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# LABWORKS LIMS v6.10

**Installation Guide** 

Last Updated: June 2020

#### LABWORKS LIMS v6.10 Installation Guide



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## LABWORKS Overview

LABWORKS is a Laboratory Information Management System (LIMS). It is a database used for recording sample information and test results in a laboratory environment. LABWORKS essentially involves logging in a sample, entering test results for the sample, validating the sample, managing quality assurance for the sample, and providing invoices and/or reports for the sample.

LABWORKS is a modular application. Each set of related functions in LABWORKS is contained in a subset or smaller streamlined programs. For example, samples may be logged in by using a Single or Multi-Sample Login program. Sample results may be entered by using Results Entry or another Results uploading related program. Each of these modular programs is specialized for its function.

LABWORKS Desktop is a client/server application. There are two options for the client application: LABWORKS Desktop (thick client) and browser-based Webtop client with Desktop being primary. The client application interacts with the LABWORKS database to send, filter and read data. Additionally, the LABWORKS uses services that run on a server computer to authenticate users and provide and receive data. The server resides on the server computer that is running LABWORKS Services. The file server is a computer that contains files common to all users. The LABWORKS base files are stored on the file server. The LABWORKS database is accessed from a database server. The database options are: Microsoft SQL Server and Oracle.

### About this Guide

The purpose of this document is to provide the installation procedures for the different software packages within the LABWORKS LIMS offerings.

To help with the understanding of the installation procedure, a Planning and Definition section has been added to this document. This will be used to define the location where the software will be located on the network. The Planning and Definition Worksheet will also show what testing is recommended prior to the start of the installation.

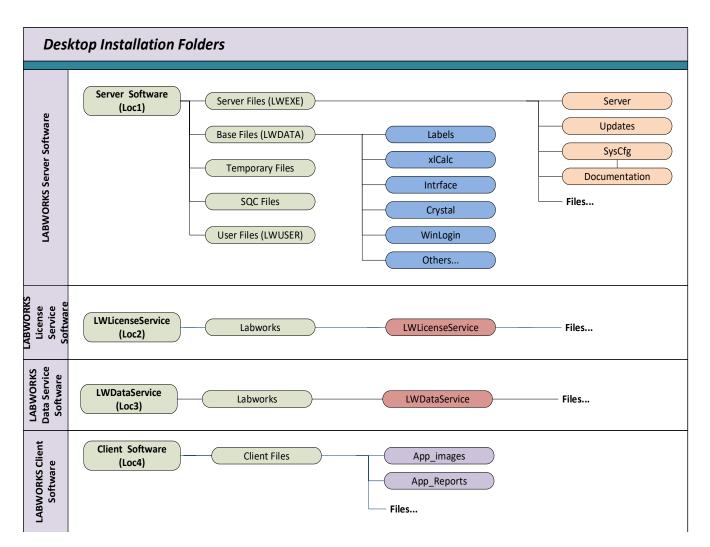
The section on Planning and Definition, LABWORKS Desktop Installation, and Appendices A and B are used to install the core product. These sections are required for a functional installation of LABWORKS on your system.

**Note:** It is suggested that Appendix A, B, and C should be printed, completed, and followed during the installation. The check list will ensure that a step in the installation process is not omitted during the installation.

## **Planning and Definition**

LABWORKS Desktop is the latest in a succession of versions of LABWORKS LIMS. It provides significant new functionality, usability and reliability and is built using the latest in software development tools. In accordance with these newer tools and technologies the installation footprint on the server and client are different from previous version. Even if you are a long time LABWORKS user, it is recommended you read the complete installation guide and complete the *'Planning and Definition Worksheet'* before starting your LABWORKS Desktop installation or upgrade.

The following diagrams show the different folders used to install the LABWORKS Desktop and LABWORKS Webtop software. During the installation, the folders for the Server software and Client software are installed in different locations and can be selected/changed during the installation. Folders for the Webtop, LWLicenseServices and LWDataServices software are predefined as explained in the following pages and cannot be changed.

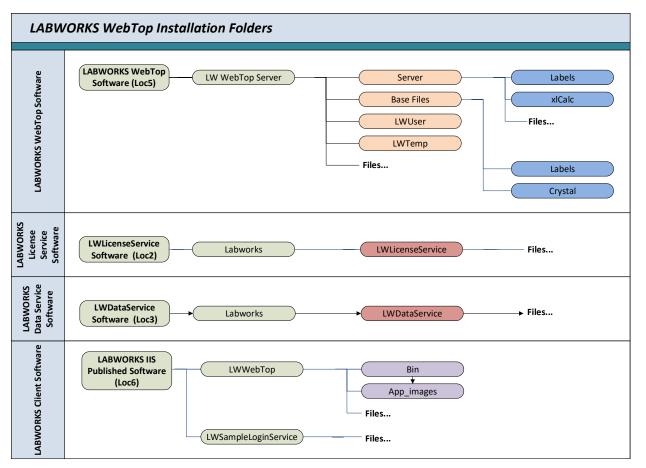


The LABWORKS Server Location (Loc1) could be different for each of the sub folders but for maintenance reasons it is suggested that you have only one folder defined on the server for the software. If the LABWORKS Server Location (Loc1) was defined as a version, then the grouping folder could be 'LABWORKS67' and the next installation would use 'LABWORKS68' or 'LABWORKS69' depending on the next version number.

After determining the LABWORKS Server Location (Loc1) then it is suggested that the Server Files be placed in LWEXE, Base Files in LWDATA, User Files in LWUSER, Temporary Files in LWTEMP, and SQC Files in the LWSQC folders. During the installation and Gateway Administrator operation these folders will be created.

The Planning and Definition Worksheet will require the location to be defined prior to the installation. If the 'LABWORKS Server Software (Loc1)' was defined to be **'C: \LABWORKS\'** then the Server Files folder would be **'C: \LABWORKS\LWEXE\'** and the Base Files folder would be C: **\LABWORKS\LWDATA\'**.

The default for the Client installation is **'C: \LABWORKS\Client'.** If user change the 'Client location (Loc4)' to other folder location (**D:\LABWORKS\**) then the software location for the client would be **'D: \LABWORKS\Client\'** 



The software location for the LABWORKS Webtop is controlled by either the LABWORKS software or the Internet Information Server (IIS). The 'LABWORKS Webtop Software (Loc5)' for the Webtop will be 'C:\Program Files (x86)\LABWORKS\' and the 'LABWORKS IIS Published Software (Loc6)' will be 'C: \inetpub\wwwroot\'. These folders are not changeable within the software. The installation of the Webtop software will create file main folders:

- *'C*:\Program Files (x86)\Labworks\LWLicenseServices\'
- 'C:\Program Files (x86)\Labworks\LWDataServices\'
- 'C:\Program Files (x86)\Labworks\LWWebtop Server\'
- 'C:\inetpub\wwwroot\LWWebtop\'
- 'C:\inetpub\wwwroot\LWSampleLoginService\'

**Note:** If the LABWORKS server is also the IIS server then only one installation of the LWLicenseServices and LWDataServices will be installed.

## **Required Sharing and Permission**

The server folders need to be shared to the clients. The share should be set with required group based on Network Policy. Normally the Administrators (domain, backup, and other) groups will have Full Control access to the share and permission. Three additional groups should be added to the share to control the LABWORKS user access.

The permission on the share must be set to RWXD for the Groups required. (**RWXD** R = Read, W = Write, X = Execute, D = Delete)

Fold	der permission required				
	Falder	LABWORKS	LABWORKS	LABWORKS	Admin.
	Folder	Users	Super User	Managers	Account
1	(Loc2) LWLicenseServices Location	N/A	N/A	N/A	Full Control
2	(Loc3) LWDataServices Location	N/A	N/A	N/A	Full Control
3	(Loc1)\LWEXE (Server Files)	RX	RX	RX	Full Control
4	(Loc1)\LWEXE\syscfg(Server Files)	RX	RX	RWXD	Full
5	(Loc1)\LWUSER (User Files)	RWXD	RWXD	RWXD	Full Control
6	(Loc1)\LWTEMP (Temporary Files)	RWXD	RWXD	RWXD	Full Control
7	(Loc1)\LWDATA (Base Files)	RWXD	RWXD	RWXD	Full Control
	Folder	LABWORKS Users	LABWORKS Super User	LABWORKS Managers	Admin. Account
1	(Loc2) Webtop LWLicenseServices	N/A	N/A	N/A	Full Control
2	(Loc3) Webtop LWDataServices Location	N/A	N/A	N/A	Full Control
3	(Loc5)\LWWebtop Server\LWEXE	Rx	RX	RX	Full Control
4	(Loc5)\LWWebtop Server\LWEXE\SysCfg	RX	RX	RWXD	Full Control
5	(Loc5)\LWWebtop Server\LWUSER	RWXD	RWXD	RWXD	Full Control
6	(Loc5)\LWWebtop Server\LWTEMP	RWXD	RWXD	RWXD	Full Control
7	(Loc5)\LWWebtop Server\LWDATA	RWXD	RWXD	RWXD	Full Control
8	(Loc6)\\LWWebtop\Reports	RX	RX	RWXD	Full Control
9	(Loc6)\\LWSampleLoginService	N/A	N/A	N/A	Full Control

## LABWORKS Desktop Installation Prerequisites

## **Before You Start**

LABWORKS Desktop is the latest in a succession of versions of LABWORKS LIMS. It provides significant new functionality, usability and reliability and is built using the latest in software development tools. In accordance with these newer tools and technologies the installation footprint on the server and client are different from previous version. Even if you are a long time LABWORKS user, it is recommended you read the complete installation guide before starting your LABWORKS Desktop installation or upgrade. Complete the Planning and Definition section which can be used as a worksheet.

Installing LABWORKS is a multi-step process that involves performing a server installation, client installation on the server, creating a UNC path or mapped drive to the LABWORKS folder, running the update database tool, running the gateway administrator tool to configure workstations and LABWORKS databases, and finally performing a client installation on each workstation that is to run LABWORKS

LABWORKS installation involves the following steps:

- Step 1: Running LWServer.exe to install required folder, server software, and client installation.
- Step 2: Configure ApplicationSpec.xml
- Step 3: Create Folder Access and Permission
  - Define the UNC Path or create mapped drive to the LABWORKS folder.
- Step 4: Prepare the database by running the Microsoft SQL/Oracle Script and Update Tool.
  - o 6.0/6.1/6.2/6.3/6.4/6.5/6.6/6.7/6.8/6.8.5/6.9/6.10 (Appendix D)
- Step 5: Run the Gateway Administrator Tool (LWSysCfg6.exe) to configure the LABWORKS software connection strings.
  - Configure the Database.
  - Configure Database Authentication.
  - Configure Global Database Availability.
- Step 6: Start LWLicenseServices/LWDataServices
- Step 7: Run Migration Utility to convert previous versions of LABWORKS 6.X to Latest version of LABWORKS.
- Step 8: Run NGMigrationTool to convert persisted groups to log batches. It is needed to be run in the case of updating from 6.9 or earlier to 6.10 or later version.
- Step 9: Run the ClientSetup.msi on each workstation that is to use LABWORKS
- **Note:** If you are using mapped drives then you must create a mapped drive on the server and then create the same mapped drive on each workstation that will run LABWORKS.

Before you start your LABWORKS Desktop installation you will need the following:

- LABWORKS Desktop Installation Disk
- LABWORKS License/Control File (\*.CTL)
- Completed Planning and Definition Worksheet
- Network Location/Share for Server Installation

If you are updating your existing LABWORKS LIMS program, back up your LABWORKS Base File folder and the database before beginning installation. LABWORKS is not responsible for any data loss or downtime caused by not creating backup files. Installation from the new LABWORKS CD should only begin after creation of a full backup of all existing files in your LABWORKS Server Files and Base Files and the actual database itself to tape, CD ROM, or other method.

It is recommended that you install any LABWORKS update on a test computer using a backup Base Files and database to test the program prior to installation on networks, servers, or multiple workstations. Even though LABWORKS thoroughly tests the LABWORKS LIMS program in-house, there may be variables associated with your network, servers, workstations, environment, etc., that may present unforeseeable problems.

## **Server Installation**

LABWORKS Desktop has 2 components of installation, the Server and the Client.

#### **Server Installation**

• The server installation copies files to a designated location. These files include: System configuration and conversion tools, the LWDATA folder, the license file and client installation point.

#### **Server Files**

- This is the location the LABWORKS server software will be located, normally referred to as LWExe. Within this folder, it will also contain the server documentation, system configuration, and updates.
- During the installation, the license (\*.CTL) file will be copied from the license file path into the Server Files Folder for LABWORKS to use.
- This folder contains utilities for updating the LABWORKS Database Schema to latest LABWORKS version, Conversion utilities for previous versions. It also includes utilities for Language translation and management.

#### **Base Files**

• The Base File location is where the external files for the operation of LABWORKS will be located, normally referred to as LWData. These files include different types of reports, image files, and other files required for LABWORKS.

#### **License File Path**

• This is the location where the installation program can find the license (\*.CTL) file to copy to the Server Files location.

### **Temporary Files**

- Path that the lwcs640 component will use for temporarily operations, normally referred to as LWTemp.
- For best performance, these files should be local to the user. The default location is the Windows folder for temporary files.

#### **User Files**

- Path where the user will find files created during the normal operation of the LABWORKS software, normally referred to as LWUser. The user path could be a folder located in the LWUser that would be created based on LABWORKS or Operating System login name.
- Files created as the data source for Crystal reports will be in the user folders.
- For best performance, these files should be local to the user.
- The default location is the Windows user profile location.

#### **SQC** Files

• Path where the Northwest Analytical Software (NWA) will be located, which is normally referred to as LWSQC.

#### **Database Server**

• The database server, SQL or Oracle requires a database instance be created. The instructions for creating the LABWORKS database are available in a separate document.

### LWLicenseServices

 This folder contains the LABWORKS License Service application. This service is used to authenticate users and provide database configuration information. This folder will be located in the "Program Files (x86)\Labworks\LWLicenseServices" folder.

#### LWDataServices

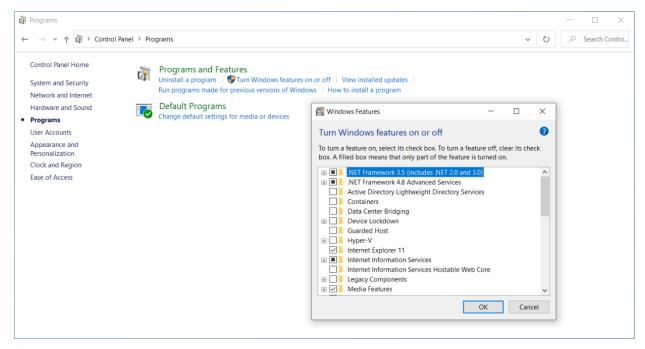
• This folder contains the LABWORKS Data Service application. This service is used to provide data to the application. This folder will be located in the "Program Files (x86)\Labworks\LWDataServices" folder.



## **Installation Prerequisites**

The following is based on a Windows Server 2016 64-bit machine:

- 1. Dot Net Framework 4.7 needs to be installed on the Server.
  - a. Control Panel → Programs → Turn Windows Features On/Off
- 2. Enable Dot Net Framework 3.5 on the Server.



## LABWORKS Desktop Installation

## **Step 1: Server Installation**

The LABWORKS setup program is LWServer.exe.

Right click on the LWServer.exe program. Select 'Run as administrator' to install. Note: Microsoft .Net Full Framework 4.0 is required. Windows installer Note: Survey View Application Boo FiLABWORKS 66 Setup:LWInstaller.68.0.5 View Survey View Application Boo FiLABWORKS 66 Setup:LWInstaller.68.0.5 View Undows (Setup) File Boo Survey View Application Boo File Boo Survey View Analysis (Setup) File Boo Survey (Setup) File File File File File File File File	0	User Input/Action	Expected Results
File       Home       Share       View       Manage       Image: Control of the		Select 'Run as administrator' to install.	
< <u>Back</u> Cancel		Image       Image       Image         Image       Image       Image       Image         Image       Image       Image       Image       Image         Image       Image       Image       Image       Image       Image         Image       Image       Image       Image       Image       Image       Image       Image <td< th=""><th>installer initiates the installation from the Setup</th></td<>	installer initiates the installation from the Setup

	LABWORKS Server - InstallShield Wizard × Customer Information Please enter your information.	
	User Name:	
	MyName	
		Customer
	Company Name:	Information
	MyCompany	dialog is displayed.
2	Install this application for:	
	Anyone who uses this computer (all users)	User Name and Company name
	Only for me (MyName)	is entered.
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Enter User Name and Company Name.	
	Click 'Next'.	
	LABWORKS Server - InstallShield Wizard	
	Setup Type	
	Select the setup type to install.	
	Please select a setup type.	
	Complete	
	All program features will be installed. (Requires the most disk space.)	
		Setup Type
		dialog is
3	Select which program features you want installed. Recommended for advanced users.	displayed. Setup Type is
		specified.
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Select the Setup Type:	
	Complete: Created Client Install, System Admin Tools, New Database	
	Custom: Each piece can be selected separately.	
	Click 'Next'.	

		1
	<ul> <li>When Complete is selected, you are first prompted for the Application Folder (The location for the client install and System Admin Tools)</li> <li>For the server application folder, or type/select the 'Server Files' in the Desktop Server section of the Planning and Definition Worksheet. This is the Network File server location where all clients will have access.</li> <li>Click 'Next' to proceed.</li> <li>Please note that the above folder should also be a different folder from the previous versions of LABWORKS. This is not an absolute requirement but using a different folder from previous versions makes it easier to differentiate between previous versions and LABWORKS Desktop. All program names for LABWORKS Desktop are different from previous versions of LABWORKS to provide easier user and system migration.</li> </ul>	
	LABWORKS Server - InstallShield Wizard	
	Choose Destination Location	
4	Specify a folder for the application.          C:\LABWORKS\LWEXE         Browse	Choose Destination Location dialog is displayed. Destination folder is
	InstallShield	specified.
	For the database folder, type the 'Base Files' in the Desktop Server section of the Planning and Definition Worksheet. LABWORKS Desktop uses the same folder structure as previous version of LABWORKS. The install won't overwrite existing files. If you are upgrading from a previous version of LABWORKS you should make a copy of your LWDATA folder for use with LABWORKS Desktop. LABWORKS Desktop uses Crystals Reports 2013 for displaying reports, with an optional install of the Crystal XI Release 2 (11.5) report designer. When existing reports are modified using LABWORKS Desktop they are saved in the new format and cannot be used with previous versions of LABWORKS.	

	LABWORKS Server - InstallShield Wizard	
	Choose Destination Location	
	Specify a folder for new Database.	
	Specify a folder for new Database.	
	C:\LABWORKS\LWDATA	
	B <u>r</u> owse	
	InstallShield	
	< Back Next > Cancel	
	Click 'Next' to continue.	
	LABWORKS Server - InstallShield Wizard	
	License file path	
	Enter License file path	
	C:\LABWORKS\LWEXE	License file
	Browse	path dialog is
5		displayed. Location of
		license file is
		specified.
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Select the location of your license file. This will most likely be from your Control File CD,	
	which is supplied on a separate disk from the installation disk.	
	LABWORKS recommends copying the license file from the CD to a folder on your	License file
6	network for easy access.	copied from CD
0	Click 'Next' to proceed.	to folder on
		network.

InstallShield Wizard X	
Installation of LABWORKS Services	
Select the services to install on this machine.	
LABWORKS Data Service	
	Installation of LABWORKS Services dialog is displayed. LABWORKS services to
InstallShield	install specified.
For installation of LABWORKS License Service on same machine check the option 'LABWORKS License Service'. If you want to install the 'LWLicenseServices' on different machine uncheck the option. For installation of 'LABWORKS Data Service' on same machine check the option 'LABWORKS Data Service'. If you want to install the 'LWDataServices' on different machine uncheck the option. Click 'Next 'to continue. Note: If LWLicenseServices/LWDataServices is not being installed, proceed to Step 18.	
lation of LW License Service	
The Server setup launches separate LWLicenseServices setup program, and the welcome screen appears with brief instructions.	The Welcome to the InstallShield Wizard for LABWORKS License Service dialog opens.
	Installation of LABWORKS Services         Select the services to install on this machine.         ABWORKS License Service         LABWORKS Data Service         Installation of LABWORKS Data Service         For installation of LABWORKS License Service on same machine check the option         'LABWORKS License Service'. If you want to install the 'LWLicenseServices' on different machine uncheck the option.         For installation of 'LABWORKS Data Service' on same machine check the option         'LABWORKS Data Service'. If you want to install the 'LWLicenseServices' on different machine uncheck the option.         Constallation of 'LABWORKS Data Service' on same machine check the option         'LABWORKS Data Service'. If you want to install the 'LWDataServices' on different machine uncheck the option.         Click 'Next 'to continue.         Note: If LWLicenseServices/LWDataServices is not being installed, proceed to Step 18.         Iation of LW License Service         The Server setup launches separate LWLicenseServices setup program, and the welcome

	LABWORKS License Services - InstallShield Wiz	ard X	
	EABWORKS EICENSE SERVICES - Instalishield Wiz		
		to the InstallShield Wizard for 5 License Services	
		hield Wizard will install LABWORKS License your computer. To continue, dick Next.	
	Click 'Next' to continue		
	LABWORKS License Services - InstallShield Wiz	ard X	
	Customer Information Please enter your information.		
	User Name:		
	MyName		<b>T</b> I 0 1
	Company Name:		The Customer Information
	MyCompany		dialog is
9	Install this application for:		displayed.
	Anyone who uses this		User Name and
	Only for me (MyName)		Company Name
			is specified.
	InstallShield		
		< Back Next > Cancel	
	Enter your User Name and Company N	lame.	
	Click 'Next' to continue.		

	LABWORKS License Services - InstallShield Wizard	
	Ready to Install the Program	
	The wizard is ready to begin installation.	
	Click Install to begin the installation.	
	If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	
	the wizard.	The Ready to
		Install the
10		Program dialog is displayed.
10		is displayed.
		The installation
		proceeds.
	InstallShield	
	< Back Install Cancel	
	Click 'Install' to begin the installation.	
	LABWORKS License Services - InstallShield Wizard	
	LABWORKS InstallShield Wizard Complete	
	The InstallShield Wizard has successfully installed LABWORKS License Services. Click Finish to exit the wizard.	
		The
		InstallShield
		Wizard
11		Complete dialog is
		displayed.
		The installation
		is complete.
		·
	< Back Finish Cancel	
	< <u>B</u> ack <b>Finish</b> Cancel	
	When the installation is complete, click 'Finish' to exit.	

12	For installation of the LWLicenseServices on different machine run LWLicenseServices.exe from the CD on desired machine.	If applicable, LWLicenseServi ces installed on a different machine.
Instal	lation of LW Data Service	
	The Server setup launches separate LWDataServices setup program, and the welcome screen appears with brief instructions.	
	LABWORKSDataServices - InstallShield Wizard	
13	<image/>	The Welcome to the InstallShield Wizard for LABWORKS Data Service dialog opens.
	Click 'Next' to continue.	
14		The Customer Information dialog is displayed. User Name and Company Name is specified.

	LABWORKSDataServices - InstallShield Wizard	
	Customer Information	
	Please enter your information.	
	User Name:	
	MyName	
	Company Name:	
	MyCompany	
	Install this application for:	
	Anyone who uses this computer (all users)	
	Only for me (MyName)	
	InstallShield	
	Contract Constant	
	< Back Next > Cancel	
	Enter your User Name and Company Name.	
	Click 'Next' to continue	
	LABWORKSDataServices - InstallShield Wizard X	
	Ready to Install the Program	
	The wizard is ready to begin installation.	
	Click Install to begin the installation.	
	If you want to review or change any of your installation settings, click Back. Click Cancel to exit	
	the wizard.	The Ready to
		Install the
		Program dialog
15		is displayed.
		The installation
		proceeds.
	InstallShield	
	< Back Install Cancel	
	Click 'Install' to begin the installation.	
		The
16		InstallShield
		•

			Wizard
	LABWORKSDataServices - InstallSh	ield Wizard	Complete
	<b>Q LABWORKS</b>	InstallShield Wizard Complete The InstallShield Wizard has successfully installed	dialog is displayed. The installation is complete.
		LABWORKSDataServices. Click Finish to exit the wizard.	is complete.
	When the installation is com		If applicable,
17	For installation of the LWDat the CD on desired machine.	aServices on different machine run LWDataServices.exe from	LWDataServices installed on a different
			machine.
			The Ready to
			Install the Program dialog
18	LABWORKS Server program	resumes and is ready to install.	is displayed.
			The installation
			proceeds.

г — т		
	LABWORKS Server - InstallShield Wizard X	
	Ready to Install the Program	
	The wizard is ready to begin installation.	
	Click Install to begin the installation.	
	If you want to review or change any of your installation settings, dick Back. Click Cancel to exit the wizard.	
	exit the wizard.	
	InstallShield	
	< Back Install Cancel	
	< <u>B</u> ack <u>I</u> nstall Cancel	
	Click 'Install' to begin the installation.	
	LABWORKS Server - InstallShield Wizard	
	<b>LABWORKS</b> InstallShield Wizard Complete	
	The InstallShield Wizard has successfully installed	
	LABWORKS Server. Click Finish to exit the wizard.	
		-1
		The InstallShield
		Wizard
10		Complete
19		dialog is
		displayed.
		The installation
		is complete.
	< <u>B</u> ack <b>Finish</b> Cancel	
	When the installation is completed, slick (Finish' to suit	
	When the installation is completed, click 'Finish' to exit.	

## Step 2: Create Folder Access and Permission

Because LABWORKS is installed on a server, the LABWORKS Grouping Folder 1 defined in the Planning and Definition Worksheet needs to be shared.

We suggest that you use a UNC (Universal Naming Convention) path to the server for the LABWORKS folders.

• **Option 1**: Using a UNC Path for LABWORKS

For example, if the LABWORKS Client Installation program is in the following folder: \LABWORKS\LWEXE, on Server 1, then the System Administrator must notify each user to log on, from their workstation, to the following shared folder: \\Server1\LABWORKS\LWEXE.

• Option 2: Create a Mapped Drive for LABWORKS

If you are using a mapped drive to access the LABWORKS folder, then every user must use the exact same map and have the mapped drive already in existence before the user can connect to LABWORKS. If the mapped drive is not created for each profile prior to the LABWORKS Client Install, then the administrator will have to log in as each user profile and map the drive.

To create the mapped location on the server, share the LABWORKS folder. Map this folder as a lettered drive, such as P:\. Then, for each workstation that is to run LABWORKS, create a mapped drive using the same drive letter and path on each workstation.

LABWORKS recommends the LABWORKS Server Application folder, <LWEXE>\Server (where <LWEXE> designates the path up to and including the \LWEXE folder) be set to Read-Only. The <LWEXE>\SysCfg folder must be set to Read/Write.

When using a UNC path for the LICENSE\_FILE\_PATH, please take note that even if the UNC path refers to a local drive, permissions and security are affected by the permissions and network security.

## Step 3: Installing New Database

#### **Create a New Database**

The LABWORKS Desktop Installation CD contains a folder with starter databases.

SQL Sever

Included with your LABWORKS Desktop installation is a BlankDatabase.zip file.

Use SQL Server tools to restore the zipped database. Then ensure there is a SQL login with access to the database.

Oracle

Create a user/schema named "LABWORKS"

Login into sqlplus with sys or system dba user then execute the following script for creating LABWORKS Schema.

SQL>CREATE USER LABWORKS IDENTIFIED BY **password** DEFAULT TABLESPACE "USERS" ACCOUNT UNLOCK;

Note: in the above script password can be replaced to LABWORKS schema password

SQL>GRANT CONNECT, RESOURCE, DBA TO LABWORKS;

Import the database file: \BlankDatabase\Oracle\LABWORKS.DMP. The export was done by the user "LABWORKS" (Schema owner)

C:\ impLABWORKS/password@ORADB file=labworks65.dmp analyze=y FROMUSER=LABWORKS TOUSER=LABWORKS GRANTS=NO log=myerror.log

Run the below procedure using sqlplus. Or create a sql file and execute.

oracle begin

dbms\_stats.gather\_schema\_stats(ownname=> 'LABWORKS' , estimate\_percent=> 10 , cascade=> TRUE );

end;

/

exit

/

Create an Oracle service connection to the LABWORKS Database.

Note: LABWORKS Applications and Server Utilities require the Oracle Client 32-bit version be installed.

### Step 4: Configure database authentication for Oracle 12.2.x

When using Oracle 12.2.x version, follow these steps:

- Run the command ALTER SYSTEM SET SEC\_CASE\_SENSITIVE\_LOGON = FALSE in the Oracle database.
- Update %ORACLE\_HOME%\network\admin\sqlnet.ora
  - Insert the line SQLNET.ALLOWED\_LOGON\_VERSION\_SERVER=8 into the file.
- Restart the database.
- Change a password for existing users.
- Make sure that PASSWORD\_VERSIONS are compatible with 10g.
  - Run the following command in the database:
    - select USERNAME, ACCOUNT\_STATUS, PASSWORD\_VERSIONS from dba users;
  - The output should look like this:

USERNAME	ACCOUNT_STATUS	PASSWORD_VERSIONS
DIP SYSKM ORACLE_OCM SYSDG SPATIAL_CSW_ADMIN_USR LABWORKS	EXPIRED & LOCKED EXPIRED & LOCKED EXPIRED & LOCKED EXPIRED & LOCKED EXPIRED & LOCKED EXPIRED & LOCKED OPEN	11G 12C 11G 12C 11G 12C 11G 12C 11G 12C 11G 12C 10G 11G 12C

### Step 5: Gateway Administrator Setup

After the Server Installation has completed you must run the Gateway Administrator Tool, LWSysCfg6.exe, to set up LABWORKS user and workstation information. This information includes the location of the LABWORKS executables, locations and names of LABWORKS databases, and user file locations. The program is in the <LWEXE>\SysCfgfolder.

This section shows you how to use the Gateway Administrator to perform the following tasks:

- Set up a new database This section shows you how to add a database to the Gateway Administrator and set Data Path information for the database.
- Configure the database This section shows you how to configure the database by defining the type of database, type of connection to database, the database name; the server name, and the database user name and password.

- Select database authentication options This section shows you how to configure LABWORKS to validate a user's ID and Password by using LABWORKS authentication or domain authentication.
- Select global default database availability This section shows you how to select which databases will be visible, by default, to all users of LABWORKS.

The Gateway Administrator requires the LABWORKS client be installed on the workstation where Gateway Administrator is run. The Gateway administrator can be run from a network client or from the server console as long as the LABWORKS client install has been completed and the user has proper network access.

Access to the Gateway Administrator tool is controlled by network privileges and the program is also password protected. The first time you access the Gateway Administrator, if you are installing LABWORKS 6.8.5 Desktop or higher, the default password is **gateway**.

#### Set up a new Database

The Gateway Administrator allows you to specify which databases will be used in your LABWORKS system and how these databases will be configured. Setting up a new database is a four-part process that involves adding a new database to the Gateway Administrator program, setting data path information, configuring the database, and selecting database authentication. The following sections show you how to add a database to the Gateway Administrator and configure the database.

Step	User Input/Action	Expected Results
1	From the LABWORKS application folder, select <lwexe>\SysCfg\LWSysCfg6.exe.</lwexe>	File selected.
2	Before the Gateway Administrator launches a message appears prompting you to enter the Gateway Administrator password. Userver Password	LABWORKS Gateway Administrato r message appears prompting you to enter Gateway Administrato r Password. Gateway Administrato r Password is entered. Gateway Administrato r Password is entered.

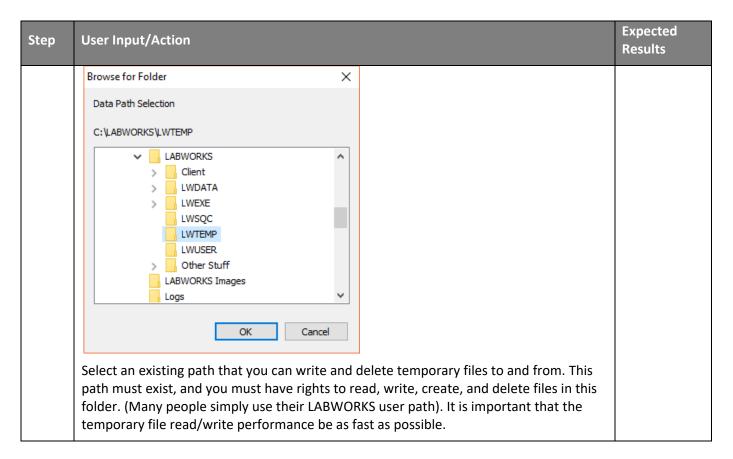
## Add a New Database and Set Data Path Information:

Step	User Input/Action	Expected Results
	The new password must be case sensitive and can include special characters, except for the following: spaces, semicolons (;), commas (,), plus sign (+), and the percent sign (%). You must enter the new password in the Enter new password field and the Confirm new password field and then click 'OK'.	
	Once you have entered the correct password and clicked 'OK' the Gateway Administrator opens, and the Global Setting node is highlighted on the tree and has focus. When the Global Setting node is selected, the database setup panel on the right appears and consists of three tabs: a Data Path tab, a Database tab, and an Authentication tab. All tab pages and fields appear blank and are disabled when the Global Setting node is selected.	
3	If you already have databases set up in Gateway Administrator, then you can expand the Global Setting node and then click on a database listed under this node to activate the database setup panel. The Data Path tab is enabled first. You must set up the data path information on the Data Path tab to activate the Database tab. Once the Database tab is enabled you must select the type of database, setup the database connection information, and test the connection on this tab. The Authentication tab remains inactive until the necessary information is entered on the Data Path and the Database tabs. Only after the Gateway Administrator is able to establish a connection to the defined database does the Authentication tab become active. From the Authentication tab you can select how you wish to authenticate users when they log into LABWORKS.	The Gateway Administrato r opens. Database Setup panel appears in right hand pane.
4	From the Gateway Administrator click File>New. A pop-up window appears prompting you to enter a new name for the database:	LABWORKS Gateway Administrato r message appears

Step	User Input/Action	Expected Results
	LABWORKS Gateway Administrator       Please enter a name for this database       OK       Cancel	prompting you to enter a new name for the database.
5	Enter a new name for the database you wish to set up and click 'OK'. The name you create for the database is the database name that users will see on the LABWORKS Login screen. The name can NOT contain spaces, semicolons (;), commas (,), plus sign (+), and the percent sign (%). The new database is added to the Global Setting node in the Gateway Administrator window and the database is selected by default. Information pertaining to the new database appears on the right-hand portion of the screen.	A new name is entered for the database.
6	Click Internet to the Data Files Path field. The Data Path Selection window appears: Browse for Folder Data Path Selection C:\LABWORKS\LWDATA I LABWORKS\LWDATA I LABWORKS\LWDATA I LABWORKS\LWDATA I WEXE LWSQC I WTEMP LWWSER OK Cancel Note: if you pick a local path, it might not be reachable by other computers in the network, so it is recommended you pick a common path that can be accessed by all servers and clients. Failure to do so will result in the following warning message: I To path public ward is slocal path and may present a provide ward of the slocal path and may present a provide ward of the slocal path and may present a I to path public ward is slocal path and may public ward is	The Data Path Selection window appears. Data Files path is specified.
7	Clicknext to the License Path field.	The Client Program Path Selection

Step	User Input/Action	Expected Results
	Browse for Folder X	window appears.
	Data Path Selection C: \LABWORKS\LWEXE	The path to the License
	Image: Client   Image: Client	file is specified.
8	If you have the Northwest Analytical Quality Analyst software package, a third-party software package used for SQC charting, then select an SQC Path.	If applicable, SQC Path is specified.
9	Select the Default Language from the corresponding drop-down menu. For example, if you select English as the default language, then this will be the language LABWORKS runs in unless you specify a different default language for a specific Workstation or User. If you do not want to see language choices at log in, you must click on the Users node and check the Hide language selection at runtime check box.	Default language is specified. OR, if applicable, 'Hidden language selection at runtime' option is enabled.
10	Clicknext to the User Path field. The Client User Path Selection window appears:	The Client User Path Selection window appears.

Step	User Input/Action	Expected Results
	Browse for Folder X	
	Data Path Selection	
	C: \LABWORKS \LWUSER	
	Client   LWDATA   LWEXE   LWSQC   LWTEMP   LWUSER   Other Stuff   LABWORKS Images   Logs	
11	Select the location for the User Path. The location of Server and User temporary files can affect application performance. Some parts of the application use temporary files to pass information between the middle tier and the user interface. Both programs execute on the client workstation. It is important that the temporary file read/write performance be as fast as possible. <b>The</b> <b>recommended option is to use the Windows defaults.</b> If required, specific files for these folders can be configured, and if you wish to append a unique path for each user or workstation, then check the Unique user path for each user box. When this option is checked you can then select the unique user path based on Domain ID, LABWORKS ID, or Workstation ID by clicking on the corresponding radio button. Based on your selection, LABWORKS will create a folder. Use Windows User Setting Folder (Default) User Path: LUWUSER Unique user path for each user For example, if you select L:\LWUSER and Unique user path for each user DomainID, then the user temp path becomes L:\LWUSER\ <domainid></domainid>	The location for the User Path is selected.
12	Clicknext to the Server Temp Path field. The Server Temp Path Selection window appears:	The Server Temp Path Selection window appears. The Server Temp path is specified.



## Step 6: Configure ApplicationSpec.XML, ClientApp.config, LWServiceConfig.xml

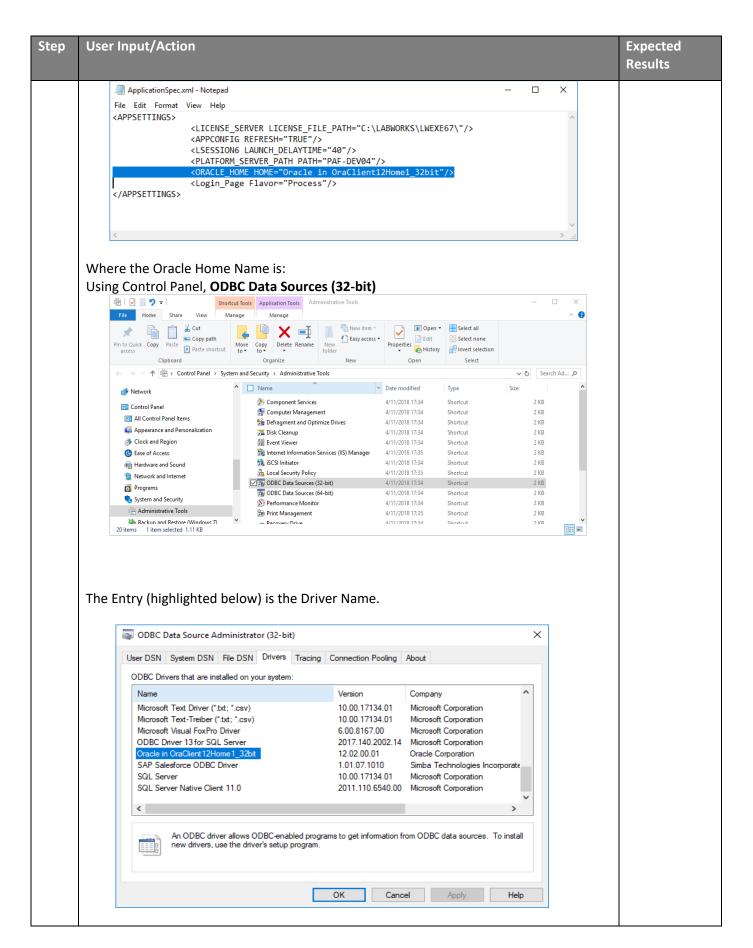
The Server installation creates the files 'ApplicationSpec.xml' and 'ClientApp.config'. The files are used to configure the path to the license file and services from the clients.

During the upcoming client installation step, these files are copied to the client workstation. By configuring it before doing the client installation, the client installation configuration is already correctly configured.

Step	User Input/Action	Expected Results
1	Open the file 'ApplicationSpec.xml' using notepad.	The ApplicationSp ec.xml is opened.

0	User Input/Actio	<u></u>					Expected Results
		RKS\LWEXE		_	ο×		
	File Home Share	View			~ 🕜		
	$\leftarrow \rightarrow \cdot \uparrow$ This	PC > Local Disk (C:) > LABWORKS > LWE	XE	✓ ひ Search LWE	XE ,O		
	^	Name	Date modified	Туре	Size		
	🖈 Quick access	Server	5/10/2017 12:15 PM	File folder			
	📃 Desktop 🖈	syscfg	5/10/2017 12:15 PM	File folder			
	United Strength Downloads	Updates	5/10/2017 12:15 PM	File folder			
	🖆 Documents 🖈	WebHelp	5/10/2017 12:15 PM	File folder			
	Sources	ApplicationSpec.xml ClientApp.config	5/10/2017 12:17 PM 5/10/2017 12:17 PM	XML Document XML Configuratio	1 KB 4 KB		
	6.7	ClientSetup.msi	5/9/2017 7:48 AM	Windows Installer	97,885 KB		
	LABWORKS66	CrystalXIRDC.msi	5/9/2017 7:58 AM	Windows Installer	69,814 KB		
	LWEXE	Labworks.ini	7/12/2016 11:24 PM	Configuration sett	40 KB		
	QuestionPapers	LE512512.CTL	4/21/2017 6:11 PM 3/30/2016 8:22 PM	Visual Basic User MDB File	8 KB 8,132 KB		
	💻 This PC	LWI18NRES.xml	3/20/2017 7:54 AM	XML Document	8 KB		
	Desktop	고 옵 LWReporting.xsd	3/30/2016 8:22 PM	XML Schema File	19 KB		
	Documents	mcinstr6.lst	5/9/2017 6:57 AM	MASM Listing	3 KB		
	Downloads	scinstr6.lst           Upgrade LABWORKS Client.bat	5/9/2017 6:57 AM 5/4/2017 4:36 AM	MASM Listing Windows Batch File	4 KB 1 KB		
	Music	Opgrade LABWORKS Client.bat Ucredist_x86.exe	5/9/2017 8:22 AM	Application	2,682 KB		
	17 items 1 item selected 2	230 bytes State: 🎎 Shared					
		e clients will use to acces					Path is
		he server shared the fold e. The path can be a ma			nt mapped	d the L:	
		e. The path can be a ma		er	nt mapped		
	drive to that shar	re. The path can be a map		er			
	drive to that shar	re. The path can be a map	pped drive lette	er			
	drive to that shar	re. The path can be a map nl - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABM Page Flavor="Process"/> UMVERSION VALUE="1"/>	pped drive lette	er			
	drive to that shar	re. The path can be a map I - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th.	pped drive lette	er S\LWEXE\"/>		*	
	drive to that shar	re. The path can be a map nl - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th. nl - Notepad	pped drive lette	er S\LWEXE\"/>		*	
	drive to that shar	re. The path can be a map nl - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th. nl - Notepad	pped drive lette	er S\LWEXE\"/>		*	
	drive to that shar	re. The path can be a map nl - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th. nl - Notepad	pped drive letter TH="C:\LABWORKS '/> WORKS-TEST01["/> TH="\\LWSERVER\ "/>	er ;\LWEXE\"/>		*	
	drive to that shar	re. The path can be a map I - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th. I - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/>	pped drive letter TH="C:\LABWORKS '/> WORK5-TEST01 "/> TH="\\LWSERVER\ "/> WORK5-TEST01"/>	er ;\LWEXE\"/> ( LABWORKS\LWE	□ □ ● XE\"/>		
	drive to that shar	re. The path can be a map I - Notepad View Help E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th. I - Notepad View Help E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> ationSpec.xml from Labw	pped drive letter TH="C:\LABWORKS '/> WORKS-TEST01 "/> TH="\\LWSERVER\ "/> WORKS-TEST01"/> WORKS-TEST01"/>	er ;\LWEXE\"/>	xE\"/>		
	drive to that shar	re. The path can be a map I - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/> th. I - Notepad <u>View Help</u> E_SERVER LICENSE_FILE_PAT FIG REFRESH="TRUE"/> ON6 LAUNCH_DELAYTIME="40" RM_SERVER_PATH PATH="LABW Page Flavor="Process"/> UMVERSION VALUE="1"/>	pped drive letter TH="C:\LABWORKS '/> WORKS-TEST01 "/> TH="\\LWSERVER\ "/> WORKS-TEST01"/> WORKS-TEST01"/>	er ;\LWEXE\"/>	xE\"/>		

User Input/Action	Expected Results
For using SQL Server database with LABWORKS: Microsoft SQL ADO is the default connect string for Database Type SQL Server	
Data Paths     Database       Database type       Image: SQL Server - Database connect string   Image: Oracle - Database connect string	
TLS Support MSOLEDBSQL	
Note: If you require TLS 1.2 Support, check "TLS Support MSOLDEDBSQL" 1) In LWSYSCFG, check "TLS Support MSOLEDBSQL" Data Paths Database Authentication	
Database type     SQL Server - Database connect string     C Oracle - Database connect string     V TLS Support MSOLEDBSQL	
<ul> <li>2) Install following drivers on the workstation :</li> <li>i) MSOLEDBSQL (Used by .net applications)</li> <li>a. <u>https://www.microsoft.com/en-us/download/details.aspx?id=56730</u></li> </ul>	
<ul> <li>ii) ODBC FOR SQL 2017 (Used by legacy applications) (Install based on OS bitness)</li> <li>a. <a href="https://www.microsoft.com/en-">https://www.microsoft.com/en-</a></li> </ul>	
us/download/details.aspx?id=56567	
For using Oracle OLEDB Driver with LABWORKS: Prerequisite: Oracle Client 32 Bit, must include OLEDB Driver Configuration	
Using LWSysconfig select Oracle OleDBORA.Oracle Connect String	
Data Paths Database Authentication	
Database type	
○ SQL Server - Database connect string	
Microsoft MSDAORA      Oracle OleDBORA.Oracle	



User Input,	Action				Expected Results
Registry En	try:				
	•				
Computer	HKEY_LOCAL_IMACHINE	SOFTWARE\ <b>WOW6432</b>	Noge/ODR		۱.
ODBC Drive	arc				
02202					1
	jistry Editor			- 🗆 ×	
	dit <u>V</u> iew F <u>a</u> vorites <u>H</u> elp ter\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\ODBC\0				
			-		-
		Name	Туре	Data	
	Conversor de pagina de codigo MS	(Default) CR SQL Server Classic Wire Protocol ODBC Driver 7.0.1	REG_SZ REG_SZ	(value not set) Installed	
	CR SQL Server Classic Wire Protocol ODBC Driver 7.0.1	CR SQL Server Classic Wire Protocol ODBC Driver 7.0.1  CR SQL Server Native Wire Protocol ODBC Driver 7.0.1	REG_SZ REG SZ	Installed	
	CR SQL Server Native Wire Protocol ODBC Driver 7.0.1	CR SQL Server Native Wire Protocol ODBC Driver 7.0.1	REG_SZ REG_SZ	Installed	
	CR Sybase Wire Protocol ODBC Driver 7.0.1	(CR TextFile ODBC Driver 7.0.1	REG_SZ	Installed	
	CR TextFile ODBC Driver 7.0.1	ab Driver da Microsoft para arquivos texto (*.txt; *.csv)	REG_SZ	Installed	
	Driver do Microsoft Access (*.mdb)	ab Driver do Microsoft Access (*.mdb)	REG_SZ	Installed	
	Driver do Microsoft dBase (*.dbf)	Driver do Microsoft dBase (*.dbf)	REG_SZ	Installed	
	Driver do Microsoft Excel(*.xls)	ab Driver do Microsoft Excel(*.xls)	REG_SZ	Installed	
	- 📙 Driver do Microsoft Paradox (*.db )	Driver do Microsoft Paradox (*.db )	REG_SZ	Installed	
	Microsoft Access dBASE Driver (*.dbf, *.ndx, *.mdx)	Microsoft Access dBASE Driver (*.dbf, *.ndx, *.mdx)	REG_SZ	Installed	
	Microsoft Access Driver (*.mdb) Microsoft Access Driver (*.mdb, *.accdb)	Microsoft Access Driver (*.mdb)	REG_SZ	Installed Installed	
	Microsoft Access Enver (*.txt, *.csv)	Microsoft Access Driver (*.mdb, *.accdb)	REG_SZ REG_SZ	Installed	
	Microsoft Access-Treiber (*.mdb)	Microsoft Access Text Driver ( .txt, .csv)	REG_SZ	Installed	
	Microsoft dBase Driver (*.dbf)	Microsoft dBase Driver (*.dbf)	REG_SZ	Installed	
	Microsoft dBase-Treiber (*.dbf)	Microsoft dBase-Treiber (*.dbf)	REG_SZ	Installed	
	Microsoft Excel Driver (*.xls)	Microsoft Excel Driver (*.xls)	REG_SZ	Installed	
	Microsoft Excel Driver (*.xls, *.xlsx, *.xlsm, *.xlsb)	Microsoft Excel Driver (*.xls, *.xlsx, *.xlsm, *.xlsb)	REG_SZ	Installed	
	Microsoft Excel-Treiber (*.xls)	Microsoft Excel-Treiber (*.xls)	REG_SZ	Installed	
	Microsoft Paradox Driver (*.db )	Microsoft ODBC for Oracle	REG_SZ	Installed	
	Microsoft Paradox-Treiber (*.db )	(*.db )	REG_SZ	Installed	
		Microsoft Paradox-Treiber (*.db )	REG_SZ	Installed	
	Microsoft Text-Treiber (*.txt; *.csv)	Microsoft Text Driver (*.txt; *.csv)	REG_SZ REG_SZ	Installed	
	Microsoft Visual FoxPro Driver	Microsoft Visual FoxPro Driver	REG_SZ REG_SZ	Installed	
	MS Code Page Translator	a) ODBC Driver 13 for SQL Server	REG_SZ	Installed	
	ODBC Core	ab Oracle in OraClient12Home1_32bit	REG_SZ	Installed	
	ODBC Driver 13 for SQL Server	SAP Salesforce ODBC Driver	REG_SZ	Installed	
	ODBC Drivers	ab SQL Server	REG_SZ	Installed	
	ODBC Translators	Discrete Antiper Server Native Client 11.0	REG_SZ	Installed	
	Oracle in OraClient12Home1_32bit SAP Salesforce ODBC Driver				
	-				
< C	>	<		,	1

## **Step 7: FIPS Compliance**

Step	User Input/Action		Expected Results
1	Example of the second provide the second provid	System cryptography: Use FIPS compliant algorithms for ? X      Local Security Setting Explain      System cryptography: Use FIPS compliant algorithms for      encoption.hashing.and signing      Detabled      Detabled	
2	For FIPS Compliant Installation (supported in LABWORKS	Sversion 6.10 onwards):	Path is entered.

Step	User Input/Action	Expected Results	
	In ApplicationSpec.xml, add CHECKSUMVERION		
	CHECKSUMVERSION VALUE="1" for Non-FIPS compliant installation. (default value)		
	CHECKSUMVERSION VALUE="2" for FIPS compliant installation.		
	ApplicationSpec.xml - Notepad		
	Eile     Edit     Format     View     Help <appsettings></appsettings>		
	<pre><defined_setures_setures_file_path="c:\labworks\lwexe\"></defined_setures_setures_file_path="c:\labworks\lwexe\"></pre>		
3	Also, open 'ApplicationSpec.xml' located at \Program Files       Changes         (x86)\Labworks\LWLicenseServices (where the LWLicense Service is installed) and perform the same changes as above.       applied.		
4	Also, open 'ApplicationSpec.xml'located at \Program Files (x86)\Labworks\LWDataServices (where the LWDataServices is installed) and perform the same changes as above.		
5	Copy 'ApplicationSpec.xml 'from <lwexe> to <lwexe>\Server (where the LWServiceControllers is installed) and perform the same changes as above.</lwexe></lwexe>		
6	Set all user passwords in clear text in "PASSWORD" field of your USERHEAD table so they can be encrypted in the next step		
7	After migrating the password from Clear to Encrypted values, be sure to clear all user passwords from the "PASSWORD" field of your USERHEAD table. This can be easily done with the following SQL command: UPDATE USERHEAD SET PASSWORD='XXXXXXXXXXX'		
8	Start LWDataServices. Start LWLicenseServices. Start LWDesktop. Open System Manager, change CHECKSUMVERSION = 2 and save the changes.		

## **Step 8: Service Connection Configuration**

Step	User Input/Action	Expected Results
	Configure LWServiceConfig.xml:	
1	Launch 'LWServiceControllers.exe' application located at '\LABWORKS\LWEXE\Server '.	
2	Go to menu Configuration -> Service Connection Configuration:	

Step	User Input/Action	Expected Results
	🕲 LABWORKS Service Controller —	×
	Configuration Help	
	Service Connection Configuration	
	PS Service	
	Service status Service and Controllers database mismatched.  Service connection information User name: Analyst First User Database: LABWORKS_68_T	EST
	On Service Connection Configuration screen, enter valid LABWORKS username, password. Select desired database for connection and enter workstation name where platform service is running. Click Generate config file button.	
	🕲 LABWORKS Service Connection Configuration — 🗌 🗙	
	LABWORKS user name	
3	LABWORKS password	
	LABWORKS database CUSTOMER_NUTRA ~	
	Platform Server path	
	Generate config file	
4	Select path to save config file:	

Step	User Input/Action	Expected Results
	Browse For Folder X	
	LABWORKS Service Configuration File Dialog	
	Desktop   This PC   Recycle Bin     Recycle Bin     Make New Folder     OK   Cancel	
	Copy 'LWServiceConfig.xml' from above selected location to \Program Files	
5	(x86)\Labworks\LWDataServices (where the LWDataService is installed)	
6	Restart LWDataServices	

# **Step 9: Configure the Database**

Once you have set up the Data Path information, the Database tab activates. On the Database tab page, you configure the database by defining the type of database, type of connection to database, the server name, the database name, the user name, and the password.

👳 LABWORKS Gateway Administr	ator
<u>F</u> ile Edit Tools	
🞯 🔳 🗙 🐰 🖻 🖺 🖄	
PRODUCTION	
Folder Items × Global Setting P→ Global Setting P→ PRODUCTION B→ B→ Users	Data Paths       Database       Authentication         Database type <ul> <li>Sql_Server - Database connect string</li> <li>TLS Support MSOLEDBSQL</li> </ul> Server Name (Service Name) <ul> <li>MyServer</li> <li>Database Name</li> <li>MyDatabase</li> </ul> Database user name       sa            Sa       Database password            **       Test Connection

To configure the database, enter the Data Path information, and click on the Database tab.

For Oracle databases:

- Enter the name of the server where the database is located in the Server name (Service Name) field.
- Enter the Database user name and Database password.
- Click the 'Test Connection' button.

For SQL Server databases:

- Enter the name of the server where the database is located in the Server name (Service Name) field.
- Enter the name used to identify the LABWORKS database in the Database Name field.
- Enter the Database user name and Database password. If needed, ask your DBA for your database username and password.
- Click the 'Test Connection' button.

The Test Connection function uses the database information and the data path information (if necessary) to establish a connection to the database. If the connection is successful, a message appears stating that the connection was a success. If the connection is not successful, a message appears that provides a description of why the connection failed.

### **Step 10: Configure Database Authentication**

You can configure LABWORKS to validate a user's ID and Password by using one of the following methods:

- Authenticate against LABWORKS using the standard LABWORKS logon
- Authenticate against a domain with re-entry of domain user name and password to enter LABWORKS
- Authenticate against a domain with no password required to enter LABWORKS.

	inistrator	
PRODUCTION		
Folder Items X Global Setting H D DEMO H P MODUCTION H Users	Data Paths       Database       Authentication         Authentication Type:       C       LABWORKS         ©       Domain Authentication       C         ©       Workstation Authentication       Single Sign-on         Group Name	Update user list

### Standard LABWORKS Authentication

To authenticate against LABWORKS using the standard LABWORKS logon, skip the following sections and simply click the LABWORKS radio button on the Authentication tab of the Gateway Administrator.

When you select LABWORKS for the Authentication Type, it associates password with the selected database. When a user logs into a LABWORKS database for the first time, the Users node of the Gateway Administrator is populated with that users Domain ID. Once a User Domain ID is listed in the Users node, the administrator can select that user from the Users node and customize which databases are visible to the user as well as enable or disable the user from changing the language used by LABWORKS.

### **Domain Authentication**

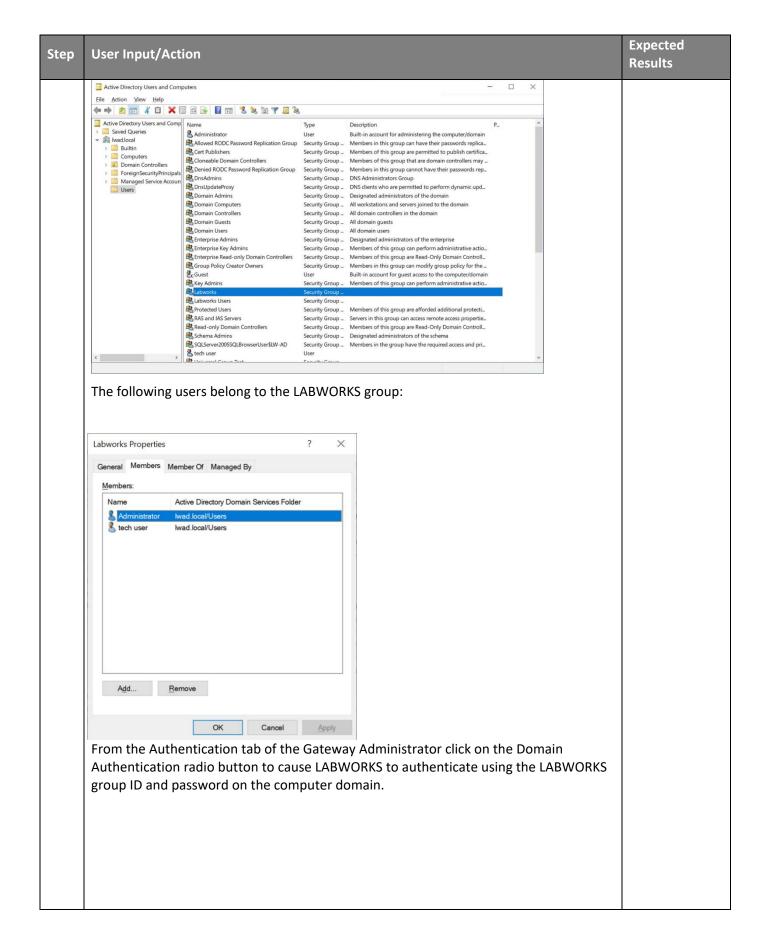
To use Domain Authentication, you must perform the following Windows Administrative steps:

- Create a LABWORKS group on the domain
- Assign users to the LABWORKS group
- Define new authentication options in the Gateway Administrator
- Import users from domain into the LABWORKS application's list of users

The following section shows you how to perform the steps listed above.

Step	User Input/Action	Expected Results
1	Create a group called LABWORKS on the Domain.	A group called LABWORKS is created.
	Assign the users whom you wish to have access to the LABWORKS application to the LABWORKS group you just created.	Users are assigned to the LABWORKS
2	The users you assign to the LABWORKS group are the users who will be able to log into LABWORKS.	group.
	For example, below is a screen shot of an Active Directory Group on the Server.	

# **QLABWORKS**



Step	User Input/Action	Expected Results
		Domain Authentication radio button selected.
3	Check the Single Sign-on check box to have the LABWORKS Login screen show the user id and password automatically filled in with the current Windows User ID and Password at login. The screen below shows the LABWORKS User Login screen if Single Sign-On is enabled:Even when Single Sign-On is enabled, the user must re-enter his/her password when the FORCECHECKIN or SYSTEMTIMEOUT System Manager keys prompt for user password verification. Moreover, if only one database is configured and single sign on is enabled, the user logon dialog is not displayed.0-OR- Uncheck the Single Sign-on check box to have the user enter his/her user name and0	
4	<ul> <li>password at logon.</li> <li>Click Update User List to synchronize the group defined in the Group Name field with the LABWORKS user list.</li> <li>The new users' Domain IDs are added to the User Setting node of the Gateway Administrator for the database you just configured. In addition, these users inherit the global default databases available for viewing.</li> <li>The global default databases available for viewing can be set by clicking on the Users node of the Gateway Administrator and then by checking the databases you wish to have visible to all users and then clicking on the Set as Global Default button.</li> <li>If there are previously defined LABWORKS users that are not assigned to the group defined in Gateway Administrator, then the following screen appears and gives you the option to add the user to the group defined in the Gateway Administrator or to delete the user from the list.</li> </ul>	The new users' Domain IDs are added to the User Setting node of the Gateway Administrator for the database you just configured.
	<ul> <li>Even if domain authentication is used, the LABWORKS user list is still required for privilege management.</li> <li>If users wish to change their passwords, they must do so through their Operating System's password utility.</li> </ul>	

# Step 11: Configure Global Database Availability

When the Users node is selected, the right-hand pane of the Gateway Administrator displays the global default databases that can be seen by all users as well as a check box that enables or disables language selection at runtime for all users of LABWORKS.

👳 LABWORKS Gateway Administrator				
<u>F</u> ile Edit Tools <u>H</u> elp				
💕 🖪 🗙 X 🖻 🖨 🖻				
Users				
Folder Items X Global Setting DEMO ProDUCTION FROUCTION FieldsPA	Set default database(s) - selectable by user at Logon			
	Hide language selection at runtime			

Clicking on the Users node will allow you to select the databases that can be seen for all users. By selecting one or more of these databases, you are configuring the Gateway Administrator to add everyone to the selected databases' User Setting node for all selected databases. In addition, all users would see only those checked databases on the LABWORKS login window. The Hide language selection at runtime check box can also be selected to hide available languages option.

The Users node also lists all the Users that have logged into a LABWORKS database. All the User Domain IDs that have logged into LABWORKS are listed here so that the system manager can set properties for users that are different than the global settings. Therefore, when a specific User Domain ID is selected on the tree, the administrator can change the databases that can be seen by the selected user. By selecting one or many of the databases, the system manager is telling Gateway Administrator to list this individual on the User Setting node for just the checked databases. In addition, the user would only see those checked databases on the LABWORKS Login window.

### To configure global default database availability:

To allow all users on the system databases, check the databases you wish to set as the default databases available to all users at login and click the Set as Default button. When databases are checked the Gateway, Administrator lists all the users under the User Setting node for each checked database in Gateway Administrator.

The screen shows that the database named DEMO is available for viewing by all users, while no users can see the database named PRODUCTION, because the only database selected on the Users node is DEMO, and there are no exceptions set up for individual users who are listed under the Users node.

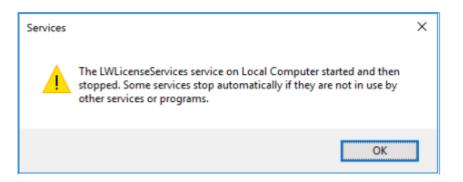
### Step 12: Start the LWLicenseServices/LWDataServices

The LWLicenseServices is installed as a Windows service and it supplies the list of databases to the login prompt and authenticates the users. The LWDataServices is installed as a Windows service and it provides data to the Labworks applications.

When the server is rebooted it starts automatically. During install the service is not started because of the prerequisite configurations. With the configurations complete, the service can be started. From the services management console, start the LWLicenseServices.

### LWLicenseServices start troubleshooting

If the LWLicenseServices fails to start with the following error message then to get more information about the error, open "LWErrorLog.xml" file from LWLicenseServices installed location i.e. C:\Program Files (x86)\LABWORKS\LWLicenseServices\LOGS\LWErrorLog.XML.



This error message comes due to one of the below reason-

- 1) "ApplicationSpec.xml" is not configured.
- 2) LABWORKS control file (.CTL) is not present at LABWORKS server folder (i.e. \\LABWORKS\LWEXE\)
- 3) LABWORKS license expired
- 4) LABWORKS control file (.CTL) is not compatible with latest LABWORKS version.

**Note:** If the LW DataService is already running, it must be restarted for the changes to take effect.

# LWDataServices start troubleshooting

If the LWDataServices fails to start with the following error message then to get more information about the error, open "LWErrorLog.xml" file from LWDataServices installed location i.e. C:\Program Files (x86)\LABWORKS\LWDataServices\LOGS\LWErrorLog.XML.

Services	×	(
	The LWDataServices service on Local Computer started and then stopped. Some services stop automatically if they are not in use by other services or programs.	
	ОК	

This error message comes due to one of the below reasons-

- 1) "ApplicationSpec.xml" is not configured.
- 2) "ClientApp.config" is not configured.
- 3) Domain user password has been expired
- 4) LWLicenseServices is not started

# **Step 13: Client Installation**

You are now ready to run the ClientSetup.msi program on each workstation that will use LABWORKS. After you run the Client Installation on each workstation you can access the Gateway Administrator tool again to customize individual user and workstation settings.

**Note:** You must log in as the Administrator, or have administrative rights, to run the Client Install.

Note: Client Install Prerequisite: Microsoft Visual C++ redistributable (vcredist\_x86.exe) for following versions:
 Microsoft Visual C++ redistributable 2005 : <u>https://www.microsoft.com/en-in/download/details.aspx?id=3387</u>
 This file can be found in the \LWExe folder.

After you have run the Server Installation and setup and configured workstation settings using the Gateway Administrator tool you must now run the Client Installation, located at <LWEXE>ClientSetup.msi on each workstation that is to use LABWORKS. Since LABWORKS is installed on a server, it is critical that every user access the ClientSetup.msi program that is located on the server in the same manner.

Step	User Input/Action		Expected Results
	-	vou wish to run LABWORKS access the server wight the LABWORKS application folder and selected wizard X	
1			The Welcome to the InstallShield for LABWORKS Client is displayed.
	Click 'Next'.	< Back Next > Cancel	

Step	User Input/Action	Expected Results
	LABWORKS Client - InstallShield Wizard × Customer Information Please enter your information.	
2	User Name:       MyName         Organization:       MyCompany         MyCompany       InstallShield         InstallShield       < Back	Customer Information dialog is displayed. User Name and Company name is entered.
3	LABWORKS Client - InstallShield Wizard   Destination Folder   Click Next to install to this folder, or click Change to install to a different folder.        Install LABWORKS Client to:     C:\LABWORKS\Client\     Cancel	Destination Folder dialog is displayed. Destination folder is changed if required.

#### 

# LABWORKS LIMS v6.10 Installation Guide

Step	User Input/Action	Expected Results
	Click 'Change' if the location of the client software is to anywhere other than the default location. Once specified, click 'Next' to proceed.	
4	LABWORKS Client - InstallShield Wizard       X         Ready to Install the Program       Image: Click Install the Program         The wizard is ready to begin installation.       Image: Click Install to begin the installation.         If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.       Image: Click Install Shield         InstallShield       Image: Click Install 'to begin the Installation.       Cancel	The Ready to Install the Program dialog is displayed. The installation proceeds.
	During client installation the files ApplicationSpec.xml and ClientApp.config are copied to the Client folder. If user views the warning messages as per below screenshots, then user needs to copy Applicationspec.xml and ClientApp.config files manually from [SystemDrive]\Labworks\Server to [SystemDrive]\Labworks\Client folder.	
	LABWORKS Client - InstallShield Wizard     LABWORKS Client - InstallShield Wizard       Applicationspec.xml not copied: Access is denied. Please copy the file manually.     ClientApp.config not copied: Access is denied. Please copy the file manually.       OK     OK	

Step	User Input/Action		Expected Results
	🖟 LABWORKS Client - InstallShie	eld Wizard X	
		InstallShield Wizard Completed	
5		The InstallShield Wizard has successfully installed LABWORKS Client. Click Finish to exit the wizard.	The InstallShield Wizard Completed dialog is displayed. The installation is complete.
		< <u>B</u> ack <b>Finish</b> Cancel	
	When the installation is co	mplete, click 'Finish' to exit.	

At this point your installation is complete. There is a new Program Group for LABWORKS and a LW Desktop application shortcut on your Desktop. By double clicking the new LW Desktop Icon, users are prompted to login:

LABWORKS - User Login
Login
User
usr
Password
•
<u>Q</u> K <u>C</u> ancel

The default credentials for a new database installation are as follows:

User: USR

Password: 1

1 Ilins   File  Lign Reads OACC Stach Verterance UBee  Coters Reots Heb YW	Netifications You have 2 new unread message(s). SHTP serve configuration saved SHTP serve configuration saved  HTP server configuration saved  HTP server configuration saved  HTP server configuration saved  HTP server configuration saved	
File Logn Logn Result GAGC Seach Martenaroe Utites Option Filept	BrtTP server configuration saved DRTP server configuration saved BRTP server configuration saved 	
Lopi Constanti C	SMTP server configuration saved SMTP server configuration saved	
Logn Carlon Carl	SMTP server configuration saved	
QA-QC Search Sea		
Seach Saich		
Martanana Ukine Opiana Rejota Heb		
Ublines Ublines Carlos		
Options Charles Reports Report		
Reports Heb		
Heb	Hessage from second user to first user	
ww		

# LABWORKS Desktop System Upgrade

# Step 1: Running Database Scripts and Update Tool

### Update the Existing Database and Run the Update Tool.

### LABWORKS 6.X to latest LABWORKS version

Step	User Input/Action	Expected Results
1	Use the Database tools to run either, LWScripts-SQLServer.sql or LWScripts- Oracle.sql, depending on your database system.	Scripts run.
2	Run the Update tool.exe using update files for all versions between your current and 6.10. Example, if upgrading from 6.6, then run the updatetool using LW67Release.xsp, LW68Release.xsp, LW69Release.xsp and LW610Release.xsp.	Updatetool.exe is run.
3	Run the utility, LWMigrationUtility.exe to update database tables new to latest LABWORKS version	Database tables are updated to latest LABWORKS version

Note: When upgrading an existing database it is recommended to run Lwwsystem6.exe from the C:\Labworks\Client folder because there are new applications-based privileges associated with the new Desktop.

The **LWMigrationUtility** was introduced in LABWORKS 6.2. It is used to copy data from an old format to a new format. In LABWORKS 6.2, the data storage for, AUDITTRAIL, CalcDefs, DMR, Specifications, and Special Info Forms has been updated. LWMigrationUtility should only be run if needed. See Appendix B for when and which options should be used for LWMigrationUtility. Running LWMigrationUtility on previoulsy migratated values like RLTSPECS can overwrite changes you made after the privous migration. LWMigrationUtility should only be run once or each object type.

**AuditTrail**. AuditTrail's data storage format changed in LABWORKS 6.0 from AUDTRAIL to AUDITTRAIL table. LWMigrationUtility converts records from AUDTRAIL (5.8) to AUDITTRAIL format.

**CalcDefs.** Internal LABWORKS Calculation Definitions were limited to 10 inputs. LABWORKS 6.2 adds a new table, CALCPARAMS which removes this 10 input limitation. LWMigrationUtility converts records from CALCDEFS to CALCPARAMS. Added in 6.2

**DMR.** (Optional Program, see DMR Documentation for specific detail.) LWMigration utility moves data into the primary LABWORKS database from the external DMR data storage previously used. Added in 6.2

**RLTSPECS.** RLTSPECS data storage has been changed to RESULTSPECS. This new format provides a better platform for extending what specifications can be defined. Additional specification capabilities will become available in future versions of LABWORKS Added in 6.2

**SIFORM.** Special Info Forms prior to LABWORKS 6.2 used multiple tables for storing defaults for Location Codes, Analyses and storing data for samples and analyses. All this data is now stored in the LABOBJSPECINFO table. Additionally, a field is added to the SIFORMDEF table to create a unique identifier for each field. This unique identifier allows for modifying a Special Info Form without losing the association between the fields and their values. Added in 6.2

MAILLIST. Migration of data from MLADDRESSES/SAMPMAILLIST to LABOBJMAILLIST Added in 6.4

COMMENTS. Migration of data from COMMENTS/DLCOMMENTS to LABOBJCOMMENTS Added in 6.4

LABOBJECTS. Migration of data from ANLOBJECT to LABOBJOBJECTS. Added in 6.4

**RESULT**. Addition of CHECKSUM data. Checksum is used to verify no one has modified the data outside of the LABWORKS application. Added in 6.4

USERHEAD. Addition of encrypted password. Added in 6.4

Migrate to FIPS Compliance. Migration of encrypted data to FIPS compliant encryption algorithm. Added in 6.10

LABWORKS 6.4 has new security features for Encrypted passwords and Checksums on result data. If upgrading from 6.2 or 6.3 the migration utility needs to be run and the options for RESULT and USERHEAD need to be run.

### Running the Update Tool

Step	User Input/Action	Expected Results
1	Select your database type, SQL or Oracle.	Database is selected.
2	Enter the database owner, likely dbo for SQL, and the schema owner for Oracle. New tables will be created under this owner.	Database owner entered.
3	Enter the database connection Password.	Database connection password entered.
4	Enter the database connection User ID.	Database connection User ID entered.

Step	User Input/Action	Expected Results
5	Select the Service pack.	
	The file LW610Release.xsp updates the database from 6.9 to 6.10 Desktop format.	
	Run the Update tool.exe using update files for all versions between your current and 6.10. Example, if upgrading from 6.6, then run the updatetool using LW67Release.xsp, LW68Release.xsp, LW69Release.xsp and LW610Release.xsp.	Service pack selected and run.
	The service pack I18NTables.xsp is used to add additional language strings to the LABWORKS database and is used only if needed for multi-language sites.	
	The service pack LW62DMRRelease.xsp is required for sites that are using the LABWORKS Discharge Monitoring Reports.	
	Press the Connect button to create a connection to the database.	
6	<ul> <li>For Oracle databases, select the Microsoft OLEDB Provider for Oracle provider and click 'Next'. Enter your Oracle service name as the server name, database connection username and password. Press Test Connection to confirm the connection.</li> <li>Data Link Properties Provider Connecton Advanced Al  Select the data you want to connect to: OLE DB Provider for Advanced Al  Wicrosoft Jet 351 OLE DB Provider  Microsoft Jet 351 OLE DB Provider  Microsoft OLE DB Provider for Analysis Services 9.0 Microsoft OLE DB Provider for OBC Drives  Microsoft OLE DB Provider for Search  Microsoft OLE DB Provider FOI Search  Microsoft OLE DB Provider for Search</li></ul>	Connection to the database is established.

Step	User Input/Action	Expected Results
	<ul> <li>For SQL Server databases, select the Microsoft OLEDB Provider for SQL Server provider and click 'Next'.</li> <li>Total Link Properties Provider Connection Advanced AI Select the data you want to connect to: Microsoft Jet 3 50 IOLE DB Provider Microsoft Jet 3 50 IOLE DB Provider Microsoft Jet 3 40 OLE DB Provider Microsoft Jet 20 DB Provider for Analysis Services 9 0 Microsoft OLE DB Provider for ODBC Drivers Microsoft OLE DB Provider for OBC Drivers Microsoft OLE DB Provider for Search Microsoft OLE DB Provider for Sole Searc</li></ul>	
7	After the database connection is tested, press 'Analyze' to have the program identify the database modifications required.	Database modifications are identified. Changes are
		applied.

ClabWORKS Update Tool       Database       SQL       Database       SQL       Database Owner Username       dbo       Database Password       set       LABWORKS User ID       User       Service Pack       LW6 IDRelease.xsp       Disconnect       Analyze       Close   The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
SQL   Database Owner Username   dbo   Database Password     **   LABWORKS User ID   usr   Service Pack   [W610Release.xsp   The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
SQL   Database Owner Username   dbo   Database Password   **   LABWORKS User ID   usr   Service Pack   [W610Release.xsp   The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
dbo   Database Password     **   LABWORKS User ID   Usr   Service Pack   W610Release.xsp   The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
DatabasePassword  ** LABWORKS User ID User Service Pack UW610Release.xsp Disconnett Analyze Close The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
LABWORKS User ID usr Service Pack LW6 10Release.xsp Disconnett Analyze Close The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
Usr         Service Pack         LW610Release.xsp         Disconnect         Analyze         Close
Service Pack       LW6 10Release.xsp     Disconnect     Analyze     Close   The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
The program gives a preview of the changes to be made. To apply the changes press 'Apply'.
'Apply'.
V MigrateData Table : StateMaster
✓ MigrateData Table : StateTransitions
I✓ MigrateData Table : SYSMGR
Table : URESOURCE
I♥ MigrateData Table : USERHEAD
₩ MigrateData
Table : StateTransitions

# Step 2: Configure database authentication for Oracle 12.2.x

When using Oracle 12.2.x version, follow these steps:

- Run the command ALTER SYSTEM SET SEC\_CASE\_SENSITIVE\_LOGON = FALSE in the Oracle database.
- Update %ORACLE\_HOME%\network\admin\sqlnet.ora
  - Insert the line SQLNET.ALLOWED\_LOGON\_VERSION\_SERVER=8 into the file.
- Restart the database.
- Change a password for existing users.
- Make sure that PASSWORD\_VERSIONS are compatible with 10g.
  - Run the following command in the database:
    - select USERNAME, ACCOUNT\_STATUS, PASSWORD\_VERSIONS from dba users;
  - The output should look like this:

USERNAME	ACCOUNT_STATUS	PASSWORD_VERSIONS
DIP	EXPIRED & LOCKED	11G 12C
SYSKM	EXPIRED & LOCKED	11G 12C
ORACLE_OCM	EXPIRED & LOCKED	11G 12C
SYSDG	EXPIRED & LOCKED	11G 12C
SPATIAL_CSW_ADMIN_USR	EXPIRED & LOCKED	11G 12C
LABWORKS	OPEN	10G 11G 12C

# Step 3: Gateway Administrator Setup

After the Server Installation has completed you must run the Gateway Administrator Tool, LWSysCfg6.exe, to set up LABWORKS with all of the user and workstation information. This information includes the location of the LABWORKS executables, locations and names of LABWORKS databases, and user file locations. The program is in the <LWEXE>\SysCfgfolder.

This section shows you how to use the Gateway Administrator to perform the following tasks:

- Set up a new database This section shows you how to add a database to the Gateway Administrator and set Data Path information for the database.
- **Configure the database** This section shows you how to configure the database by defining the type of database, type of connection to database, the database name; the server name, and the database user name and password.
- Select database authentication options This section shows you how to configure LABWORKS to validate a user's ID and Password by using LABWORKS authentication or domain authentication.
- Select global default database availability This section shows you how to select which databases will be visible, by default, to all users of LABWORKS.

The Gateway Administrator requires the LABWORKS client be installed on the workstation where Gateway Administrator is run. The Gateway administrator can be run from a network client or from the server console as long as the LABWORKS client install has been completed and the user has proper network access.

Access to the Gateway Administrator tool is controlled by network privileges and the program is also password protected. The first time you access the Gateway Administrator, if you are installing LABWORKS 6.8.5 Desktop or higher, the default password is **gateway**.

### Set up a new Database

The Gateway Administrator allows you to specify which databases will be used in your LABWORKS system and how these databases will be configured. When evaluating a LABWORKS Upgrade, creating an additional database as a Test or Sandbox environment can be useful. Setting up a new database is a four-part process that involves adding a new database to the Gateway Administrator program, setting data path information, configuring the database, and selecting database authentication. The following sections show you how to add a database to the Gateway Administrator program.

Step	User Input/Action	Expected Results
1	From the LABWORKS application folder, select <lwexe>\SysCfg\LWSysCfg6.exe.</lwexe>	File selected.
2	Before the Gateway Administrator launches a message appears prompting you to enter the Gateway Administrator password.	LABWORKS Gateway Administrat

# Add a New Database and Set Data Path Information:

Step	User Input/Action	Expected Results
	Cancel	or message appears prompting you to enter Gateway Administrat or Password. Gateway Administrat or Password is entered. Gateway Administrat or Password is changed.
	the following: spaces, semicolons (;), commas (,), plus sign (+), and the percent sign (%). You must enter the new password in the Enter new password field and the Confirm new password field and then click 'OK'.	
3	Once you have entered the correct password and clicked 'OK' the Gateway Administrator opens, and the Global Setting node is highlighted on the tree and has focus. When the Global Setting node is selected, the database setup panel on the right appears and consists of three tabs: a Data Path tab, a Database tab, and an Authentication tab. All tab pages and fields appear blank and are disabled when the Global Setting node is selected.	The Gateway Administrat or opens. Database Setup panel appears in right hand pane.

Step	User Input/Action	Expected Results
	If you already have databases set up in Gateway Administrator, then you can expand the Global Setting node and then click on a database listed under this node to activate the database set up panel. The Data Path tab is enabled first. You must set up the data path information on the Data Path tab to activate the Database tab. Once the Database tab is enabled you must select the type of database, setup the database connection information, and test the connection on this tab. The Authentication tab remains inactive until the necessary information is entered on the Data Path and the Database tabs. Only after the Gateway Administrator is able to establish a connection to the defined database does the Authentication tab become active. From the Authentication tab you can select how you wish to authenticate users when they log into LABWORKS.	
4	From the Gateway Administrator click File>New. A pop-up window appears prompting you to enter a new name for the database:          LABWORKS Gateway Administrator         Please enter a name for this database         OK         Cancel         PRODUCTION	LABWORKS Gateway Administrat or message appears prompting you to enter a new name for the database.
5	Enter a new name for the database you wish to set up and click 'OK'. The name you create for the database is the database name that users will see on the LABWORKS Login screen. The name can NOT contain spaces, semicolons (;), commas (,), plus sign (+), and the percent sign (%). The new database is added to the Global Setting node in the Gateway Administrator window and the database is selected by default. Information pertaining to the new database appears on the right-hand portion of the screen.	A new name is entered for the database.
6	Click next to the Data Files Path field. The Data Path Selection window appears:	The Data Path

Step	User Input/Action	Expected Results
	Browse for Folder × Data Path Selection	Selection window appears.
	C: \LABWORKS Client Client LWDATA LWEXE LWSQC LWTEMP LWUSER Other Stuff LABWORKS Images OK Cancel	Data Files path is specified.
7	Click mext to the License Pathfield.	The Client Program Path Selection window appears. The path to the License file is specified.
8	If you have the Northwest Analytical Quality Analyst software package, a third-party software package used for SQC charting, then select an SQC Path.	If applicable, SQC Path is specified.
9	Select the Default Language from the corresponding drop-down menu. For example, if you select English as the default language, then this will be the language LABWORKS runs in unless you specify a different default language for a specific Workstation or User. If you do not want to see language choices at log in, you must click on the Users node and check the Hide language selection at runtime check box.	Default language is specified. OR, if applicable,

Step	User Input/Action	Expected Results
		'Hidden language selection at runtime' option is enabled.
	Clicknext to the User Path field. The Client User Path Selection window appears:	
	Browse for Folder X	
	Data Path Selection	
10	C:\LABWORKS\LWUSER	The Client User Path Selection window appears.
	Select the location for the User Path.	
	The location of Server and User temporary files can affect application performance. Some parts of the application use temporary files to pass information between the middle tier and the user interface. Both programs execute on the client workstation. It is important that the temporary file read/write performance be as fast as possible. <b>The</b> <b>recommended option is to use the Windows defaults.</b>	
11	If required, specific files for these folders can be configured, and if you wish to append a unique path for each user or workstation, then check the Unique user path for each user box. When this option is checked you can then select the unique user path based on Domain ID, LABWORKS ID, or Workstation ID by clicking on the corresponding radio button. Based on your selection LABWORKS will create a folder sub folder based on the selection.	The location for the User Path is selected.
	Use Windows User Setting Folder (Default)     User Path:     L:\LWUSER     C Domain ID     C Labworks ID     C Workstation ID	
	For example, if you select L:\LWUSER and Unique user path for each user DomainID, then the user temp path becomes L:\LWUSER\ <domainid></domainid>	

Step	User Input/Action	Expected Results
12	Click in next to the Server Temp Path field. The Server Temp Path Selection window appears: Browse for Folder	The Server Temp Path Selection window appears. The Server Temp path is specified.

# Step 4: Configure ApplicationSpec.XML, ClientApp.config, LWServiceConfig.xml

The Server installation creates the files 'ApplicationSpec.xml' and 'ClientApp.config'. The files are used to configure the path to the license file and services from the clients.

During the upcoming client installation step, this file is copied to the client workstation. By configuring it before doing the client installation, the client installation configuration is already correctly configured.

Step	User Input/Action	Expected Results
1	Open the file 'ApplicationSpec.xml' using notepad.	The ApplicationS pec.xml is opened.

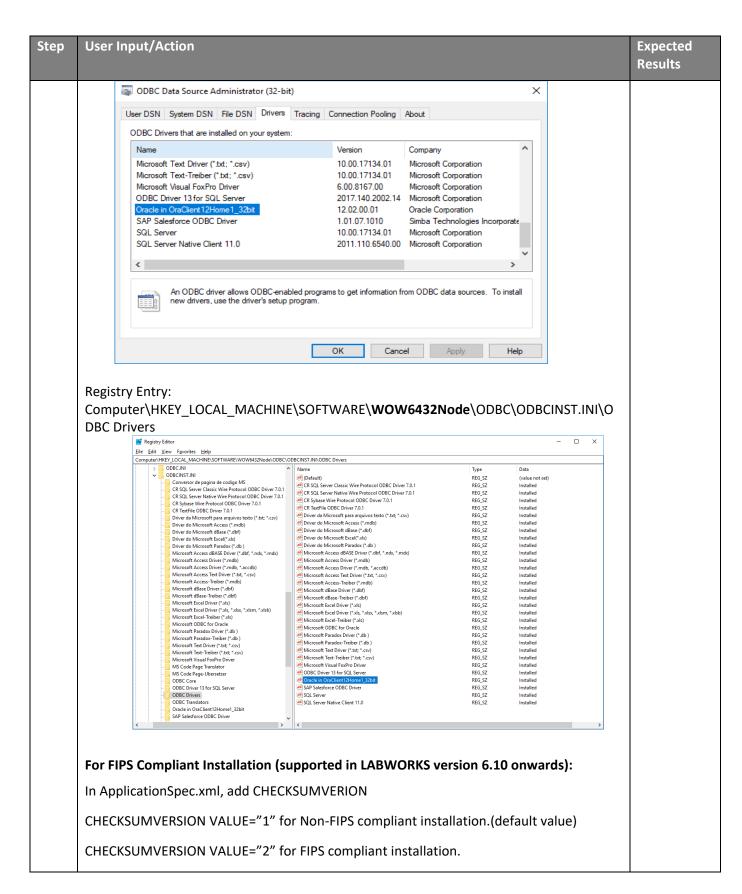
User Input/Action	····					Expecte Results
				× 🔞		
	s PC > Local Disk (C:) > LABWORKS > LWE		v ひ Search LWE	-		
A Quick access	Name	Date modified	Туре	Size		
Desktop 🖈	Server	5/10/2017 12:15 PM	File folder			
Downloads *	syscfg	5/10/2017 12:15 PM	File folder			
🗄 Documents 🖈	Updates WebHelp	5/10/2017 12:15 PM 5/10/2017 12:15 PM	File folder File folder			
Pictures *	ApplicationSpec.xml	5/10/2017 12:17 PM		1 KB		
Sources 🖈	ClientApp.config	5/10/2017 12:17 PM	XML Configuratio	4 KB		
6.7	🔁 ClientSetup.msi	5/9/2017 7:48 AM	Windows Installer	97,885 KB		
LABWORKS66	🕞 CrystalXIRDC.msi	5/9/2017 7:58 AM	Windows Installer	69,814 KB		
LWEXE	Labworks.ini	7/12/2016 11:24 PM	Configuration sett	40 KB		
QuestionPapers	LE512512.CTL	4/21/2017 6:11 PM 3/30/2016 8:22 PM	Visual Basic User MDB File	8 KB 8,132 KB		
This PC	LWI18NRES.xml	3/20/2017 7:54 AM	XML Document	8 KB		
Desktop	고 LWReporting.xsd	3/30/2016 8:22 PM	XML Schema File	19 KB		
Documents	mcinstr6.lst	5/9/2017 6:57 AM	MASM Listing	3 KB		
Downloads	B scinstr6.lst	5/9/2017 6:57 AM	MASM Listing	4 KB		
Music	Upgrade LABWORKS Client.bat	5/4/2017 4:36 AM	Windows Batch File	1 KB		
- D' -	vcredist_x86.exe	5/9/2017 8:22 AM	Application	2,682 KB		
17 items 1 item selected	230 bytes State: 🎎 Shared					
In this example, the		r c:\labworks, a	-	mapped th		enterer
In this example, the drive to that share ApplicationSpec.xii File Edit Format APPSETTINGS> <licens< th=""><th>he server shared the folde e. The path can be a mapp ml - Notepad <u>View H</u>elp SE_SERVER LICENSE_FILE_P</th><th>r c:\labworks, a ped drive letter</th><th>nd the client</th><th></th><th></th><th>entere</th></licens<>	he server shared the folde e. The path can be a mapp ml - Notepad <u>View H</u> elp SE_SERVER LICENSE_FILE_P	r c:\labworks, a ped drive letter	nd the client			entere
In this example, the drive to that share applicationSpec.xu <u>File Edit Format</u> <appsettings> <licens <appcon <lsessi <platfo <login< td=""><td>he server shared the folde e. The path can be a mapp ml - Notepad <u>V</u>iew <u>H</u>elp</td><td>r c:\labworks, a ped drive letter PATH="C:\LABWOF 10"/&gt; NBWORKS-TEST01 </td><td>nd the client</td><td></td><td></td><td></td></login<></platfo </lsessi </appcon </licens </appsettings>	he server shared the folde e. The path can be a mapp ml - Notepad <u>V</u> iew <u>H</u> elp	r c:\labworks, a ped drive letter PATH="C:\LABWOF 10"/> NBWORKS-TEST01	nd the client			
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In this example, the drive to that share ApplicationSpec.xu <u>File Edit Format</u> <appsettings> <licens <appcon <lsessi <platf( <login <checks </checks </login </platf( </lsessi </appcon </licens </appsettings>	he server shared the folde e. The path can be a mapp ml - Notepad <u>View Help</u> SE_SERVER LICENSE_FILE_P NFIG REFRESH="TRUE"/> ION6 LAUNCH_DELAYTIME="4 ORM_SERVER_PATH PATH="LA PAGE Flavor="Process"/> SUMVERSION VALUE="1"/>	r c:\labworks, a ped drive letter PATH="C:\LABWOF 10"/> NBWORKS-TEST01	nd the client			enterec
In this example, the drive to that share ApplicationSpec.xu File Edit Format <appsettings> <licens <appsettings> <licens <appcon <lsessi <platfo <login <checks </checks </login </platfo </lsessi </appcon </licens </appsettings> OR as an UNC pat</licens </appsettings>	he server shared the folde e. The path can be a mapp ml - Notepad <u>View H</u> elp SE_SERVER LICENSE_FILE_P NFIG REFRESH="TRUE"/> ION6 LAUNCH_DELAYTIME="4 DRM_SERVER_PATH PATH="LA PAGE Flavor="Process"/> SUMVERSION VALUE="1"/> th.	r c:\labworks, a ped drive letter PATH="C:\LABWOF 10"/> NBWORKS-TEST01	nd the client			

User Input/Action		Expected Results
For using SQL Server database with L		
MICrosoft SQLOLEDB is the default co	onnect string for Database Type SQL Server	
Data Paths Database Authentication		
Database type		
SQL Server - Database connect string	O Oracle - Database connect string	
TLS Support MSOLEDBSQL		
Note : For TLS 1.2 Support :		
3) In LWSYSCFG, check "TLS Sup	port MSOLEDBSQL"	
Data Paths Database Authentication		
_ Database type		
SQL Server - Database connect string	O Oracle - Database connect string	
Z TLS Support MSOLEDBSQL		
4) Install following drivers on th		
iii) MSOLEDBSQL (Used by .r	<pre>net applications) crosoft.com/en-us/download/details.aspx?id=</pre>	-56730
	ed by legacy applications) (Install based on OS	
-	crosoft.com/en-us/download/details.aspx?id=	<u>-56567</u>
For using Oracle OLEDB Driver with L	LABWORKS:	
Prerequisite : Oracle Client 32 Bit, Mu	ust include OLEDB Driver	
Configuration Using LWSysconfig select Oracle OleD	DBORA.Oracle Connect String	
Data Paths Database Authentication		
Database type		
O SQL Server - Database connect string	Oracle - Database connect string	
	<ul> <li>Oracle - Database connect string</li> <li>Microsoft MSDAORA</li> <li>Oracle OleDBORA.Oracle</li> </ul>	

# LABWORKS LIMS v6.10 Installation Guide

### 

Step	User Input/Action						Expected Results
	In ApplicationSpec.xml, a	dd OracleHome					
	ApplicationSpec.xml - N	otepad					_
	File Edit Format View	нер					
	<ap <ls <pl< td=""><td>CENSE_SERVER LICENSE_FI PCONFIG REFRESH="TRUE"/: ESSION6 LAUNCH_DELAYTIMI ATFORM_SERVER_PATH PATH</td><td>&gt; E="40"/&gt; ="PAF-DEV04</td><td>4"/&gt;</td><td></td><td></td><td></td></pl<></ls </ap 	CENSE_SERVER LICENSE_FI PCONFIG REFRESH="TRUE"/: ESSION6 LAUNCH_DELAYTIMI ATFORM_SERVER_PATH PATH	> E="40"/> ="PAF-DEV04	4"/>			
		ACLE_HOME HOME="Oracle : gin_Page Flavor="Proces:		nt12Home1_	_32b1t	*/>	
	<						
	Where the Oracle Home I Using Control Panel, <b>ODB</b>						
	🏝   📝 📕 🎔 =   Shorte	ut Tools Application Tools Administrative Tools			_	- 🗆 X	
	File Home Share View Ma	nage Manage				~ 😨	
	Pin to Quick     access     acces     ac	Move Copy Delete Rename Delete Rename Tolder	Properties	Select all Select none Invert selection			
	Clipboard	Organize New	Open	Select			
	← → · ↑ 📸 > Control Panel > Syste	m and Security > Administrative Tools			~ Ū	Search Ad 🔎	
	i Network		Date modified	Туре	Size	Â	
	💌 Control Panel	Component Services Computer Management	4/11/2018 17:34 4/11/2018 17:34	Shortcut Shortcut		KB	
	All Control Panel Items	Computer Management Defragment and Optimize Drives	4/11/2018 17:34	Shortcut		KB	
	Appearance and Personalization	🔚 Disk Cleanup	4/11/2018 17:34	Shortcut		KB	
	Olock and Region	Event Viewer Internet Information Services (IIS) Manager	4/11/2018 17:34	Shortcut		KB	
	😍 Ease of Access	Internet Information Services (IIS) Manager IscSI Initiator	4/11/2018 17:35 4/11/2018 17:34	Shortcut Shortcut		KB KB	
	────────────────────────────────────	Local Security Policy	4/11/2018 17:35	Shortcut		KB	
	Programs	ODBC Data Sources (32-bit)	4/11/2018 17:34	Shortcut	2	KB	
	System and Security	DDBC Data Sources (64-bit)	4/11/2018 17:34	Shortcut		KB	
	Administrative Tools	Performance Monitor Print Management	4/11/2018 17:34 4/11/2018 17:35	Shortcut Shortcut		KB KB	
	A Backup and Restore (Windows 7) 20 items   1 item selected 1.11 KB	V Recovery Drive	4/11/2018 17-2A	Shortcut			
	The Entry (highlighted be	low) is the Driver Name.					



Step	User Input/Action	Expected Results
	ApplicationSpec.xml - Notepad	
	<u>F</u> ile <u>E</u> dit F <u>o</u> rmat <u>V</u> iew <u>H</u> elp	
	<pre><appsettings></appsettings></pre>	
3	Also, open 'ApplicationSpec.xml'located at \Program Files (x86)\Labworks\LWLicenseServices (where the LWLicense Service is installed) and perform the same changes as above.	Changes applied.
4	Also, open 'ApplicationSpec.xml'located at \Program Files (x86)\Labworks\LWDataServices (where the LWDataServices is installed) and perform the same changes as above.	Changes applied.
	22 Rems     1 item selected     215 bytes     Item selected     215 bytes	
5	Copy 'ClientApp.config'from <lwexe> to \Program Files (x86)\Labworks\LWDataServices (where the LWDataServices is installed) and perform the same changes as above.</lwexe>	File Copied
	Configure LWServiceConfig.xml:	
6	<ol> <li>Launch 'LWServiceControllers.exe' application located at '\LABWORKS\LWEXE\Server '.</li> <li>Go to menu Configuration -&gt; Service Connection Configuration:</li> </ol>	

# LABWORKS LIMS v6.10 Installation Guide



User li	nput/Action		Expected Results
🔕 LA	BWORKS Service Controller -	- 🗆	×
Conf	figuration Help		
	Service Connection Configuration hon Service Controller		
	PS Service		
	Service status		
	mismatched.		
Servi	ce connection information		
	ame: Analyst First User       Database: LA         On Service Connection Configuration screen, enter valid LABWORKS usern password.         Select desired database for connection and enter workstation name where platform service is running.         Click Generate config file button.            \u00ed LABWORKS Service Connection Configuration	name,	8_TEST
	On Service Connection Configuration screen, enter valid LABWORKS usern password. Select desired database for connection and enter workstation name where platform service is running. Click Generate config file button.	name,	8_TEST
	On Service Connection Configuration screen, enter valid LABWORKS usern password. Select desired database for connection and enter workstation name where platform service is running. Click Generate config file button.	name,	8_TEST
	On Service Connection Configuration screen, enter valid LABWORKS usern password. Select desired database for connection and enter workstation name where platform service is running. Click Generate config file button.	name,	8_TEST
	On Service Connection Configuration screen, enter valid LABWORKS usern password. Select desired database for connection and enter workstation name where platform service is running. Click Generate config file button. Click Generate config file button.	name,	8_TEST

Step	User In	put/Action	Expected Results
	4.	Select path to save config file:	
		Browse For Folder X	
		LABWORKS Service Configuration File Dialog	
		<ul> <li>Desktop</li> <li>This PC</li> <li>This res</li> <li>Network</li> <li>Control Panel</li> <li>Recycle Bin</li> </ul>	
		Make New Folder OK Cancel	
		Copy 'LWServiceConfig.xml' from above selected location to \Program Files (x86)\Labworks\LWDataServices (where the LWDataService is installed) Restart LWDataServices	

# **Step 5: Configure the Database**

Once you have set up the Data Path information, the Database tab activates. On the Database tab page, you configure the database by defining the type of database, type of connection to database, the server name, the database name, the user name, and the password.

💂 LABWORKS Gateway Administr	ator
<u>F</u> ile Edit Tools	
🞯 🔳 🗙 🐰 🖻 🖺 🖄	
PRODUCTION	
Folder Items × Global Setting PRODUCTION Users	Data Paths       Database       Authentication         Database type       Image: Server - Database connect string       Image: Oracle - Database connect string         Image: TLS Support MSOLEDBSQL       Image: Oracle - Database connect string         Server Name (Service Name)       Image: Oracle - Database connect string         MyServer       Database Name         MyDatabase       Image: Oracle - Database connect string         Database Name       Image: Oracle - Database connect string         Database Name       Image: Oracle - Database connect string         Database user name       Image: Oracle - Database connect string         Image: Oracle - Database connect string       Image: Oracle - Database connect string         Database user name       Image: Oracle - Database connect string         Image: Oracle - Database password       Image: Oracle - Database connect string         Image: Oracle - Database password       Image: Oracle - Database connect string         Image: Oracle - Database password       Image: Oracle - Database connect string         Image: Oracle - Database password       Image: Oracle - Database connect string         Image: Oracle - Database connect string       Image: Oracle - Database connect string         Image: Oracle - Database connect string       Image: Oracle - Database connect string         Image: Oracle - Database connect string

To configure the database, enter the Data Path information, and click on the Database tab.

For Oracle databases:

- Enter the name of the server where the database is located in the Server name (Service Name) field.
- Enter the Database user name and Database password. If needed, ask your DBA for your database username and password.
- Click the 'Test Connection' button.

For SQL Server databases:

- Enter the name of the server where the database is located in the Server name (Service Name) field.
- Enter the name used to identify the LABWORKS database in the Database Name field.
- Enter the Database user name and Database password.
- Click the 'Test Connection' button.

The Test Connection function uses the database information and the data path information (if necessary) to establish a connection to the database. If the connection is successful, a message appears stating that the connection was a success. If the connection is not successful, a message appears that provides a description of why the connection failed.

### **Step 6: Configure Database Authentication**

You can configure LABWORKS to validate a user's ID and Password by using one of the following methods:

- Authenticate against LABWORKS using the standard LABWORKS logon
- Authenticate against a domain with re-entry of domain user name and password to enter LABWORKS
- Authenticate against a domain with no password required to enter LABWORKS.

Image: LABWORKS Gateway Adm       File     Edit       Tools     Help       Image: Comparison of the second seco		
PRODUCTION		
Folder Items X Global Setting H D DEMO H F PRODUCTION Users	Data Paths       Database       Authentication         -Authentication Type:       C       LABWORKS         © Domain Authentication       ©       Workstation Authentication         © Single Sign-on       Group Name	Update user list

### Standard LABWORKS Authentication

To authenticate against LABWORKS using the standard LABWORKS logon, skip the following sections and simply click the LABWORKS radio button on the Authentication tab of the Gateway Administrator.

When you select LABWORKS for the Authentication Type, it associates password with the selected database. When a user logs into a LABWORKS database for the first time, the Users node of the Gateway Administrator is populated with that users Domain ID. Once a User Domain ID is listed in the Users node, the administrator can select that user from the Users node and customize which databases are visible to the user as well as enable or disable the user from changing the language used by LABWORKS.

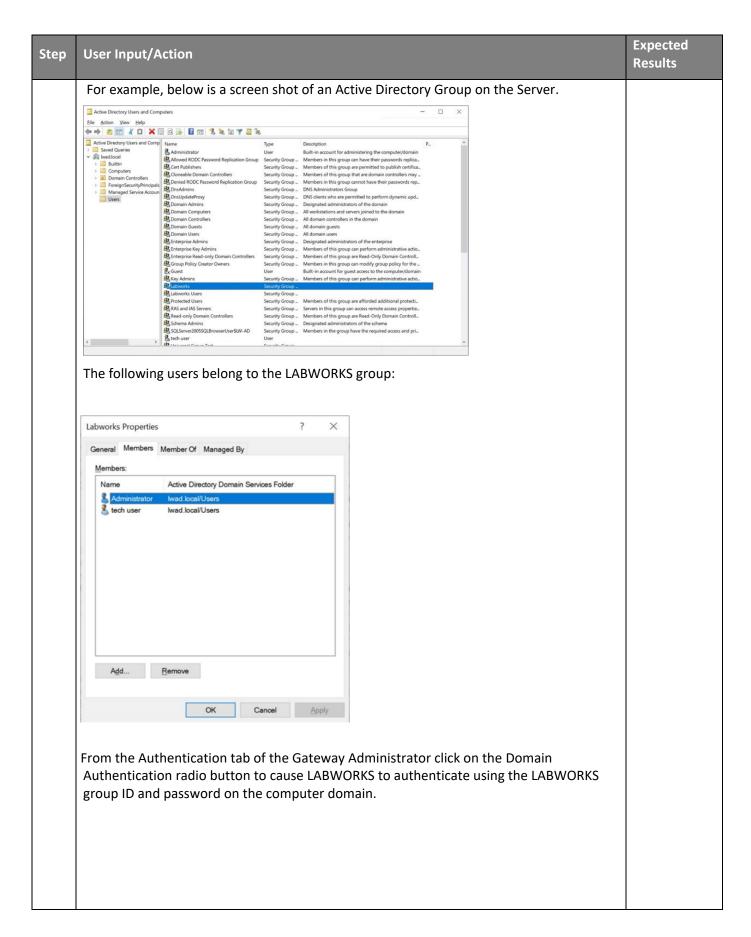
### **Domain Authentication**

To use Domain Authentication, you must perform the following Windows Administrative steps:

- Create a LABWORKS group on the domain
- Assign users to the LABWORKS group
- Define new authentication options in the Gateway Administrator
- Import users from domain into the LABWORKS application's list of users

The following section shows you how to perform the steps listed above.

Step	User Input/Action	Expected Results
1	Create a group called LABWORKS on the Domain.	A group called LABWORKS is created.
	Assign the users whom you wish to have access to the LABWORKS application to the LABWORKS group you just created.	Users are assigned to the
2	The users you assign to the LABWORKS group are the users who will be able to log into LABWORKS.	LABWORKS group.
	For example, below is a screen shot of an Active Directory Group on the Server.	



Step	User Input/Action	Expected Results
		Domain Authenticatio n radio button selected.
3	Check the Single Sign-on check box to have the LABWORKS Login screen show the user id and password automatically filled in with the current Windows User ID and Password at login. The screen below shows the LABWORKS User Login screen if Single Sign-On is enabled: Even when Single Sign-On is enabled, the user must re-enter his/her password when the FORCECHECKIN or SYSTEMTIMEOUT System Manager keys prompt for user password verification. Moreover, if only one database is configured and single sign on is enabled, the user logon dialog is not displayed. - <b>OR-</b> Uncheck the Single Sign-on check box to have the user enter his/her user name and	Single Sign- on check box enabled or disabled, depending on environment.
4	<ul> <li>password at logon.</li> <li>Click Update User List to synchronize the group defined in the Group Name field with the LABWORKS user list.</li> <li>The new users' Domain IDs are added to the User Setting node of the Gateway Administrator for the database you just configured. In addition, these users inherit the global default databases available for viewing.</li> <li>The global default databases available for viewing can be set by clicking on the Users node of the Gateway Administrator and then by checking the databases you wish to have visible to all users and then clicking on the Set as global default button.</li> <li>If there are previously defined LABWORKS users that are not assigned to the group defined in Gateway Administrator, then the following screen appears and gives you the option to add the user to the group defined in the Gateway Administrator or to delete the user from the list.</li> <li>Even if domain authentication is used, the LABWORKS user list is still required for privilege management.</li> <li>User's passwords are now encrypted, so you cannot change passwords from the System Manager.</li> <li>If users wish to change their passwords, they must do so through their Operating System's password utility.</li> </ul>	The new users' Domain IDs are added to the User Setting node of the Gateway Administrato r for the database you just configured.

# Step 7: Configure Global Database Availability

Note: Client Install Prerequisite: Microsoft Visual C++ redistributable (vcredist\_x86.exe) for following versions:

Microsoft Visual C++ redistributable 2005 : <u>https://www.microsoft.com/en-</u> in/download/details.aspx?id=3387

When the Users node is selected, the right-hand pane of the Gateway Administrator displays the global default databases that can be seen by all users as well as a check box that enables or disables language selection at runtime for all users of LABWORKS.

JABWORKS Gateway Administrator				
<u>File</u> Edit Tools <u>H</u> elp				
Users				
Folder Items X Global Setting DEMO PRODUCTION FRODUCTION FrieddsPA	Set default database(s) - selectable by user at Logon			
	Hide language selection at runtime	Set as Default		

Clicking on the Users node will allow you to select the databases that can be seen for all users. By selecting one or more of these databases, you are configuring the Gateway Administrator to add everyone to the selected databases' User Setting node for all selected databases. In addition, all users would see only those checked databases on the LABWORKS login window. The Hide language selection at runtime check box can also be selected to hide available languages option.

The Users node also lists all the Users that have logged into a LABWORKS database. All the User Domain IDs that have logged into LABWORKS are listed here so that the system manager can set properties for users that are different than the global settings. Therefore, when a specific User Domain ID is selected on the tree, the administrator can change the databases that can be seen by the selected user. By selecting one or many of the databases, the system manager is telling Gateway Administrator to list this individual on the User Setting node for just the checked databases. In addition, the user would only see those checked databases on the LABWORKS Login window.

### To configure global default database availability:

To allow all users on the system databases, check the databases you wish to set as the default databases available to all users at login and click the Set as Default button. When databases are checked the Gateway, Administrator lists all the users under the User Setting node for each checked database in Gateway Administrator.

The screen shows that the database named DEMO is available for viewing by all users, while no users can see the database named PRODUCTION, because the only database selected on the Users node is DEMO, and there are no exceptions set up for individual users who are listed under the Users node.

You are now ready to run the ClientSetup.msi program on each workstation that will use LABWORKS. After you run the Client Installation on each workstation you can access the Gateway Administrator tool again to customize individual user and workstation settings.

## Step 8: Running the LWMigrationUtility

**Note**: If upgrading from 6.4 or 6.5 the LWMigrationUtility is only requried for ViolationReorder or FIPS Encryption Migration. Re-migrating data that has been migrated can overwrite data that has been updated after a migration.

The LWMigrationUtility requires a valid LABWORKS login to the database, thus requiring Gateway Administrator be configured and the LWLicenseServices be running.

Step	User Input/Action	Expected Results
1	When LWMigrationUtility.exe starts it prompts for information about the database and users.         IWMigrationUtility         Database Type*         SQL         Database schema owner user name*         dbo         Database schema owner password*         ***         LABWORKS Data Path*         c:\labworks\wdata         Database schema owner user name:         When new tables are created using the update tool, tables will be added to this schema         Database schema owner password:         The database user password.	LWMigration Utility prompt is displayed.
2	Then, connect using the same information/parameters as when running the UpdateTool in earlier steps. After connection, the 'Next' button will be available.	Connection to the database is established.

Step	User Input/Action	Expected Results
	LWMigrationUtility   Database Type*   SQL   Database schema owner user name*   dbo   Database schema owner password*   ****   LABWORKS User Name*   usr   LABWORKS Data Path*   c: \abworks \wdata   mathematical information informa	
	Then the program gives the option of running the Update Tool.	The option to run the
3	Next       Cose         Cose         LABWORKS Migration Utility         Image: Complete for the form the	Update Tool is presented. If applicable, the Update Tool is run.

The LABWORKS Migration Utility provides a method for migrating each type of data independently. And for data conversions that are sample related and may take long periods of time to process, the sample range can be defined. (Sample Specs, Sample Special Info)

For each process in the migration the program stores the date the conversion was last executed. When doing an upgrade to LABWORKS 6.10, the programs will store their data in the new formats described earlier. Working with

LABWORKS product specialist and support specialist, best practices for the migration process can be worked out for your configuration and change management processes.

When the Migration Utility is finished it provides a log file with a count of the number of records that were migrated.

LABWORK	S Migration Utility 23
0	Data migrated successfully. Log file created at [C:\Jabworks\Jwexe68.Server\LWMigration_20100712210948.log] Do you want to view log file?
	<u>Y</u> es <u>N</u> o

The log file can be helpful if there are errors in migrating data to the new format.

## Step 9: Running NGMigrationTool

NGMigrationTool is a common tool for various migrations. It needs to be executed when updating a version. Follow the instruction below for more details about each migration task.

#### Migration: Persisted group to Log Batch

This kind of migration is required to update from 6.9 or earlier to 6.10 or later.

Starting with 6.10, Desktop services do not work with persisted groups. Instead of using persisted groups, applications use log batch details associated with sample log batches. To avoid losing persisted group data, it can be associated with existing or new log batches using NGMigrationTool.

**Note:** NGMigrationTool can be run repeatedly to change the migration. It is available because the old relationships between persisted groups and samples are not removed from the database after the migration.

Step	User Input/Action	Expected Results
1	Run NGMigrationTool from LABWORKS\LWEXE\Server\NGMigrationTool.exe	Authenticatio n window is open.
	Select a database. Provide your login and password to access the database.	NGMigration Tool window is open.

Step	User Input/Action	Expected Results
	LABWORKS - User Login Login User Password OK Cancel Vancel	
2	Select "Persisted group to log batch" tile.	The migration wizard runs.
3	Read Welcome screen information. Click Next.	Auto-merge screen is open.

Step	User Input/Action		
	<text><section-header><section-header><section-header><text><list-item><list-item><list-item><list-item><list-item><ul> <li>C C the stand allow the log that has allow the stand the stand</li></ul></list-item></list-item></list-item></list-item></list-item></text></section-header></section-header></section-header></text>		
4	Check Auto-merge information and click Next to continue.         - □ ×         Contract press         - □ ×	Manual merge screen is open.	
5	Resolve conflicts following the instructions in the tool. Click Next to continue.	Report screen is open.	

Step	User Input/Action	Expected Results
	<ul> <li>Persisted Group to Log Batch migration steps</li> <li>Set only one log batch for persisted group</li> <li>Welcome</li> <li>Auto-merge</li> <li>Conflict type#1: Group and log batch mismatch</li> <li>Conflict type#2: Empty log batch</li> <li>Review changes</li> <li>Migrating</li> </ul>	
	<ul> <li>Next Cancel</li> <li>- □ ×</li> <li>← I ← I ← Persisted Group to Log Batch migration steps</li> <li>Set log batch Id for persisted group samples with empty log batch</li> </ul>	
	<ul> <li>Velcome</li> <li>Auto-merge</li> <li>Conflict type#2: Encoup and log batch instancta</li> <li>Aritic myse#2</li> <li>Bry instance</li> <li>Provide a log batch and the persisted group on the previous step. You also can associate a sample with a custom log batch is the log batch batch step log batch is the log batch batch and the persisted group on the previous step. You also can associate a sample with a custom log batch batch and the persisted group on the previous step. You also can associate a sample with a custom log batch batch and the persisted group on the previous step. You also can associate a sample with a custom log batch batch is the log batch batch and the persisted group on the previous step. You also can associate a sample with a custom log batch batch and the persisted group on the previous step. You also can associate a sample with a custom log batch batch and the persisted group on the previous step. You also can associate a sample with a custom log batch batch and the persisted group was not auto migrated and was not included in the conflict tresolution step. See See See See See See See See See Se</li></ul>	
6	After configuring the migration, NGMigrationTool provides a report to check changes before the migration. Print report if it is needed. Check changes and click Next to start the migration.	Progress screen is open.

Step	User Input/Action			Expected Results
				Results
	← F Persisted Group to Log Batch migration steps Please check and confirm following c ✓ Welcome		□ × Start migration	
	<ul> <li>Auto-merge</li> <li>Conflict type#1: Group and log batch mis</li> </ul>	smatch Changes in persisted group IDs	Print report	
	<ul> <li>Conflict type#2: Empty log batch</li> </ul>	Persisted group Type of migration Log batch		
	<ul> <li>Review changes</li> <li>Migrating</li> </ul>	LB_2019-08-23-004 Auto 2019-12-27-003 2019-12-27-002 Manual 2017-08-09-001		
		LB_2019-08-23-005 Manual 2019-12-27-004		
		LB_2019-08-23-007 Manual 2020-04-29-001		
		Changes in samples		
		Sample Previous persisted group d Current persisted group d Previous log bat	Current log bat	
		Next	Cancel	
7	After the migration compleneeded. Click Finish to finish the m Click Finish to finish the m Persisted Group to Log Batch migration steps Data migration process Velcome Auto-merge Conflict type#1: Group and log batch mis Conflict type#2: Empty log batch Review changes Migrating	Updating	report if it is	The wizard will be closed.

# Step 10: Client Installation

## **Note:** You must log in as the Administrator, or have administrative rights, to run the Client Install.

After you have run the Server Installation and setup and configured workstation settings using the Gateway Administrator tool you must now run the Client Installation, located at <LWEXE>ClientSetup.msi on each workstation that is to use LABWORKS. Since LABWORKS is installed on a server, it is critical that every user access the ClientSetup.msi program that is located on the server in the same manner.

Step	User Input/Action		Expected Results
	-	rou wish to run LABWORKS access the server whether the LABWORKS application folder and selected wizard X	
1	<b>Click 'Next'.</b>	Welcome to the InstallShield Wizard for LABWORKS Client         The InstallShield(R) Wizard will install LABWORKS Client on your computer. To continue, dick Next.             < Back	The Welcome to the InstallShield for LABWORKS Client is displayed.
2			Customer Information dialog is displayed. User Name and Company name is entered.

Step	User Input/Action	Expected Results
	Habworks Client - InstallShield Wizard X	
	Customer Information	
	Please enter your information.	
	User Name: MyName	
	Organization: MyCompany	
	h theorem in the second s	
	InstallShield	
	< Back Next > Cancel	
	Enter your Name and Company Name.	
	Click 'Next'to continue.	
	EABWORKS Client - InstallShield Wizard	
	Destination Folder	
	Click Next to install to this folder, or click Change to install to a different folder.	
	Install LABWORKS Client to:	
	C:\LABWORKS\Client\ Change	Destination
		Folder
		dialog is
3		displayed.
5		Destination
		folder is
		changed if
		required.
	InstallShield	
	< Back Next > Cancel	
	Click 'Change' if the location of the client software is to other than the default location.	
	Once specified, click 'Next' to proceed.	

Step	User Input/Action				
	Habworks Client - InstallShield Wizard				
	Ready to Install the Program The wizard is ready to begin installation.				
	Click Install to begin the installation.				
4	If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	The Ready to Install the Program dialog is displayed. The installation proceeds.			
	InstallShield < <u>B</u> ack Install Cancel				
	Click 'Install' to begin the Installation.				
	Depending on the Operating system and the configuration of UAC (User Account Control) you may get the error messages as below.				
	LABWORKS Client - InstallShield Wizard 🗶 LABWORKS Client - InstallShield Wizard 🗶				
	Applicationspec.xml not copied: Access is denied. Please copy the file manually.				
	ОК ОК				
	If you receive these messages, you need to manually copy files, ApplicationSpec.xml and ClientApp.config to the LABWORKS path [System Drive]\Labworks\Client				

Step	User Input/Action		Expected Results
	🛃 LABWORKS Client - InstallShie	eld Wizard X	
		InstallShield Wizard Completed	
5		The InstallShield Wizard has successfully installed LABWORKS Client. Click Finish to exit the wizard.	The InstallShield Wizard Completed dialog is displayed. The installation is complete.
		< <u>B</u> ack <b>Finish</b> Cancel	
	When the installation is co	mplete, click 'Finish' to exit.	

At this point your installation is complete. There is a new Program Group for LABWORKS and a LW Desktop application shortcut on your Desktop. By double clicking the new LW Desktop Icon, users are prompted to login:

LABWORKS - User Login			
<b>Q LABWORKS</b>			
Login			
User			
usr			
Password			
•			
QK <u>C</u> ancel			

The default credentials for a new database installation are as follows:

User: USR

Password: 1

s 🕰 🔲 🚉 📈 🕄 🖳			
a Items 🔟 🦷 👎	Notifications		¥
<u>Q</u>	You have 2 new unread message(s).	*	
File	SMTP server configuration saved		
Login	SMTP server configuration saved		
Results	SMTP server configuration saved		
QA/QC			
Search			
Maintenance			
Utilities			
Options	-		
Reports	Message from second user to first user		
Help			
ww			

**Note:** When upgrading an existing database (version 5.8) it may be necessary to run Lwwsystem6.exe from the C:\Labworks\Client folder because there are new applications-based privileges associated with the new Desktop.

# LABWORKS Webtop Installation

## **Before You Start**

LABWORKS Webtop is the latest in a succession of versions of LABWORKS LIMS. It provides new WEB functionally and is built using the latest in software development tools. As a WEB application its installation is different from any previous version of LABWORKS.

Even if you are a long time LABWORKS user, it is recommended you read the complete installation guide before starting your LABWORKS Webtop installation.

Installing LABWORKS Webtop is a multi-step process that involves performing a server installation, running the update database tool, modifying configuration files, running the gateway administrator tool configures LABWORKS databases.

LABWORKS installation involves the following steps:

- Step 1: Run LWWebtop.exe.
- Step 2: Modify ApplicationSpec.XML
- Step 3: Configure folder security
- Step 4: Run the Microsoft/Oracle scripts, Update Tool, and Migration Utility.
- Step 5: Configure Web Applications
- Step 6: Run the Gateway Administrator Tool.
  - Configure the Database.
- Step 7: Update web.config (lwwebtop and lwsampleloginservice)
- Step 8: Start LWLicenseServices/LWDataServices if not running
- Step 9: Login

Before you start your LABWORKS Webtop installation you will need the following:

- LABWORKS Webtop Installation Disk
- LABWORKS License/Control File (\*.CTL)
- Internet Server, IIS 7.0 or above

As this is an update to your existing LABWORKS LIMS program, back up your LABWORKS data files and database before beginning installation. LABWORKS is not responsible for any data loss or downtime caused by not creating backup files. Installation from the new LABWORKS CD should only begin after creation of a full backup of all existing files in your LABWORKS program path and data path and the actual database itself to tape, CD ROM, or other method.

It is recommended that you install any LABWORKS update on a test computer using a backup data path and database to test the program prior to installation on networks, servers, or multiple workstations. Even though LABWORKS thoroughly tests the LABWORKS LIMS program in-house, there may be variables associated with your network, servers, workstations, environment, etc., that may present unforeseeable problems.

## **Web Server Installation Footprint**

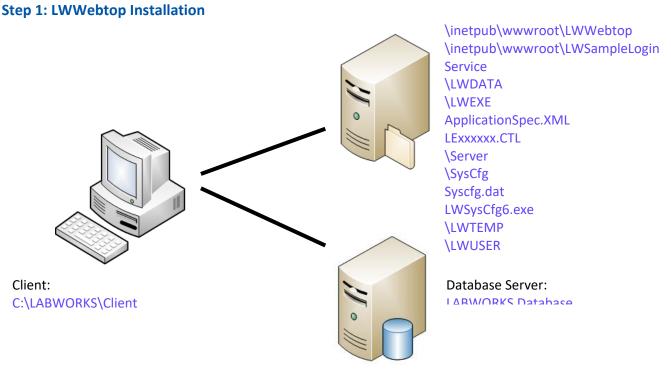
LABWORKS Webtop installs on the WEB Application Server

#### \Inetpub\wwwroot\LWWebtop:This folder contains the LABWORKS Webtop software

\inetpub\wwwroot\LWSampleLoginService: This folder contains the web service for reading and writing LABWORKS Sample related data.

\Program Files (x86)\Labworks\LWLicenseServices:	This folder contains the LABWORKS License Service application. This service is used to authenticate users and provide database configuration information. With latest LABWORKS version both Webtop and Desktop will use this service. This service can be loaded both on the Desktop server, for use by Desktop, and on the Webtop server.
\Program Files (x86)\Labworks\LWDataServices:	This folder contains the LABWORKS DataService application. This service provides data to the application. With latest LABWORKS version both Webtop and Desktop will use this service. This service can be loaded both on the Desktop server, for use by Desktop, and on the Webtop server.
C:\Labworks\\LWEXE:	This folder contains utilities for updating the LABWORKS Database Schema to Webtop Format, Conversion utilities for Specifications and Calculations.
C:\Labworks\\LWEXE\SYSCFG:	This folder contains the client configuration utility LWSyscfg6.exe and the file syscfg.dat where LABWORKS client configuration preferences are stored.
C:\Labworks\\LWDATA:	The LWDATA is a blank for LWSYSCFG6.EXE to point to on the WEB Server.
License File:	The license file is supplied by LABWORKS on a separate CD. It enables the LABWORKS features your organization has purchased.
Database Server:	The database server, SQL or Oracle requires a database instance be created. The instructions for creating the LABWORKS database are available in a separate document.

WEB Server:



The Server Installation procedure is used to copy the LABWORKS files to the web server. The Webtop server must have the IIS 7.0 or greater loaded and running. The LABWORKS setup program is launched when the installation CD is inserted in your CD ROM drive.

1 **Note:** If the program does not launch automatically when you insert the installation CD into your CD ROM drive, use windows explorer to view the contents of the CD and double click on LWWebtop.exe, which is located on the root node of the CD.

Step	User Input/Action	Expected Results
1	Insert the LABWORKS installation CD in your CD ROM drive. The setup program automatically launches, and the welcome screen appears with brief instructions.	Windows installer initiates the installation from the Setup program.

	d Wizard X		
	Welcome to the InstallShield Wizard for LABWORKS WebTop The InstallShield Wizard will install LABWORKS WebTop on your computer. To continue, click Next.		
	< <u>B</u> ack <u>N</u> ext > Cancel		
Click 'Next'			
LABWORKS WebTop - InstallS	nield Wizard	×	
Customer Information Please enter your informatio		×	
Customer Information			Customer
Customer Information Please enter your informatio User Name: MyName			Customer Information
Customer Information Please enter your informatio			Information dialog is
Customer Information         Please enter your information         User Name:         MyName         Company Name:         MyCompany         Install this application for:			Information dialog is displayed. User Name and
Customer Information Please enter your information User Name: MyName Company Name: MyCompany Install this application for:  Any	n.		Information dialog is displayed.
Customer Information Please enter your information User Name: MyName Company Name: MyCompany Install this application for:  Any	n.		Information dialog is displayed. User Name and Company nam
Customer Information Please enter your information User Name: MyName Company Name: MyCompany Install this application for:  Anyu O Only	n.		Information dialog is displayed. User Name and Company nam

	LABWORKS WebTop - InstallShield Wizard X	
	Setup Type Select the setup type to install.	
	Please select a setup type.	
	All program features will be installed. (Requires the most disk space.)	
	© *	Setup Type
	○ Cu <u>s</u> tom	dialog is
3	Select which program features you want installed. Recommended for advanced users.	displayed.
		Setup Type is specified.
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Select the Setup Type:	
	Complete: Web Install, System Admin Tools	
	Custom: Each piece can be selected separately.     Click 'Next'.	
		License file
	LABWORKS recommends copying the license file from the CD to a folder on your	copied from CD
4	network for easy access.	to folder on network.
4	Click 'Next' to proceed.	network.
		Installation of
		LABWORKS
5		Services dialog is displayed.
		uispiayeu.
		LABWORKS
		services to
		install specified.

	LABWORKS WebTop - InstallShield Wizard X	
	Setup Type	
	Select the setup type that best suits your needs.	
	Select the features you want to install, and deselect the features you do not want to install. Click Next to continue.	
	LABWORKS License Service	
	LABWORKS Data Service	
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	For installation of LWLicense Service on same machine check the option 'LWLicense Service'. If you want to install the LWLicenseServices on different machine uncheck the option. In most configurations, the LWLicenseServices install done during the Desktop Server install will satisfy the requirement for one instance of the LWLicenseServices running on the network.	
	For installation of LW Data Service on same machine check the option 'LW Data Service'. If you want to install the LWDataServices on different machine uncheck the option. In most configurations, the LWDataServices install done during the Desktop Server install will satisfy the requirement for one instance of the LWDataServices running on the network.	
	Click 'Next'to continue.	
Instal	lation of LW License Service	
6	The Server setup launches separate LWLicenseServices setup program, and the welcome screen appears with brief instructions.	The Welcome to the InstallShield Wizard for LABWORKS License Service dialog opens.

LABWORKS License Services - InstallShield Wizard X	
Welcome to the InstallShield Wizard for         Low of the InstallShield Wizard will install LABWORKS License         Services on your computer. To continue, dick Next.	
< Back Next > Cancel	
Click 'Next' to continue	
LABWORKS License Services - InstallShield Wizard       ×         Customer Information       V         Please enter your information.       V	
User Name:	
MyName	The Customer
Company Name:	Information dialog is
7	displayed.
Install this application for:	User Name and
Anyone who uses this computer (all users)	Company Name
Only for me (MyName)	is specified.
InstallShield	
< Back Next > Cancel	
Enter your User Name and Company Name.	
Click 'Next' to continue.	

	LABWORKS License Services - InstallShield Wizard X		
	Ready to Install the Program The wizard is ready to begin installation.		
	Click Install to begin the installation.		
	If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.		
8	the wizard.		The Ready to Install the Program dialog is displayed.
			The installation proceeds.
	InstallShield		
	< Back Install Cancel		
	Click 'Install' to begin the installation.		
	LABWORKS License Services - InstallShield Wizard	]	
	<b>QLABWORKS</b> InstallShield Wizard Complete	When	
		the	
	The InstallShield Wizard has successfully installed LABWORKS License Services. Click Finish to exit the wizard.		
9			The InstallShield Wizard Complete dialog is displayed.
			The installation
			is complete.
	< <u>B</u> ack <b>Finish</b> Cancel		
	installation is complete, click 'Finish' to exit.	_	
10	For installation of the LWLicenseServices on different machine run		If applicable, the LWLicenseServic
	LWLicenseServices.exe from the CD on desired machine.		es.exe is run on

		a different machine.		
Installation of LW Data Service				
11	The Server setup launches separate LWDataServices setup program, and the welcome screen appears with brief instructions.	The Welcome to the InstallShield Wizard for LABWORKS Data Service dialog opens.		
12	LABWORKSDataServices - InstallShield Wizard       X         Customer Information       Please enter your information.         User Name:       MyName         Company Name:       MyCompany!         Install this application for: <ul> <li>Only for me (MyName)</li> <li>InstallShield</li> <li></li></ul> <li> <li> <li>Anyone who uses this computer (all users)</li> <li>Only for me (MyName)</li> </li> </li>	The Customer Information dialog is displayed. User Name and Company Name is specified.		

	Enter your User Name and Company Name.	
	Click 'Next'to continue	
13	LABWORKSDataServices - InstallShield Wizard       ×         Ready to Install the Program       The wizard is ready to begin installation.         Click Install to begin the installation.       If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.         InstallShield          InstallShield          Click 'Install' to begin the installation.	The Ready to Install the Program dialog is displayed. The installation proceeds.
14	LABWORKSDataServices - InstallShield Wizard         InstallShield Wizard Complete         The InstallShield Wizard has successfully installed         LABWORKSD ataServices.         Click Finish to exit the wizard.	The InstallShield Wizard Complete dialog is displayed. The installation is complete.

	When the installation is complete, click 'Finish' to exit.	
15	For installation of the LWDataServices on different machine run LWDataServices.exe from the CD on desired machine.	If applicable, the LWDataServices. exe is run on a different machine.
	LABWORKS Webtop program resumes and is ready to install.	
	LABWORKS WebTop - InstallShield Wizard	
	Ready to Install the Program	
	The wizard is ready to begin installation.	
	Click Install to begin the installation.	
16	If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.	The Ready to Install the Program dialog is displayed.
		The installation proceeds.
	InstallShield	
	Click 'Install' to begin the installation.	

	LABWORKS WebTop - InstallShield	Wizard	
	<b>Q LABWORKS</b>	InstallShield Wizard Complete The InstallShield Wizard has successfully installed LABWORKS WebTop. Click Finish to exit the wizard.	
17			The InstallShield Wizard Complete dialog is displayed. The installation is complete.
		< <u>B</u> ack <b>Finish</b> Cancel	
	When the installation is com	pleted, click 'Finish' to exit.	

# Step 2: Modify ApplicationSpec.XML

The Webtop installation created the file 'ApplicationSpec.xml'. This file is used to configure the path to the license file.

Step	User Input	Action		Expected Results					
1	Image: State       Image: State		onSpec.xml' using notepad.	The ApplicationSpec. xml is opened.					
2	name of th In this exai ApplicationSpec.xi File_Edit_Format_ KAPPSETTINGS> <licens <appcon <lisessi <platfo< th=""><th>r the path the ne server e.g. mple, the We <sup>ml-Notepad</sup> View Help se_server LICENSE_FI JFIG REFRESH="TRUE"/ ONG LAUKCH_DELAYTM</th><th>E="1"/&gt; ="LABWORKS-TEST01"/&gt;</th><th>Path is entered.</th></platfo<></lisessi </appcon </licens 	r the path the ne server e.g. mple, the We <sup>ml-Notepad</sup> View Help se_server LICENSE_FI JFIG REFRESH="TRUE"/ ONG LAUKCH_DELAYTM	E="1"/> ="LABWORKS-TEST01"/>	Path is entered.					
3	(x86)\Labv	vorks\LWLice		Changes are completed.					
4	(x86)\Labv	(x86)\Labworks\LWLicenseServices (where the LWLicense Service is installed) and do the same changes as above. Also, open 'ApplicationSpec.xml' located at \Program Files (x86)\Labworks\LWDataServices (where the LWData Service is installed) and do the same changes as above.							
5	(x86)\Labv		from <lwexe> to \Program Files aServices (where the LWDataServices is installed) and perform pove.</lwexe>	File Copied					

## **Step 3: Database Scripts and Updatetool.exe**

Preparing the Existing Database

The LABWORKS Webtop and Desktop use the same database schema. The upgrades done in Step 4 of the Desktop are the same ones required to run the Webtop. No additional database changes are required.

# **Step 4: Configuring Folder Security**

After LABWORKS Webtop is installed on the server, there is configuration information that needs to be updated. There is a utility to do this. This utility requires folder permissions be configured so the necessary files can be updated.

Step	User Input/Action	Expected Results
1	For the folders, \inetpub\wwwroot\LWWebtop and \inetpub\wwwroot\LWSampleLoginService add the group "Authenticated Users"	The group 'Authenticated Users' is added.
2	Under Permissions for Authenticated Users, allow "Modify"	'Modify' is granted as Permissions for Authenticated Users.

1. Enable 32-bit Application in IIS.

Internet Information Services (II)	5) Manager									
😋 💿 🔯 🕨 LW-ALL1 🕨 App	lication Pools		🖬 🖂 🛐 I 🕢 🕶							
File View Help										
Connections Actions Actions										
🔍 - 🗔 🖄 😥		Advanced Settings	? 🗙							
Start Page	This page lets you view and manage the list of app									
E- 📲 LW-ALL1 (LW-ALL1\Administrato	associated with worker processes, contain one or r		¥4.0							
Application Pools	different applications.	Enable 32-Bit Applications	V4.0							
⊡ 🔂 Sites ⊕ 🚯 Default Web Site	Filter:		Integrated							
H W Derauk web site		Name	DefaultAppPool							
	Name A Status .NET Frame.	Oueue Length	1000							
	ASP.NET v4.0 Started v4.0	Start Automatically	True							
	ASP.NET v4.0 Cl Started v4.0 ASP.NET v4.0 De Started v4.0									
	Classic .NET App Started v4.0	Limit	0							
	DefaultAppPool Started v4.0	Limit Action	NoAction							
	EraukAppPoor Started V4.0	Limit Interval (minutes)	5							
		Processor Affinity Enabled	False							
		Processor Affinity Mask	4294967295							
		Process Model								
		Identity	ApplicationPoolIdentity							
		Idle Time-out (minutes)	20							
		Load User Profile	False							
		Maximum Worker Processes	1							
		Ping Enabled	True							
		Ping Maximum Response Time (second								
		Ping Period (seconds)	30							
		Shutdown Time Limit (seconds)	90							
		Startun Time Limit (seconds)	90							
		system, the worker process(es) serving	for an application pool on a 64-bit operating the application pool will be in WOW64 ses in WOW64 mode are 32-bit processes							
	•									
	Features View									
Ready			• <b>1</b> .:							

## **Step 5: Configure Web Applications**

The folders installed into the \inetpub\wwwroot\LWWebtop and \inetpub\wwwroot\LWSampleLoginServiceneeds to be converted to web applications.

Step	User Input/Action	n			Expected Results
1	applications.	e tool, "Internet Informa below the sterner of the	tion Services Mar	nager" to configure the	web Internet Information Services Manager is opened.

## 

Step	User Input/Action	Expected Results
2	Select LWWebtop and then right click to Convert the folder to an application.	LWWebtop is selected. Convert to Application is selected.
3	Add Application         Site name:       Default Web Site         Path:       /         Alias:       Application pool:         LWWebTop       DefaultAppPool         Example:       sales         Physical path:          C:\inetpub\wwwroot\LWWebTop          Pass-through authentication          Connect as       Test Settings         OK       Cancel	The Add Application dialog is displayed. The LWWebtop folder is converted to an application.
4	Repeat the same procedure for LWSampleLoginService         Add Application         Site name:       Default Web Site         Path:       /         Alias:       Application pool:         LWSampleLoginService:       DefaultAppPool         Example:       sales         Physical path:          C:\inetpub\wwwroot\LWSampleLoginService          Pass-through authentication          Connect as       Test Settings         OK       Cancel	The Add Application dialog is displayed. The LWSampleLoginService folder is converted to an application.

# Step 6: Gateway Administrator Setup

For steps 6 - 8 of the Webtop Instillation please refer to steps 5 - 14 of the Desktop Instillation.

### **Step 7: Configure the Database**

## **Step 8: Start the LWLicenseServices/LWDataServices**

#### Step 9: Logon

Http://localhost/lwwebtop/login.aspx

#### **Customer Logo:**

The logo in the top-left of the application can be replaced.

Replace the file: \inetpub\wwwroot\LWWebtop\images\customerlogo.jpg with an image of your choice. The image size is 200X54, but the program will also stretch/shrink to fit in the allowed space.

🖬 Start	CTFSPRJLWKS001 Tea	m Final 🛛 🗔 New tab		Web Explorer $ imes$	+		-	٥	$\times$
$\leftarrow$ $\rightarrow$ $\circlearrowright$ $\mid$ loc	calhost/lwwebtop/WEBEXPLC	RER/LWEXPMAIN.ASPX				□ ☆   =	1	٩	
labworks	1 8 ano								
•	First User			LABWORKS66					U
¼ Login 😐	Browse Data								Help
🔄 Explorer 🖃	Billing Rate	✓ From Date	3/29/2017 🛄 T	o Date 4/28/2017		✓ Report		S Re	afresh
Browse Data		Drag a column header here	to group by that column	1					
Results Entry 🛨									_
🕗 Help 🛨									
									_

# **Third Party Software**

If your LABWORKS Application includes Third Party Applications such as BarTender or Northwest Analytical Quality Analyst (NWA), then instructions for instillations for those products are provided with their respective products.

## **Appendices**

## **Appendix A – Planning and Definition Worksheet**

## **Desktop Server**

Computer Name			Domain Name			Ping By Name		Ping ByIPAddress	
IP Address				Ping from Client	Yes / N	0 )	Yes / No		
Server Reverse Loo	okup				Use Ping –a <ipado< td=""><td>lr&gt;</td><td></td><td></td></ipado<>	lr>			
IP Client		· ·							
Client Reverse Loo	kup				Use Ping –a <ipado< td=""><td>lr&gt;</td><td></td><td></td></ipado<>	lr>			
LABWORKS Server	Locat	ion (Loc1)							
Server Files UNC									
Server Files Local F	Path								
Base Files							User Folder		
User Files							Selec	tion	
SQC Files								<ul> <li>Domain ID</li> <li>LABWORKS ID</li> </ul>	
Temporary Files						Workstation ID			
LABWORKS LWPla	tform	Service Folde	er (Loc2)		[	□ None			

## **Desktop Client**

Computer Name			Domain				Ping By	Ping	
				Name				Name	ByIPAddress
IP Address						Ping from Server	Yes / No	Yes / No	
Client Reverse Loc	okup						Use Ping –a <ipadd< td=""><td>lr&gt;</td><td></td></ipadd<>	lr>	
IP Server									
Server Reverse Lookup							Use Ping –a <ipadd< td=""><td>lr&gt;</td><td></td></ipadd<>	lr>	
LABWORKS Client									

# Webtop Server

Computer Name	iter Name		Domain Name			Ping By Name	Ping ByIPAddress	
IP Address		•	•		Ping from Client		Yes / No	Yes / No
Reverse Lookup					Use	Ping –a <ipaddr></ipaddr>		

## Share and Permission

Permission function	Permission Name
Manager	
Advanced User	
User	
Special Requirements:	

## Appendix B – Server and Client Installation Check List

- □ Running LWServer.exe as the administrator to install required folder, server software, and client installation.
- □ Installation of LWLicenseServices
  - Install as part of the LWServer installation the LWLicenseServices.
- □ Installation of LWDataServices
  - Install as part of the LWServer installation the LWDataServices.
- CopyApplicationSpec.xmlfrom the server folder into the LWLicenseServices/LWDataServices folder License Path should be local drive to LWEXE folder.
- □ CopyClientApp.config the server folder into the LWDataServices folder.
- □ Edit the LABWORKS Server ApplicationSpec.xml to use UNC name for LICENSE\_SERVER LICENSE\_FILE\_PATH.
- □ Create Share and set share permission on the server folder.
- □ Set folder permission as required.
- □ Perform migration of the database to the current version as outlined in appendix D.
  - 6.1/6.2/6.3/6.4/6.5/6.6/6.7/6.8/6.8.5/6.9/6.10
    - Run the Microsoft/Oracle Script
    - Run the Update Tool
    - Run the Microsoft/Oracle Inventory Script If Required.
    - Run LWMigrationTool for Inventory If Required.
    - Run NGMigrationTool If Required.

If Your Current Version is: Then Run These Migrations	AuditTrail	CalcDefs	DMR * Optional	RltSpecs	Location Specs	Analysis Specs	Sample Specs	SIForm	Location Special Info	Analysis Special Info	Sample Special Info	MailList	Comments	LabObjects	Userhead	Result	AuditTrail Checksum	Violation Reorder	Chemical Inventory
6.0	Х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х	х		
6.1			х	х	х	х	х	х	х	х	х	х	х	х	х	х	х		
6.2												х	х	х	х	х	х		
6.3												х	х	х	х	х	х		
6.4,																		х	х
6.5,6.6,6.7,																			
6.8, 6.8.5,																			
6.9, 6.10																			

- Run the Gateway Administrator Tool.
- Configure folders required for LABWORKS.
- Configure the Database.
- Configure Database Authentication.
- Configure Global Database Availability.

- □ Start LWLicenseServices
- □ Start LWDataServices
- □ Run the ClientSetup.msi on each workstation that is to use LABWORKS

## **Appendix C – Webtop Check List**

- □ Run LWWebtop.exe.
- □ If database updates performed by Desktop Installation the database is current, else run the Update Tool.
- □ Configure folder security
- □ Configure Web Applications
- □ Configure Webtop Applicationspec.xml using the local drive notation.
- □ Run the Gateway Administrator Tool.
  - Set the folders for the Webtop
  - o Set the database connection
- □ Start LWLicenseServices
- □ Start LWDataServices

# Appendix D – LABWORKS database migration 6.0/6.1/6.2/6.3/6.4/6.5/6.6/6.7/6.8/6.8.5/6.9/6.10

- 1. Use the Database tools to run SQL script either, LWScripts-SQLServer.sql or LWScripts-Oracle.sql, depending on your database system.
- 2. Run all versions of the LWXXRelease.xsp that have not previously been run.
- 3. If upgrading from 6.0 to 6.6 then run the Updatetool.exe for Service Pack LW67Release.xsp. (Refer Appendix E)
- 4. If upgrading from 6.0 to 6.7 then run the Updatetool.exe for Service Pack LW68Release.xsp. (Refer Appendix E)
- 5. If upgrading from 6.0 to 6.8 then run the Updatetool.exe for Service Pack LW69Release.xsp. (Refer Appendix E)
- 6. If upgrading from 6.0 to 6.9 then run the Updatetool.exe for Service Pack LW610Release.xsp. (Refer Appendix E)
- 7. LWMigrationTool.exe may need to be run.
- 8. NGMigrationTool.exe may need to be run.

## Appendix E – LABWORKS Update Tool

#### **Running the Update Tool**

Step	User Input/Action	Expected Results
1	Select your database type, SQL or Oracle.	Database is selected.

Step	User Input/Action	Expected Results
	Q LABWORKS Update Tool     Database   Oracle   Oracle   Database Owner Username   LABWORKS   Database Password   ***   LABWORKS User ID   LABWORKS   Service Pack   Wo 10Release.xsp   Connect   Analyze   Close	
2	Enter the database owner, likely dbo for SQL, and the schema owner for Oracle. New tables will be created under this owner.	Database owner entered.
3	Enter the database connection Password.	Database connection password entered.
4	Enter the database connection User ID.	Database connection User ID entered.
	Select the Service pack. All LWXXRelease.xsp files not previously applied are required. They should be run in release order, 6.7, 6.8, 6.9, 6.10.	
5	LW62DMRRelease.xsp, I18NTables.xsp, LWOPC.xsp are service packs for optional software.	Service pack selected and run.
	Update the database to latest LABWORKS Desktop format. The service pack I18NTables .xsp is used to add addition languages strings to the LABWORKS database and is used only if needed for multi-language sites.	1011.
	Press the Connect button to create a connection to the database.	Connection
6	• For Oracle databases, select the Microsoft OLEDB Provider for Oracle provider and click 'Next'. Enter your Oracle service name as the server name, database connection username and password. Press 'Test Connection' to confirm the connection.	to the database is established.

Step	User Input/Action	Expected Results
	Provider Connection Advanced All Select the data you want to connect to:   OLE DB Provider(s)   Microsoft Jet 3.51 OLE DB Provider   Microsoft OLE DB Provider for Analysis Services 9.0   Microsoft OLE DB Provider for Analysis Services 9.0   Microsoft OLE DB Provider for DTS Packages   Microsoft OLE DB Provider for Indexing Service   Microsoft OLE DB Provider for ODBC Drivers   Microsoft OLE DB Provider for Search   Microsoft OLE DB Provider for Search	
	Enter your Oracle service name as the server name, database connection username and password. Click Test Connection to confirm the connections.	
	<ul> <li>For SQL Server databases, select the Microsoft OLEDB Provider for SQL Server provider and click 'Next'.</li> <li> <b>Data Link Properties Provider</b> Connection Advanced All         <b>Select</b> the data you want to connect to:         <b>OLE DB Provider(s) Microsoft Jet 3.51 OLE DB Provider Microsoft Jet 3.51 OLE DB Provider Microsoft Jet 3.51 OLE DB Provider Microsoft OLE DB Provider for Cala Mining Services 9.0 Microsoft OLE DB Provider for Data Mining Services Microsoft OLE DB Provider for Total Mining Services Microsoft OLE DB Provider for ODBC Drivers Microsoft OLE DB Provider for ODBC Drivers Microsoft OLE DB Provider for OLAP Services 8.0 Microsoft OLE DB Provider for Search Microsoft OLE DB Provider for</b></li></ul>	

Step	User Input/Action	Expected Results
	Enter your SQL Server name, database connection username and password, and the database name. Press 'Test Connection' to confirm the connection.	
	Data Link Properties     Provider     Connection     Advanced     All     Specify the following to connect to SQL Server data:     1. Select or enter a server name:     mysqlserver     Refresh     2. Enter information to log on to the server:     Use Windows NT Integrated security          • Use r name:     Indownorks   Password:     Indownorks     Indownorks	
7	After the database connection is tested, press 'Analyze' to have the program identify the database modifications required.	Database modifications are identified. Changes are applied.

If an error is encountered, the step that was unsuccessful appears in red. Clicking on the error message displays details about the error.	Step	User Input/Action	Expected Results
I I I DA ARRONS MUST DA CORRECTAR DRIOR TO CONTINUING		Table : Status : Success         Table : Success         Table : Status : S	