuration to server	Yes	Yes	No

Labworldsoft 6 User Logs functionalities based on User roles

Function	Administrator	Super User	User
Automatically saving the User Logs to server	Yes	Yes	Yes
Viewing the User Logs	Yes	Yes	No

Add User

1. Click on **Add** button to create a new user in **Users** tab. The following screen will be displayed.

The screenshot shows a dark-themed 'Add User' dialog box. It contains the following fields and values:

- User ID: tonythomas
- First Name: Tony
- Last Name: Thomas
- Email: tonythomas@ika.in
- Department: RD
- Team: LAB
- Role: Administrator

Below the fields, the text 'User ID should have:' is followed by a list of requirements:

- Minimum 4 characters
- Maximum 40 characters
- First character a letter
- Allowed special characters . @ - _

An 'Ok' button is located at the bottom right of the dialog.

2. Fill all the fields and select the proper **Role** on this screen and press **OK**.

3. There are different states for a **User** , they are

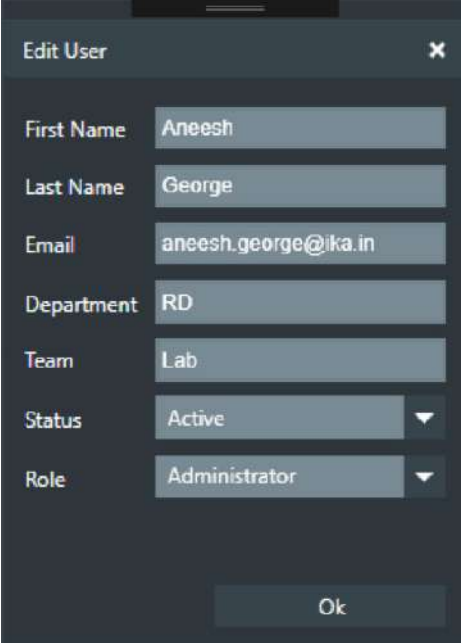
Active State of an active user.
Inactive State of an inactive user.

4. Only those **User** whose state is **Active** is allowed to login to server from **Labworldsoft 6**.

5. An Administrator user can change an **Active** user to **Inactive** state and vice versa.

Edit User

1. We can edit user account from this **Users** tab screen. The following screen will be displayed.



The screenshot shows a dark-themed 'Edit User' dialog box. It has a title bar with 'Edit User' and a close button (X). The form contains the following fields:

- First Name: Aneesh
- Last Name: George
- Email: aneesh.george@ika.in
- Department: RD
- Team: Lab
- Status: Active (dropdown menu)
- Role: Administrator (dropdown menu)

An 'Ok' button is located at the bottom center of the dialog box.

Reset Password of User

1. To reset the password of a user to **Default Password**, Click on this button.

Default Password is the Password provided in the **Users** tab, **Default Password** field in **Laworldsoft Server**.

Delete User

1. Only the users who is in **Inactive** state can be deleted from the server.
2. Edit the user and make his state from **Active** to **Inactive**.
3. Use the **Delete** button to delete user, who is not in **Active** state.

User Logs

User can view the **User Logs** in this section. The following **User Logs** and their details are covered for better understanding the server activity.



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USERLOG_USER_ADDED_SUCCESS	User added successfully.
USERLOG_USER_ADDED_FAILED	Adding a user failed.
USERLOG_USER_DELETED_SUCCESS	User deleted successfully.
USERLOG_USER_DELETED_FAILED	Deleting a user failed.
USERLOG_USER_MODIFIED_SUCCESS	User modified successfully.
USERLOG_USER_MODIFIED_FAILED	Modifying user failed.
USERLOG_PASSWORD_RESETTED_SUCCESS	Password resetted successfully.
USERLOG_PASSWORD_RESETTED_FAILED	Resetting password failed.
USERLOG_USER_LOGGED_IN_SUCCESS	User logged in successfully.
USERLOG_USER_LOGGED_IN_FAILED	User login failed.
USERLOG_USER_LOGGED_OUT_SUCCESS	User logged out successfully.
USERLOG_USER_LOGGED_OUT_FAILED	User logout failed.
USERLOG_PASSWORD_CHANGED_SUCCESS	Password changed successfully.
USERLOG_PASSWORD_CHANGED_FAILED	Password changing failed
USERLOG_MEASUREMENT_STARTED_SUCCESS	Measurement started successfully.
USERLOG_MEASUREMENT_STARTED_FAILED	Measurement starting failed.
USERLOG_MEASUREMENT_SIGNED_SUCCESS	Measurement signed successfully.
USERLOG_MEASUREMENT_SIGNED_FAILED	Measurement signing failed.
USERLOG_MEASUREMENT_ACTIVATED_SUCCESS	Measurement activated successfully.
USERLOG_MEASUREMENT_ACTIVATED_FAILED	Measurement activation failed.
USERLOG_MEASUREMENT_INACTIVATED_SUCCESS	Measurement inactivated successfully.
USERLOG_MEASUREMENT_INACTIVATED_FAILED	Measurement inactivation failed.
USERLOG_MEASUREMENT_DELETED_SUCCESS	Measurement deleted successfully.
USERLOG_MEASUREMENT_FILE_EXCEL_DOWNLOADED_SUCCESS	Measurement file excel downloaded successfully.
USERLOG_MEASUREMENT_FILE_EXCEL_DOWNLOADED_FAILED	Measurement file excel downloading failed.
USERLOG_MEASUREMENT_FILE_PDFA_DOWNLOADED_SUCCESS	Measurement file pdfa downloaded successfully.
USERLOG_MEASUREMENT_FILE_PDFA_DOWNLOADED_FAILED	Measurement file pdfa downloading failed.
USERLOG_MEASUREMENT_FILE_EXCEL_UPLOADED	Measurement file excel uploaded successfully.
USERLOG_MEASUREMENT_FILE_PDFA_UPLOADED	Measurement file pdfa uploading successfully.
USERLOG_MEASUREMENT_FILE_UPLOAD_ABORTED_SUCCESS	Measurement file upload aborted successfully.
USERLOG_MEASUREMENT_FILE_UPLOAD_ABORTED_FAILED	Measurement file upload aborting failed.