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# LABWORKS LIMS v7.0

**Installation Guide** 

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#### LABWORKS LIMS v7.0 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	Folder permission required					
		LABWORKS	LABWORKS	LABWORKS	Admin.	
	Folder	Users	Super User	Managers	Account	
1	(Loc2) LWLicenseServices Location	N/A	N/A	N/A	Full	
2	(Loc3) LWDataServices Location	N/A	N/A	N/A	Full	
3	(Loc1)\LWEXE (Server Files)	RX	RX	RX	Full	
					Control	
4	(Loc1)\LWEXE\syscfg <mark>(Server Files)</mark>	RX	RX	RWXD	Full Control	
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	
		LABWORKS	LABWORKS	LABWORKS	Admin.	
	Folder	Users	Super User	Managers	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	
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
  - o 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.
  - 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  $\rightarrow$  Programs  $\rightarrow$  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.

ep	User Input/Action	Expected Results
	Right click on the LWServer.exe program.         Select 'Run as administrator' to install.         Note: Microsoft .Net Full Framework 4.7.2 is required.	
	File     Home     Share     View     Manage     V< 👔	
	← → < ↑ 🔤 « LIMS (\\dtp302) (F:) > LABWORKS 6.6 Setups > LWInstaller.6.8.0.5 v ♂ ⊘ Search LWInstaller.6 P	Windows
	Mame       Date modified       Type       Size         Desktop       ISSetupPrerequisites       7/6/2017 10:38 AM       File folder         Downloads       Mame       7/6/2017 10:38 AM       File folder         Autorun.inf       7/6/2017 10:38 AM       Setup Information       1 KB         WebHelp       7/6/2017 10:38 AM       Application       5,063 KB         Wuickascers       7/6/2017 10:38 AM       Application       4,163 KB         WebVer.exe       7/6/2017 10:37 AM       Application       224,952 KB         WindowsInstaller-KB893803-x86.exe       7/6/2017 10:37 AM       Application       2,525 KB	installer initiates the installation from the Setup program.
	7 items 1 item selected 219 MB	
	LABWORKS Server - InstallShield Wizard       ×         Image: Comparison of the installShield wizard for LABWORKS Server       Welcome to the InstallShield Wizard for LABWORKS Server on your computer. To continue, click Next.	
	< <u>B</u> ack <u>Next</u> Cancel	
	Click 'Next'	

	LABWORKS Server - InstallShield Wizard X	
	Customer Information	
	Please enter your information.	
	User Name:	
	MvName	
		Customer
	Company Name:	Information
	MyCompany	dialog is
2	Install this application for	displayed.
		User Name and
	Anyone who uses this computer (all users)	Company name
	○ Only for <u>m</u> e (MyName)	is entered.
	InstallShield	
	Consul	
	< <u>Dack</u> <u>Next</u> Cancel	
	Enter Liser Name and Company Name	
	Click 'Next'.	
	LABWORKS Server - Installshield Wizard X	
	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
2		dialog is
3	advanced users.	displayed.
		specified.
		specifical
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Select the Setur Tyree	
	Complete: Created Client Install System Admin Tools, New Database	
	<ul> <li>Custom: Each piece can be selected separately.</li> </ul>	
	CIICK INEXL.	

<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 fold 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>	er ler d
LABWORKS Server - InstallShield Wizard	
Choose Destination Location	
Specify a folder for the application.	Choose Destination Location dialog is displayed.
Browse	Destination folder is specified.
InstallShield	
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 structu 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 o 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 LABWORK Desktop they are saved in the new format and cannot be used with previous versions LABWORKS.	ure f <s of</s 

	LABWORKS Server - InstallShield Wizard X	
	Choose Destination Location	
	Specify a folder for new Database.	
	C:\LABWORKS\LWDATA	
	Desures	
	DLOWSE	
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Click (Next' to continue	
	LABWORKS Server - InstallShield Wizard	
	License file path	
	Enter License file path	
	C. LIDWORD FIVE/L	License file path dialog is
5	Browse	displayed.
C		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 he 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	Click 'Next' to proceed	to folder on
		network.

	InstallShield Wizard X	
	Installation of LABWORKS Services	
	Select the services to install on this machine.	
7	InstallShield < <u>Back</u> Next > Cancel	Installation of LABWORKS Services dialog is displayed. LABWORKS services to install specified.
	<ul> <li>For installation of LABWORKS License Service on same machine check the option</li> <li>'LABWORKS License Service'. If you want to install the 'LWLicenseServices' on different</li> <li>machine uncheck the option.</li> <li>For installation of 'LABWORKS Data Service' on same machine check the option</li> <li>'LABWORKS Data Service'. If you want to install the 'LWDataServices' on different</li> <li>machine uncheck the option.</li> <li>Click 'Next 'to continue.</li> <li>Note: If LWLicenseServices/LWDataServices is not being installed, proceed to Step 18.</li> </ul>	
Instal	lation of LW License Service	
8	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 LBWORKS License Services         The InstallShield Wizard will install LABWORKS License Services on your computer. To continue, dick Next.	
	<pre></pre>	
	LABWORKS License Services - InstallShield Wizard X Customer Information Please enter your information.	
	User Name:	
	MyName	The Customer
	Company Name:	Information
	MyCompany	dialog is
9	Install this application for:	displayed.
	Anyone who uses this computer (all users)	Company Name
	Only for me (MyName)	is specified.
	< Back Next > Cancel	
	Enter your User Name and Company Name. Click 'Next' to continue.	

	LABWORKS License Services - InstallShield Wizard	
	Ready to Install the Program	
	The wizard is ready to begin installation.	
	Officie la stall de la stalla de la stalla d'au	
	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 Deedute
		Ine Ready to
		Program dialog
10		is displayed.
		The installation
		proceeds.
	InstallShield	
	< Back Install Cancel	
	Click 'Install' to begin the installation.	
	LABWORKS License Services - InstallShield Wizard	
	The InstallShield Wizard has successfully installed	
	LABWURKS License Services. Click Finish to exit the wizard.	
		The
		InstallShield
		Wizard
11		dialog is
		displayed.
		The installation
		is complete.
	< Back Finish Cancel	
	When the installation is complete, click 'Finish' to exit.	

12	For installation of the LWLicen from the CD on desired machir	If applicable, LWLicenseServi ces installed on a different machine.	
Instal	lation of LW Data Service		
	The Server setup launches sepa screen appears with brief instr LABWORKSDataServices - InstallShie	arate LWDataServices setup program, and the welcome fuctions.	
13	Click 'Next' to continue.	Welcome to the InstallShield Wizard for LABWORKSDataServices         The InstallShield Wizard will install         .ABWORKSDataServices on your computer. To continue, dick Next.             < Back	The Welcome to the InstallShield Wizard for LABWORKS Data Service dialog opens.
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	
	< Back Next > Cancel	
	Enter your User Name and Company Name. Click 'Next' to continue	
	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 Ready to
	the wizard.	Install the
		Program dialog
15		is displayed.
		The installation
		proceeds.
	InstallShield	
	< Back Install Cancel	
	Click 'Install' to begin the installation.	
16		The InstallShield
I	1	

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

	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, click Back. Click Cancel to	
	exit the wizard.	
	InstallShield	
	< <u>Back</u> Install Cancel	
	Click (Install' to begin the installation	
	ABWORKS Server - InstallShield Wizard	
	<b>ULABWORKS</b> InstallShield Wizard Complete	
	The InstallShield Wizard has successfully installed	
	LABWORKS Server. Click Finish to exit the wizard.	
		The
		InstallShield
		Wizard
10		Complete
19		dialog is
		displayed.
		The installation
		is complete.
	z Rack Finish Cancel	
	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

#### A. Create pluggable database-

- 1. Launch "Database Configuration Assistant" application as an administrator.
- 2. Select "Create a database" option.

Database Configuration Assis	tant - Application - Step 1 of 14	
elect Database Operatio		<b>9</b> Database
Database Operation	Select the operation that you want	to perform.
Creation Mode	<u>Create a database</u>	
Deployment Type	Configure an existing database	
Database Identification		
Storage Option		
Fast Recovery Option	Manage Riuggable databases	
Configuration Options		mananament
Management Options	O Oracle RAC database instance	management
User Credentials		
Creation Option		
Summary		
Progress Page		
Finish		
Help		< Back Next > Finish Cance
Help		< <u>Back</u> <u>N</u> ext> <u>Finish</u> Cancel
Help Database Configuration Assis	tant - Create a database - Step 2 of 14	< <u>Back</u> <u>N</u> ext> <u>Einish</u> Cancel
Help	tant - Create a database - Step 2 of 14	< <u>Back</u> <u>Next&gt;</u> Einish Cancel
Database Configuration Assis	tant - Create a database - Step 2 of 14	< <u>Back</u> <u>Next&gt;</u> <u>Einish</u> <u>Cancel</u> - <b>&gt;</b> <b>19°</b> <del>CRACLE</del> Database
Help Database Configuration Assis lect Database Creation Database Operation	tant - Create a database - Step 2 of 14 Mode	<pre>&lt; Back Next&gt; Einish Cancel -</pre>
Database Configuration Assis Hect Database Creation Database Operation Creation Mode	tant - Create a database - Step 2 of 14 Mode  Jupical configuration Global database name:	< <u>Back</u> <u>Mext&gt;</u> <u>Einish</u> <u>Cancel</u> 
Help Database Configuration Assis Ilect Database Creation Database Operation Creation Mode Deployment Type	tant - Create a database - Step 2 of 14  Mode	<u>ABack Next&gt; Einish Cancel</u> -     -       -     -       19° ORACLE       Database
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	tant - Create a database - Step 2 of 14 Mode	< Back       Next>       Einish       Cancel         -
tep Database Configuration Assis  Lect Database Creation Database Operation Creation Mode Deployment Type Database Identification Storage Option Fast Recovery Option Database Options Configuration Options Management Options	tant - Create a database - Step 2 of 14 Mode	< <p>Einish Cancel Cancel Igc Create Igc Crea</p>
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telp Database Configuration Assis Cect Database Creation Database Operation Creation Mode Deployment Type Database Identification Storage Option Fast Recovery Option Database Options Configuration Options Management Options User Credentials Creation Option Summary Progress Page	tant - Create a database - Step 2 of 14  Total Create a database - Step 2 of 14  Output Outpu	< Back
Help Database Configuration Assis Cect Database Creation Database Operation Creation Mode Deployment Type Database Identification Storage Option Fast Recovery Option Database Options Configuration Options User Credentials Creation Option Summary Progress Page Finish	tant - Create a database - Step 2 of 14  Mode	< Back
Help Database Configuration Assis Database Configuration Assis Detect Database Creation Database Operation Creation Mode Deployment Type Database Identification Database Identification Database Option Datab	tant - Create a database - Step 2 of 14  Mode	< Back       Yext>       Enish       Cancel         -
Help Database Configuration Assis Database Configuration Assis Detect Database Creation Database Operation Creation Mode Deployment Type Database Identification Storage Option Fast Recovery Option Fast Recovery Option Fast Recovery Option Configuration Options Management Options User Credentials Creation Option User Credentials Creation Option Summary Progress Page Finish	tant - Create a database - Step 2 of 14  Tode	< Back     Next>     Enish     Cancel       -     -     -     -       19: Creace     Database         LABWORKS70.GALAXY.IN         File System         {ORACLE_BASE}\oradata\{DB_UNIQUE_NAME}   Browse       {ORACLE_BASE}\fast_recovery_area\{DB_UNIQUE_NAME}   Browse       AL32UTF8 - Unicode UTF-8 Universal character set         ••••••         ••••••
Help Database Configuration Assis Elect Database Creation Database Operation Database Operation Creation Mode Deployment Type Database Identification Storage Option Fast Recovery Option Database Options Configuration Options Configuration Options User Credentials Creation Option Summary Progress Page Finish	tant - Create a database - Step 2 of 14  Mode	< Back
telp  Database Configuration Assis  Lect Database Creation  Database Operation  Creation Mode  Deployment Type Database Identification Storage Option Fast Recovery Option Database Options Configuration Options Management Options User Credentials Creation Option Summary Progress Page Finish	tant - Create a database - Step 2 of 14  Mode	< Back

3. Click Next and Finish.

4. Start the sqlplus prompt and Log in as sys in the role of sysdba

```
Enter user-name: sys as sysdba
Enter password:
```

5. Make sure the pluggable database has an open mode of read write

```
SQL> select name,open_mode from v$pdbs;
NAME
OPEN_MODE
------
PDB$SEED
READ ONLY
LABWVORKS70PDB
READ WRITE
```

6. Make sure the pluggable database stays in read write mode next time you open it

```
SQL> alter pluggable database LABWORKS70PDB save state;
```

Pluggable database altered.

7. Check the status of the database using the command prompt directly

C:\WINDOWS\system32>lsnrctl status

```
Service " LABWORKS70;GALAXY.IN" has 1 instance(s).
Instance "LABWORKS70 status READY, has 1 handler(s) for this service...
Service LABWORKS70XDB,GALAXY.IN" has 1 instance(s).
Instance "LABWORKS70", status READY, has 1 handler(s) for this service...
Service " LABWORKS70PDB,GALAXY.IN" has 1 instance(s).
Instance "LABWORKS70", status READY, has 1 handler(s) for this service...
```

- 8. In the status we can see that "LABWORKS70PDB.GALAXY.IN" service has instance name as "LABWORKS70".
- 9. Connect to your new pluggable database. As we need to connect to the pluggable database, we need to use the instance name



- B. Create a user/schema named "LABWORKS"
- 1. Login into sqlplus with sys or system dba user then execute the following script for creating LABWORKS Schema.
- 2. 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

- 3. 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:\ imp LABWORKS/password@ORADB file=labworks65.dmp analyze=y FROMUSER=LABWORKS TOUSER=LABWORKS GRANTS=NO log=myerror.log
- 5. 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

/

6. 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 19c**

When using Oracle 19c version, follow these steps:

- Run the command ALTER SYSTEM SET SEC\_CASE\_SENSITIVE\_LOGON = FALSE in the Oracle database.
- Change a password for existing users.
- Make sure that PASSWORD\_VERSIONS are compatible with 19c.
  - 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	EXPIRED & LOCKED EXPIRED & LOCKED	11G 12C 11G 12C
DRACLE_OCM	EXPIRED & LOCKED	11G 12C
SYSDG SPATIAL_CSW_ADMIN_USR	EXPIRED & LOCKED EXPIRED & LOCKED	11G 12C 11G 12C
LABWORKS	OPEN	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.

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

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.          IABWORKS Gateway Administrator         Image Password         Image Password	LABWORKS Gateway Administrato r message appears prompting you to enter Gateway Administrato r Password.
	Set Gateway Administrator Password X Friter old password Enter new password Confirm new password Cancel 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'.	Gateway Administrato r Password is entered. Gateway Administrato r Password is changed.



Step	User Input/Action	Expected Results
		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 Selection window appears. Data Files path is specified.
	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:	
7	Clicknext to the License Path field.	The Client Program Path Selection window appears. The path to the License

Step	User Input/Action	Expected Results
	Browse for Folder × Data Path Selection C:\LABWORKS\LWEXE Cient LUWDATA LWDATA LWUSER Other Stuff LABWORKS Images Logs This is the path to the License file.	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	Results
	OK Cancel	
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 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. User Verdows User Setting Folder (Default) User Verdows User Setting Folder (Default) Use Verdows User Setting Folder (Default) 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>	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	Expe cted Resul ts
1	Open the file 'ApplicationSpec.xml' using notepad.	The Appli catio nSpe c.xml is open ed.



User Input/Action	l ( l
(x86)\Labworks\LWLicenseServices and \Program Files (x86)\Labworks\LWDataServices.	
For using SOL Server database with LABWORKS.	
Microsoft SQL ADO is the default connect string for Database Type SQL Server	
Data Paths Database Authentication	
Database type	
TLS Support MSOLEDBSQL	
Note: If you require TLS 1.2 Support, check "TLS Support MSOLDEDBSQL"	
1) In LWSYSCFG, check "TLS Support MSOLEDBSQL"	
<ul> <li>Image: SQL Server - Database connect string</li> <li>O Dracle - Database connect string</li> <li>✓ TLS Support MSOLEDBSQL</li> </ul>	
<ul> <li>2) Install following drivers on the workstation : <ul> <li>i) MSOLEDBSQL (Used by .net applications)</li> <li>a. <a href="https://www.microsoft.com/en-us/download/details.aspx?id=56730">https://www.microsoft.com/en-us/download/details.aspx?id=56730</a></li> <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-us/download/details.aspx?id=56567">https://www.microsoft.com/en-us/download/details.aspx?id=56730</a></li> <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-us/download/details.aspx?id=56567">https://www.microsoft.com/en-us/download/details.aspx?id=56567</a></li> </ul> </li> <li>For using Oracle OLEDB Driver with LABWORKS:</li> <li>Prerequisite: Oracle Client 32 Bit, must include OLEDB Driver</li> <li>Configuration</li> <li>Using LWSysconfig select Oracle OleDBORA.Oracle Connect String</li> </ul>	
Data Paths Database Authentication	
Database type	
○ SQL Server - Database connect string <ul> <li>Oracle - Database connect string</li> </ul>	
Microsoft MSDA0RA	
Oracle OleDBORA.Oracle	




# Step 7: Configure Service Security Mode as Transport

LABWORKS services (LWLicenseService and LWDataServices) has Security Mode as 'None' by default.

Follow below steps to configure LABWORKS services security mode to 'Transport':-

Step	User Input/Actio	n					Expected Results
	Open the file 'ApplicationSpec.xml' using notepad.					The	
		•				ApplicationSpec.x	
	_   🛃 🚽 =   C:\LABWO	RKS\LWEXE		-			ml is opened
	File Home Share	View			~ 🕐		in is opened.
	$\leftarrow \rightarrow \checkmark \uparrow$ , This	PC > Local Disk (C:) > LABWORKS > LWEXE		✓ Ö Search LWEX	e ,o		
	A Quick access	Name	Date modified	Туре	Size		
	Deskton	Server	5/10/2017 12:15 PM	File folder			
	Downloads	syscfg	5/10/2017 12:15 PM	File folder			
	Documents 🖈	Updates	5/10/2017 12:15 PM	File folder			
	Pictures 🖈	ApplicationSpec.xml	5/10/2017 12:15 PM	XML Document	1 KB		
1	Sources 🖈	P 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	Visual Basic User	8 KB		
			3/30/2016 8:22 PM	MDB File	8,132 KB		
	This PC	2 LWReporting vsd	3/20/2017 7:54 AIVI 3/30/2016 8:22 PM	XML Document	8 KB		
	Desktop	mcinstr6.lst	5/9/2017 6:57 AM	MASM Listing	3 KB		
	Documents	scinstr6.lst	5/9/2017 6:57 AM	MASM Listing	4 KB		
	Downloads	Upgrade LABWORKS Client.bat	5/4/2017 4:36 AM	Windows Batch File	1 KB		
	Music	🚭 vcredist_x86.exe	5/9/2017 8:22 AM	Application	2,682 KB		
	17 items 1 item selected 2	230 bytes State: 🎎 Shared					
	Enter the Securit	y mode as 'Transport' in Ap	plicationSpe	c.xml		~	Security Mode is entered.
	File Edit Format	.xmi - Notepad View Help		_			
2	<ul> <li></li> <li><td>NSE_SERVER LICENSE_FILE DNFIG REFRESH="TRUE"/&gt; SION6 LAUNCH_DELAYTIME=" CORM_SERVER_PATH PATH="I LE_HOME HOME="Oracle in n_Page Flavor="Process", (SUMVERSION VALUE="1"/&gt; RITY MODE="Transport"/&gt; RITY MODE="Transport"/&gt;</td><td>_PATH="C:\L "40"/&gt; DTP218"/&gt; OraClient1 /&gt; rks/LWEXE an icenseService DataServices.</td><td>ABWORKS\LWE) 2Home1_32bi nd place it in es</td><td>KE\"/&gt; t"/&gt;</td><td>ders-</td><td></td></li></ul>	NSE_SERVER LICENSE_FILE DNFIG REFRESH="TRUE"/> SION6 LAUNCH_DELAYTIME=" CORM_SERVER_PATH PATH="I LE_HOME HOME="Oracle in n_Page Flavor="Process", (SUMVERSION VALUE="1"/> RITY MODE="Transport"/> RITY MODE="Transport"/>	_PATH="C:\L "40"/> DTP218"/> OraClient1 /> rks/LWEXE an icenseService DataServices.	ABWORKS\LWE) 2Home1_32bi nd place it in es	KE\"/> t"/>	ders-	
	\LABWORKS\LWEXE\Server						
	<ul> <li>\LABWOI</li> </ul>	RKS\Client					

Step	User Input/Action	Expected Results
	Open the file 'BindingApp.config' using notepad from \LABWORKS\Client.	Security Mode is
	Enter the Security mode as 'Transport' in BindingApp.config	entered in
	🗐 BindingApp.config - Notepad — 🗆 🗙	BindingApp.config
	<u>F</u> ile <u>E</u> dit F <u>o</u> rmat <u>V</u> iew <u>H</u> elp	
3	 <nettcpbinding> <binding 00:10:00"="" closetimeout="00:01:00" hostnamecomparis<br="" name="netTCPBindingConfig" opentimeout="00&lt;br&gt;receiveTimeout=" sendtimeout="00:10:00">maxBufferPoolSize="2147483647" maxReceivedMessageSize="2147483647" <readerquotas maxarrayl<br="" maxdepth="32" maxstringcontentlength="2147483647"><security mode="Transport"></security> </readerquotas></binding> <binding closetimeout="00:10:00" name="netTCPBindingConfig_Sample" opentime<br="">receiveTimeout="00:30:00" sendTimeout="00:10:00" hostNameComparis maxBufferPoolSize="2147483647" maxReceivedMessageSize="2147483647" <readerquotas maxarrayl<br="" maxdepth="32" maxstringcontentlength="2147483647"><security mode="Transport"></security> </readerquotas></binding>        </nettcpbinding>	
	\LABWORKS\Client	
	Open the file 'LWLicenseServices64.exe.config' using notepad from \Program Files (x86)\Labworks\LWLicenseServices. Enter the Security mode as 'Transport' for 'netTCPBindingConfig' in LWLicenseServices64.exe.config	Security Mode is entered in LWLicenseService s64.exe.config.
	🔲 LWLicenseServices64.exe.config - Notepad — 🗆 🗙	
4	Elle       Edit       Format       View       Help           ^             ^  <	
	<pre><binding closetimeout="00:20:00" name="netTCPBindingConfig" opentimeout<="" td=""><td></td></binding></pre>	
	<pre>  <pre> </pre> </pre>	
5	Open the file 'LWDataServices64.exe.config' using notepad from \Program Files	Security Mode is
	(x86)\Labworks\LWDataServices.	entered in
	Enter the Security mode as 'Transport' for 'netTCPBindingConfig' and 'netTCPBindingConfig_Sample' in LWDataServices64.exe.config	4.exe.config.

Step	User Input/Action	Expected Results
	🔳 LWDataServices64.exe.config - Notepad — 🗆 🗙	
	<u>F</u> ile <u>E</u> dit F <u>o</u> rmat <u>V</u> iew <u>H</u> elp	
	<pre><nettcpbinding></nettcpbinding></pre>	
	<pre><binding 2147483647"="" <security="" closelimeout="00:01:00" m="" maxstringcontentlength="2147483647" mode="Transport" name="netltPBindingLonfig" openiimeout="04 &lt;readerQuotas maxDepth="></binding></pre>	
	<pre><binding <readerquotas="" <security="" closelimeout="00:10:00" maxarrayl="" maxdepth="32" maxstringcontentlength="2147483647" mode="Transport" name="net[CPBindingConfig_Sample" openlime=""></binding></pre>	
	< >>	
6	Restart LWLicenceServices and LWDataServices	

# **Step 8: FIPS Compliance**

Step	User Input/Action	Expected Results
1	Enable FIPS on Client Machine	
2	For FIPS Compliant Installation (supported in LABWORKS version 6.10 onwards): In ApplicationSpec.xml, add CHECKSUMVERION CHECKSUMVERSION VALUE="1" for Non-FIPS compliant installation. (default value) CHECKSUMVERSION VALUE="2" for FIPS compliant installation.	Path is entered.

Step	User Input/Action	Expected Results
	ApplicationSpec.xml - Notepad <u>File Edit Format View Help</u> <appsettings> <license_server license_file_path="C:\LABWORKS\LWEXE\"></license_server> <appconfig refresh="TRUE"></appconfig> <lsession6 launch_delaytime="40"></lsession6> <platform_server_path path="LABWORKS-TEST01"></platform_server_path> <login_page flavor="Process"></login_page> <checksumversion value="2"></checksumversion> </appsettings>	
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.
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= 'XXXXXXXXXX'	
8	Start LWDataServices. Start LWLicenseServices. Start LWDesktop. Open System Manager, change CHECKSUMVERSION = 2 and save the changes.	

# **Step 9: 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 on Service Controller	
	PS Service	
	Service status Service and Controllers database mismatched. Service connection information User name: Analyst First User Database: LABWORKS_68_1	EST
3	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. Click Generate config file button. LABWORKS Service Connection Configuration - × LABWORKS user name LABWORKS password LABWORKS database CUSTOMER_NUTRA Platform Server path Generate config file Select path to save config file:	

Step	User Inp	put/Action I	Expected Results
		Browse For Folder X	
		LABWORKS Service Configuration File Dialog	
		Desktop   This PC   This PC   Libraries   Network   Searce Control Panel   Recycle Bin	
5	Cop <sup>.</sup> (x86	by 'LWServiceConfig.xml' from above selected location to \Program Files 6)\Labworks\LWDataServices (where the LWDataService is installed)	
6	Rest	tart LWDataServices	

# **Step 10: 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>File</u> 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 user name       Image: Oracle - Database connect string         Sa       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         Database user name       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       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.
- 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 11: 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.

💂 LABWORKS Gateway Adm	inistrator	
<u>F</u> ile Edit Tools <u>H</u> elp		
🞯 🔒 🗙 🐰 🖻 🖺 🖻		
PRODUCTION		
Folder Items ×	Data Paths Database Authentication	
B B DEMO B PRODUCTION B Users	C LABWORKS C LABWORKS C Unit 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. -OR- Uncheck the Single Sign-on check box to have the user enter his/her user name and password at logon.	Single Sign-on check box enabled or disabled, depending on environment.
4	<ul> <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>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 Administrator for the database you just configured.

# Step 12: 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 Admin	strator	
<u>F</u> ile Edit Tools <u>H</u> elp		
💕 🖪 🗙 🐰 🖻 🖨 🖻		
Users		
Folder Items X Global Setting DEMO POP PRODUCTION B-S FjeldsPA	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.

### Step 13: 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 14: 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++ 2005 redistributable (**vcredist\_x86.exe**) for following versions:

This file can be found in the \LWEXE folder.

**Note:** Client Install Prerequisite: Crystal Report XI (**CrystalXIRDC.msi**) for following version:

Crystal Report XI.

This file can be found in the \LWEXE folder.

**Note:** Client Install Prerequisite: Crystal Report Runtime (**CR13SP28MSI32\_0-10010309.msi**) for following version:

Crystal Report 2013 Runtime for 32 bit.

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.

Stop	User Input/Action	
Step		
		The
	On each workstation that you wish to run LABWORKS access the server where you installed LABWORKS and open the LABWORKS application folder and select ClientSetup.msi.	Welcome to
		the
1		InstallShield
1		for
		LABWORKS
		Client is
		displayed.

Step	User Input/Action		Expected Results
	🛃 LABWORKS Client - InstallShie	ld Wizard X	
	<b>Q LABWORKS</b>	Welcome to the InstallShield Wizard for LABWORKS Client The InstallShield(R) Wizard will install LABWORKS Client on your computer. To continue, dick Next.	
		< <u>B</u> ack <u>N</u> ext > Cancel	
	Click 'Next'.		
2	LABWORKS Client - InstallShi Customer Information Please enter your information. User Name: MyName Organization: MyCompany InstallShield Enter your Name and Comp Click 'Next'to continue.	ield Wizard	Customer Information dialog is displayed. User Name and Company name is entered.
3			Destination Folder dialog is displayed.

Step	User Input/Action	Expected Results
	Habworks Client - InstallShield Wizard X	Destination
	Destination Folder	folder is
	Click Next to install to this folder, or click Change to install to a different folder.	changed if
		required.
	Install LABWORKS Client to: C:\/ ABWORKS\Client\	
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Click 'Change' if the location of the client software is to anywhere other than the default	
	location.	
	Once specified, there to proceed.	
	🛃 LABWORKS Client - InstallShield Wizard	
	Poods to Install the Pressan	
	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
		Program
		dialog is
4		displayed.
		The
		installation
		proceeds.
	InstallShield	
	< <u>B</u> ack ♥Install Cancel	
	Click (Install' to begin the Installation	

Step	User Input/Action			
	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.         OK			
	🖟 LABWORKS Client - InstallShie	ld Wizard X		
	<b>Q LABWORKS</b>	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 <u>Finish</u> 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				
•				
<u>O</u> K <u>C</u> ancel				

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

User: USR

### Password: 1

🔕 LABWORKS - Desktop	-	0	×	
🕹 🗛 💷 🚉 📈 🕄 🔢 💶 🖬 😑 🔿				
Menu Items 🗸 🤤	Notifications		Ψ	į.
	You have 2 new unread message(s).	*		5
Control of the second s	SMTP server configuration saved			7
ins iso	SMTP server configuration saved			
The Results	Current and a second			
A A A A	beite server configuration saved			
Search	-			
Maintenance	-			
bittee	***			
Dptions				
Pepots	Message from second user to first user			
De leb				
NW N				
				Ē
Ready Licensed to: Hindustan Petroleum Corp Ltd. Database: LABWORK566		Fir	st User	

# 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 USERHEAD to FIPS Compliance.** Migration of USERHEAD data to FIPS compliant using FIPS compliant encryption algorithm. Added in 6.10

**Migrate RESULT to FIPS Compliance.** Migration of RESULT data to FIPS compliant using FIPS compliant encryption algorithm. Added in 6.10

**Migrate AuditTrail to FIPS Compliance.** Migration of AuditTrail data to FIPS compliant using 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.

Step	User Input/Action	
4	Enter the database connection User ID.	Database connection User ID entered.
	Select the Service pack.	
	The file LW610Release.xsp updates the database from 6.9 to 6.10 Desktop format.	
5	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.	
	<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> </ul>	
	📑 Data Link Properties	
6	Provider Connection Advanced All Select the data you want to connect to: OLE DB Provider(s) Microsoft Jet 3.51 OLE DB Provider Microsoft Jet 4.0 OLE DB Provider Microsoft OtE 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 ODBC Drivers Microsoft OLE DB Provider for OLAP Services 8.0 Microsoft OLE DB Provider for Search Microsoft OLE DB Provider for Search	Connection to the database is established.
	password. Click Test Connection to confirm the connections.	

Step	User Input/Action	Expected Results
	📑 Data Link Properties	
	Provider Connection Advanced All	
	Specify the following to connect to Uracle data:	
	MYServiceName	
	2. Enter information to log on to the database:	
	User name: labworks	
	Password: ***	
	Blank password Allow saving password	
	For SQL Server databases, select the Microsoft OLEDB Provider for SQL Server provider and click 'Next'.	
	Data Link Properties	
	Provider Connection Advanced All	
	Select the data you want to connect to:	
	OLE DB Provider(s)	
	Microsoft Jet 3.51 OLE DB Provider Microsoft Jet 4.0 OLE DB Provider Microsoft Office 12.0 Access Database Engine OLE DB Prov Microsoft OLE DB Provider for Analysis Services 9.0 Microsoft OLE DB Provider for Data Mining Services Microsoft OLE DB Provider for DTS Packages 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 Oracle Microsoft OLE DB Provider for Search	
	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 <u>R</u> efresh	
	2. Enter information to log on to the server:	
	Use a specific user name and password:	
	User name: llabworks	
	Password: ***	
	Blank password Allow saving password	
	3. • Select the database on the server:	

Step	User Input/Action	Expected Results
	After the database connection is tested, press 'Analyze' to have the program identify the database modifications required.	
	🔕 LABWORKS Update Tool – 🗆 X	
	Database SQL  Database Owner Lisername	
	dbo	
	DatabasePassword **	
	LABWORKS User ID	
	Jusr Service Pack	
	LW610Release.xsp	Database
		modifications are identified
7	The program gives a preview of the changes to be made. To apply the changes press	
		Changes are
	VigrateData Table : StateMaster	applied.
	✓ MigrateData Table : StateTransitions	
	I✓ MigrateData Table : SYSMGR	
	IV MigrateData Table : URESOURCE	
	MigrateData Table : USERHEAD	
	I⊄ MigrateData v	
	Create script only Apply Cancel	
	If an error is encountered, the step that was unsuccessful appears in red. Clicking on the	
	error message displays details about the error.	

## **Step 2: Configure database authentication for Oracle 19.c**

When using Oracle 19.c version, follow these steps:

- Run the command ALTER SYSTEM SET SEC\_CASE\_SENSITIVE\_LOGON = FALSE in the Oracle 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 OPEN	116 12C 116 12C 116 12C 116 12C 116 12C 116 12C 116 12C 106 116 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		
	Charles Cateway Administrator Enter the Gateway Administrator Password Enter the Gateway Administrator Password. When you launch Gateway Administrator for the first time the default password is gateway. After you enter the password for the first time you will be prompted to change the password. If the rew password Inter new password I	or message appears prompting you to enter Gateway Administrat or Password. Gateway Administrat or Password is entered. Gateway Administrat or Password is entered.		
	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.			

Step	User Input/Action				
	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.				
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 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\LWDATA	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.				
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.				

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 ×	
	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     Omain ID     C Labworks ID     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:	The Server Temp Path Selection window appears. The Server Temp path is specified.
	tolder. (Many people simply use their LABWORKS user path). It is important that the temporary file read/write performance be as fast as possible.	

# 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.

Step	User Input/Action					Expected	
-							Results
		BKOLUMENE					
	File Home Share	KKS\LWERE		_			
			/E	Canada DM/E			
				<ul> <li>Search LWE</li> </ul>			
	A Quick access	Name	Date modified	Туре	Size		
	📃 Desktop 🛛 🖈	Server	5/10/2017 12:15 PM	File folder			
	🖶 Downloads 🛛 🖈	Updates	5/10/2017 12:15 PM	File folder			
	🔮 Documents 🖈	WebHelp	5/10/2017 12:15 PM	File folder			
	📰 Pictures 🛛 🖈	ApplicationSpec.xml	5/10/2017 12:17 PM	XML Document	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		7/12/2017 7:58 AIVI	Configuration sett	40 KB		
	LWEXE	K LE512512.CTL	4/21/2017 6:11 PM	Visual Basic User	8 KB		
	QuestionPapers	LWI18NRES.MDB	3/30/2016 8:22 PM	MDB File	8,132 KB		
	This PC	LWI18NRES.xml	3/20/2017 7:54 AM	XML Document	8 KB		
	Desktop	온 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	5/9/2017 6:57 AM	MASM Listing	4 KB		
	h Music	Upgrade LABWORKS Client.bat	5/4/2017 4:36 AM	Windows Batch File	1 KB		
	- D' -	vcredist_x8b.exe	5/9/2017 8:22 AM	Application	2,682 KB		
	17 items 1 item selected 2	230 bytes State: 🎎 Shared					
	Enter the nath the	clients will use to access t	ha licansa fila	and onter ma	chine nam	e of the	Path is
				.)		c of the	autorod
	server (e.g. LABW	ORKS-TESTUL as shown in	example below	/).			enterea.
	In this example th	he server shared the folder	· c·\lahworks a	nd the client	manned th	۱۰	
	duite to that show			nu the cheft	mapped ti		
	drive to that share	e. The path can be a mapp	ed drive letter				
	ApplicationSpec.xr	nl - Notepad				×	
	File Edit Format	View Help					
		E SERVER LITCENSE ETLE PA		KS\LWEXE\"/	>		
	<appcon< th=""><th>ETG REERESH="TRUE"/&gt;</th><th></th><th></th><th></th><th></th><th></th></appcon<>	ETG REERESH="TRUE"/>					
	<lsessi< th=""><th>ON6 LAUNCH DELAYTIME="40</th><th>0"/&gt;</th><th></th><th></th><th></th><th></th></lsessi<>	ON6 LAUNCH DELAYTIME="40	0"/>				
	<platec< th=""><th>RM_SERVER_PATH PATH="LA</th><th>BWORKS-TEST01</th><th>'/&gt;</th><th></th><th></th><th></th></platec<>	RM_SERVER_PATH PATH="LA	BWORKS-TEST01	'/>			
	<login_< th=""><th>Page Flavor="Process"/&gt;</th><th></th><th></th><th></th><th></th><th></th></login_<>	Page Flavor="Process"/>					
	<chécks< th=""><th>SUMVERSION VALUE="1"/&gt;</th><th></th><th></th><th></th><th></th><th></th></chécks<>	SUMVERSION VALUE="1"/>					
2						-	
-							
	UK as an UNC pat	n.					
	ApplicationSpec.xr	nl - Notepad				×	
	File Edit Format	<u>V</u> iew <u>H</u> elp					
		E SERVER LITCENSE ETLE P				<b>^</b>	
	<appcon< td=""><td>ETG REERESH="TRUE"/&gt;</td><td></td><td></td><td></td><td></td><td></td></appcon<>	ETG REERESH="TRUE"/>					
	<lsess1< td=""><td>ON6 LAUNCH_DELAYTIME="4</td><td>0"/&gt;</td><td></td><td></td><td></td><td></td></lsess1<>	ON6 LAUNCH_DELAYTIME="4	0"/>				
	<platec< td=""><td>RM_SERVER_PATH PATH="LA</td><td>BWORKS-TEST01'</td><td>'/&gt;</td><td></td><td></td><td></td></platec<>	RM_SERVER_PATH PATH="LA	BWORKS-TEST01'	'/>			
	<login_< td=""><td>Page Flavor="Process"/&gt;</td><td></td><td>-</td><td></td><td></td><td></td></login_<>	Page Flavor="Process"/>		-			
	<chēcks< td=""><td>SUMVERSION VALUE="1"/&gt;</td><td></td><td></td><td></td><td></td><td></td></chēcks<>	SUMVERSION VALUE="1"/>					
						-	
	1						

User Input/Action	E	xpected lesults
For using SQL Server database with LABWORKS: Microsoft SOLOLEDB is the default connect string for Database Type SOL Server		
Data Paths Database Authentication		
Database type		
TLS Support MSOLEDBSQL		
Note : For TLS 1.2 Support : 3) In LWSYSCFG, check "TLS Support MSOLEDBSQL"		
Data Paths Database Authentication		
Database type		
SQL Server - Database connect string O Oracle - Database connect string		
TLS Support MSOLEDBSQL		
<ul> <li>4) Install following drivers on the workstation :</li> <li>iii) MSOLEDBSQL (Used by .net applications) <ul> <li>a. <u>https://www.microsoft.com/en-us/download/details.aspx?</u></li> </ul> </li> <li>iv) ODBC FOR SQL 2017 (Used by legacy applications) (Install based on bitness)</li> </ul>	<u>lid=56730</u> I OS	
a. <u>https://www.microsoft.com/en-us/download/details.aspxr</u> for using Oracle OLEDB Driver with LABWORKS:	<u>1d=56567</u>	
Prerequisite : Oracle Client 32 Bit, Must include OLEDB Driver		
Configuration Jsing LWSvsconfig select Oracle OleDBORA.Oracle Connect String		
Data Paths Database Authentication		
Parapase type		
O SQL Server - Database connect string I Dracle - Database connect string		
SQL Server - Database connect string     Oracle - Database connect string     Microsoft MSDAORA		
SQL Server - Database connect string     SQL Server - Database connect string     Microsoft MSDAORA     Vracle OleDBOBA Oracle		

## LABWORKS LIMS v7.0 Installation Guide

Step	User Input/Action						Expected
							Results
	In Application Space yml	add Oracla Lama					
	in Applicationspec.xmi,						-
	ApplicationSpec.xml -	Notepad					
	File Edit Format View	v Help					
	<appsettings></appsettings>						
	<l< td=""><td>ICENSE SERVER LICENSE FI</td><td>LE PATH="C:</td><td>LABWORKS</td><td>5\LWEXE67\</td><td>"/&gt;</td><td></td></l<>	ICENSE SERVER LICENSE FI	LE PATH="C:	LABWORKS	5\LWEXE67\	"/>	
	4>	APPCONFIG REFRESH="TRUE"/	> _				
	<l< td=""><td>SESSION6 LAUNCH_DELAYTIM</td><td>E="40"/&gt;</td><td></td><td></td><td></td><td></td></l<>	SESSION6 LAUNCH_DELAYTIM	E="40"/>				
	<f< td=""><td>LATFORM_SERVER_PATH PATH</td><td>="PAF-DEV04</td><td>4"/&gt;</td><td></td><td></td><td></td></f<>	LATFORM_SERVER_PATH PATH	="PAF-DEV04	4"/>			
	<0	RACLE_HOME HOME="Oracle :	in OraClier	nt12Home1_	_32bit"/>		
	<l< td=""><td>.ogin_Page Flavor="Proces</td><td>s"/&gt;</td><td></td><td></td><td></td><td></td></l<>	.ogin_Page Flavor="Proces	s"/>				
	1						
							_
	Where the Oracle Home	e Name is:					
	Using Control Panel, OD	BC Data Sources (32-bit)					
	📸   🛃 📑 🄊 =   sh	ortcut Tools Application Tools Administrative Tools			- 0	×	
	File Home Share View	Manage Manage				~ <b>(</b> )	
	Cut	🛛 🗛 🛄 🗙 🛋 📗 👘 New item -	✓ ● Open ▼	Select all			
	Pin to Quick Copy Paste access Paste Paste Paste	t to	Properties	Invert selection			
	Clipboard	Organize New	Open	Select			
		ystem and Security → Administrative Tools			✓ Ö Search	Ad 🔎	
	i Network	↑ Name	Date modified	Туре	Size	^	
	💌 Control Panel	Component Services Computer Management	4/11/2018 17:34	Shortcut	2 KB		
	All Control Panel Items	Defragment and Optimize Drives	4/11/2018 17:34	Shortcut	2 KB		
	Cleaker of Parison	Disk Cleanup	4/11/2018 17:34	Shortcut	2 KB		
	Clock and Region     Ease of Access	[#] Event Viewer [%] Internet Information Services (IIS) Manager	4/11/2018 17:34 4/11/2018 17:35	Shortcut	2 KB 2 KB		
	Hardware and Sound	a iSCSI Initiator	4/11/2018 17:34	Shortcut	2 KB		
	Network and Internet	Local Security Policy	4/11/2018 17:35	Shortcut	2 KB		
	Programs	ODBC Data Sources (32-bit)	4/11/2018 17:34	Shortcut	2 KB		
	System and Security	ODBC Data Sources (64-bit)	4/11/2018 17:34	Shortcut	2 KB		
	Administrative Tools	Performance Monitor	4/11/2018 17:34	Shortcut	2 KB		
	Backup and Restore (Windows 7)	Print Management     Recovery Drive	4/11/2018 17:35	Shortcut	2 KB	~	
	20 items 1 item selected 1.11 KB						
	The Entry (highlighted b	elow) is the Driver Name.					



Step	User Input/Action	Expected Results	
3	ApplicationSpec.xml - Notepad         File Edit Format View Help <appsettings> <license_server license_file_path="C:\LABWORKS\LWEXE\"></license_server> <appconfig refresh="TRUE"></appconfig> <lsession6 launch_delaytime="40"></lsession6> <platform_server_path path="LABWORKS-TEST01"></platform_server_path> <login_page flavor="Process"></login_page> <checksumversion value="2"></checksumversion>            Also, open 'ApplicationSpec.xml'located at \Program Files         (x86)\Labworks\LWLicenseServices (where the LWLicense Service is installed) and</appsettings>	Changes	
0	perform the same changes as above.	applical	
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.	
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>		
6	<ul> <li>Configure LWServiceConfig.xml:</li> <li>1. Launch 'LWServiceControllers.exe' application located at '\LABWORKS\LWEXE\Server '.</li> <li>2. Go to menu Configuration -&gt; Service Connection Configuration:</li> </ul>		

#### 

## LABWORKS LIMS v7.0 Installation Guide

Step	User In	put/Action		Expected Results
	🕲 LAB	WORKS Service Controller	_	×
	Config	uration Help		
	-	Service Connection Configuration		
		PS Service		
		Service status		
	Service			
	Service	connection mormation		
	User nar	ne: Analyst First User Databa:	se: LABWORKS_6	8_TEST
	3.	On Service Connection Configuration screen, enter valid LABWORKS u password. Select desired database for connection and enter workstation name w platform service is running. Click Generate config file button.	sername, /here	
		🕲 LABWORKS Service Connection Configuration — 🗌 🗙		
		LABWORKS user name		
		LABWORKS password		
		LABWORKS database CUSTOMER_NUTRA ~		
		Platform Server path		
		Generate config file		

Step	User Inp	put/Action	Expected Results
	4.	Select path to save config file: Browse For Folder × LABWORKS Service Configuration File Dialog	
		Desktop   This PC   This PC   Libraries   Provide Control Panel   Recycle Bin	
	5.	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 Administrate	or
<u>File</u> Edit Tools	
🎯 🔳 🗙 🐰 🖻 🖺 🖄	
PRODUCTION	
Folder Items × Global Setting H- PRODUCTION H- 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 <ul> <li>Test Connection</li> </ul>

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.

💂 LABWORKS Gateway Adm	inistrator	
<u>F</u> ile Edit Tools <u>H</u> elp		
🞯 🔒 🗙 🐰 🖻 🖺 🖻		
PRODUCTION		
Folder Items ×	Data Paths Database Authentication	
B B DEMO	C LABWORKS C LABWORKS C Unit 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
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. -OR- Uncheck the Single Sign-on check box to have the user enter his/her user name and password at logon.	Single Sign- on check box enabled or disabled, depending on environment.
4	<ul> <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++ 2005 redistributable (vcredist\_x86.exe) for following versions:

This file can be found in the \LWEXE folder

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 Admin	istrator	
<u>F</u> ile Edit Tools <u>H</u> elp		
🞯 🖪 🗙 🐰 🖻 🖨 🖻		
Users		
Folder Items X Global Setting B- DEMO B- PRODUCTION Construction FjeldsPA	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.         Image: Constant of the information of the information about the database and users.         Image: Constant of the information of the information of the information about the database and users.         Image: Constant of the information of	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 — X   Database Type*   SQL   Database schema owner user name*   dbo   Database schema owner password*   ****   LABWORKS User Name*   usr   LABWORKS Data Path*   c:\\abworks\\wdata	
	Disconnect     Next       Then the program gives the option of running the Update Tool.       Image: ABWORKS Migration Utility       Image: ABWORKS Migration Utility	
3	The Update Tool should have previously been run, but if not, it can be run at this time.	The option to run the Update Tool is presented.
	Select Description       Status       Last updated on       From       To         MAILLIST data transfer       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         COMMENTS data transfer       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         LABOBJECTS data transfer       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         UserHead data transfer       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         AUDITTRAIL checksum data update       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         VIOLREORDER data transfer       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         VIOLREORDER data transfer       Complete       16/10/2013 08:30:12       Image: Complete       16/10/2013 08:30:12         FIPS Compliance UserHead data transfer       Pending       Image: Complete       16/10/2013 08:30:12       Image: Complete         FIPS Compliance BLSULT data transfer       Pending       Image: Complete       16/10/2013 08:30:12       Image: Complete         FIPS Compliance AUDITTRAIL data transfer       Pending       Image: Complete       16/10/2013 08:30:12       Image: Complete         F	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, RESULT data transfer, FIPS Compliance RESULT data transfer). Date range can be defined for AUDITTRAIL checksum data transfer, FIPS Compliance AUDITTRAIL data transfer.

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:\labworks\lwexe68.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 User Password OK Cancel	
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	Expected Results
	<ul> <li>Revisited Group to Log Batch migration steps</li> <li>Welcome to migration tool for persisted group to log batch</li> <li>Nutor-merge</li> <li>Auto-merge</li> <li>Conflict type#2: Empty log batch</li> <li>Review changes</li> <li>Migrating</li> </ul>	
4	Check Auto-merge information and click Next to continue.         Image: Check auto merge samples         Image: Check auto merge samples         Image: Conflict type: Conflict type: Check automatically to patches below have the same set of samples and can be migrated automatically.         Image: Conflict type: Check automatical type: Check automati	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>	
	Net       Cancel         - □ ×         * To Persisted Group to Log Batch migration steps         Set log batch Id for persisted group samples with empty log batch         • Welcome         • Auto-merge         • Conflict type#2: Group and log batch mismatch         • Conflict type#2: Empty log batch         • Nerges         • Nigrating	
	Next Cancel	
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.

Stop	E User Input / Action		
Step	Oser input/Action		
	<ul> <li>← B Persisted Group to Log Batch migration steps</li> <li>Please check and confirm following c</li> <li>✓ Welcome</li> <li>✓ Auto-merge</li> <li>✓ Conflict type#1: Group and log batch mis</li> <li>✓ Conflict type#2: Empty log batch</li> <li>▶ Review changes</li> <li>▶ Migrating</li> </ul>	hanges         match         Please check the changes that will be applied to the database and run the process clicking the Start migration         Changes in persisted group IDs         Print report         Persisted group         12019-12-27-002         Manual         2019-12-27-003         2019-12-27-004         LB_2019-08-23-005         Manual         2019-12-27-004         LB_2019-08-23-007         Manual         2020-04-29-001         Banges	
		Next Cancel	
7	After the migration comp needed. Click Finish to finish the m ← ☞ Persisted Group to Log Batch migration steps Data migration process	letes, the information dialog will be shown. Print report if it is nigration.	The wizard will be closed.

### Migration: PsSchedule to Sample

This kind of migration is required to update from 6.10 or earlier to 7.0 or later.

Starting with 7.0, scheduled samples DB structure has been changed. Desktop services do not work with PSSchedule table. Instead of using PSSchedule table, applications will use Sample table. To avoid losing scheduled samples data, it is necessary to migrate it in Sample table using NGMigrationTool.

Step	User Input/Action	
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.     LABWORKS - User Login   Viser   Viser   Password   OK   Cancel     Viser   OK     Cancel     Select Language   French   Viser   Password   OK     Cancel     Viser   V	NGMigration Tool window is open.
2	Select "PSSchedule to Sample" tile.	The migration wizard runs.

Step	User Input/Action	Expected Results
	🕲 Migration Tool — 🗆 🗙	
	File Help	
	Persisted group to log batch       PSSchedule to Sample         Image: Second secon	
	It is strongly recommended to back up the data before performing a migration and will	
3	test the migration on a test environment before applying it in production. Make sure that the necessary measures are taken, check all checkboxes in the dialog, and click Proceed. Migration Tool File Help Persisted group to log batch PSSchedule to Sample Persisted group to log batch PSSchedule to Sample Pe	Migration Warning dialog is open.

Step	User Input/Action	
4	<text><section-header></section-header></text>	Migration process screen is open.
5	Migration will be done automatically. The first migration step is to migrate the PSSCHEDULE table into the SAMPLE one. Please wait when it is finished. You will receive a success notification. Click OK.	Message with migration status is shown.

Step	User Input/Action	Expected Results
	<ul> <li>Merge Sample and PSSchedule migration steps</li> <li>Migrating PSSchedule to Sample</li> <li>Migrating SSSchedule to Sample</li> <li>Migrating sample statuses</li> <li>Migration report: Sample statuses</li> </ul> Find data to migrate from PSSCHEDULE to SAMPLE100% Higrate excissing samples data from PSSCHEDULE to SAMPLE100% Create new samples from PSSCHEDULE to SAMPLE100% Higrate excissing samples data from PSSCHEDULE to SAMPLE100% Higrate excissing samples from PSSCHEDULE to SAMPLE100% Higrate excissing samples from PSSCHEDULE to SAMPLE100% Higrate excissing samples data from PSSCHEDULE to SAMPLE100% Higrate excissing samples data from PSSCHEDULE to SAMPLE100% Create new samples from PSSCHEDULE in SAMPLE100% Higrate excissing samples data from PSSCHEDULE in SAMPLE100% Create new samples from PSSCHEDULE in SAMPLE100% Piesee wat	
	<ul> <li>Start Cancel</li> <li>Start Cancel</li> <li>         — — ×     </li> <li>Migrating PSSchedule to Sample     <li>Migrating PSSchedule to Sample</li> <li>Migrating Sample statuses</li> <li>Migration report: PSSchedule to Sample</li> <li>Migration report: Sample statuses</li> <li>Migration report: Sample statuses</li> </li></ul>	
	Labworks migration X	
6	The next step is to migrate sample statuses based on the selected option. It will be done automatically. Please wait when it is finished. You will receive a success notification. Click OK.	Message with migration status is shown.

Step	User Input/Action			Expected Results
	<ul> <li>← Some Merge Sample and PSSchedule migration steps</li> <li>Migrating statuses</li> <li>✓ Welcome</li> <li>✓ Migrating PSSchedule to Sample</li> <li>Migration report: PSSchedule to Sample</li> <li>Migration report: Sample statuses</li> </ul>	Updating Samples have PsStatus="0" Samples have PsStatus=1.3" Samples have PsStatus=1.8" Samples have PsStatus=1.8" Samples have PsStatus="2" Abworks migration the sample statuses migration process completed successfully.  Samples have empty PsStatus and SSTATUS="B" Samples have empty PsStatus and SSTATUS="B" Samples have incorrect PsSTATUS and SSTATUS="B" Samples have transient states Completed	×	
7	Check the table migration result the error details using "Error" h Migration from PSSCHEDULE to SAMPLE v Welcome Migrating PSSchedule to Sample Migration report: PSSchedule to Sample Migration report: Sample statuses Migration report: Sample statuses	It. Print report if it is needed. If an encryperlink in Status column.         vas finished. Please find details in the migration report.         Please check the migrated samples list.         Existing samples columns were updated         SampNo         New samples were added         PsSampled         1         AA00130         2         AA00130         2         AA00131         3         4         AA00132         4         AA00135         29         AA00136             red, the sample is not migrated. So, r in this sample data using LWDesktop	rror is occurred, check	Migration is finished.

Step	User Input/Action	
8	Check the sample statuses migration result. Print report if it is needed.	Migration is finished.
	Finish Note: If an error has occurred, the sample is displayed in the list and not migrated. So, to migrate this sample need to fix an error in this sample data using LWDesktop apps and run the migration wizard one more time.	
9	Click Finish to close the migration wizard.	

## Status migration map

During sample statuses migration, the SAMPLE.CURRENT\_STATE field is populated from the PSSCHEDULE.PSSTATUS and SAMPLE.SSTATUS fields as follows:

- PSSTATUS = 0 (WaitingCollectionOK) => CURRENT\_STATE = SAMP\_NOT\_READY
- PSSTATUS = 1 (WaitingCollection) => CURRENT\_STATE = SAMP\_READY\_TO\_COLLECT
- PSSTATUS = 1.3 (PrintedLabels) => CURRENT\_STATE = SAMP\_READY\_TO\_COLLECT
- PSSTATUS = 1.5 (Collected) => CURRENT\_STATE = SAMP\_COLLECTED
- PSSTATUS = 1.8 (In\_Transit) => CURRENT\_STATE = SAMP\_IN\_TRANSIT
- PSSTATUS = 2 (WaitingAnalysis) => CURRENT\_STATE = SAMP\_ANALYSIS\_PENDING
- PSSTATUS = 3 (AnalysisComplete) => CURRENT\_STATE = SAMP\_VALIDATE\_QUEUE
- PSSTATUS = 4 (LabOK) => CURRENT\_STATE = SAMP\_REPORT\_QUEUE
- PSSTATUS = 5 (LabReject) => CURRENT\_STATE = SAMP\_REPORT\_REJECTED
- PSSTATUS = 5.5 (InvoiceQueue) => CURRENT\_STATE = SAMP\_INVOICE\_QUEUE
- PSSTATUS = 6 (ProductOK) => CURRENT\_STATE = SAMP\_INVOICED
- PSSTATUS = 7 (ProductReject) => CURRENT\_STATE = SAMP\_INVOICE\_REJECTED
- PSSTATUS = 99 (Completed) => CURRENT\_STATE = SAMP\_COMPLETED
- PSSTATUS = NULL
  - SSTATUS = I (Incomplete (Analyses pending)) => CURRENT\_STATE = SAMP\_ANALYSIS\_PENDING

- SSTATUS = C (Analysis Complete/ Validation Queue) => CURRENT\_STATE = SAMP\_VALIDATE\_QUEUE
- SSTATUS = V (Validated/Report Queue) => CURRENT\_STATE = SAMP\_REPORT\_QUEUE
- SSTATUS = R (Reported/Invoice Queue) => CURRENT\_STATE = SAMP\_INVOICE\_QUEUE
- SSTATUS = B (Inactive)
  - If the sample is included in a collection group AND have been received in the lab
    - CollectionStatus = 0 (Ready to Collect) => CURRENT\_STATE = SAMP\_READY\_TO\_COLLECT
    - CollectionStatus = 1 (Collected) => CURRENT\_STATE = SAMP\_COLLECTED
    - CollectionStatus = 2 (Not Collected) => CURRENT\_STATE = SAMP\_NOT\_COLLECTED
  - Else if all analysis have the status != 0 => CURRENT\_STATE = SAMP\_COMPLETED
    - Else => CURRENT\_STATE = SAMP\_INVOICED

## 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	
	On each workstation that y installed LABWORKS and op ClientSetup.msi.	ou wish to run LABWORKS access the server wi pen the LABWORKS application folder and seled	here you ct	
	🖟 LABWORKS Client - InstallShie	eld 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, click Next.		The Welcome to the InstallShield for LABWORKS Client is displayed.
2				Customer Information

Step	User Input/Action	Expected Results
	HABWORKS Client - InstallShield Wizard X	dialog is
	Customer Information	displayed.
	Please enter your information.	User Name
		and
	User Name:	Company
		name is
		entereu.
	L d contradi	
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Enter your Name and Company Name.	
	Click 'Next'to continue.	
	Habworks Client - InstallShield Wizard	
	Destination Folder	
	Click Next to install to this folder, or click Change to install to a different folder.	
		<b>6</b>
		Destination
		dialog is
		displayed.
3		
		Destination
		changed if
		required.
	InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel	
	Click 'Change' if the location of the client software is to other than the default location.	
	Unce specified, click "Next" to proceed.	

Step	User Input/Action	
	HABWORKS Client - InstallShield Wizard	
	Ready to Install the Program     Image: Constall the Program       The wizard is ready to begin installation.     Image: Constallation	
	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>&lt; Back</u> 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	
	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	
	<b>Q LABWORKS</b>	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	
LABWORKS	
Login	
User	
usr	
Password	
•	
<u>O</u> K <u>C</u> ancel	

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

User: USR

Password: 1

C LABWORKS - Desktop	- 0 >	×
45 🕰 🗏 🗱 📈 🕄 🔜 💶 🖬 😑 🔘		
Menu Items • 4 Notifications		4
You have 2 m	iew unread message(s). 🛛 🔀 🗖	Ø
SMTP server con	Figuration saved	
SMTP server con	figuration saved	
Presita and an and a second and	-	
Date Server con	riguration saved	
Search -		
Martenance -		
Diffee		
Options		
P Reports	arond usar to first usar	
Heb Heb	econd user to miscuser	
T WW		
Ready Licensed to: Hindustan Petroleum Corp Ltd. Database: LABWORKS66	First Usi	er

**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.



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.

**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.

LABWORKS WebTop - InstallShield	l Wizard X		
	Welcome to the InstallShield Wizard for LABWORKS WebTop The InstallShield Wizard will install LABWORKS WebTop on your computer. To continue, click Next.		
Click 'Next'	< Back Next > Cancel		
LABWORKS WebTop - InstallSh Customer Information Please enter your information User Name:	ield Wizard	×	
 MyName   MyCompany			Customer Information dialog is displayed.
Install this application for:	ne who uses this computer (all users) for <u>m</u> e (MyName)		User Name and Company name is entered.
InstallShield	< <u>B</u> ack <u>N</u> ext > Cancel		
Enter User Name and Cor Click 'Next'.	npany Name.		

	LABWORKS WebTop - InstallShield Wizard X	
	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.)	
3	Custom Select which program features you want installed. Recommended for advanced users.	Setup Type dialog is displayed. Setup Type is specified.
	InstallShield < <u>B</u> ack <u>N</u> ext > Cancel	
	Select the Setup Type:	
	<ul> <li>Complete: Web Install, System Admin Tools</li> <li>Custom: Each piece can be selected separately.</li> <li>Click 'Next'.</li> </ul>	
1	LABWORKS recommends copying the license file from the CD to a folder on your network for easy access.	License file copied from CD to folder on
4	Click 'Next' to proceed.	network.
5		Installation of LABWORKS Services dialog is displayed.
		LABWORKS services to install specified.

LABWO	RKS WebTop - InstallShield Wizard X	
Setu	р Туре	
Sele	ect the setup type that best suits your needs.	
- 1		
Sel	ect the features you want to install, and deselect the features you do not want to all. Click Next to continue.	
	LABWORKS License Service	
	LABWORKS Data Service	
InstallSh	ield	
	< Back Next > Cancel	
Server runnin	install will satisfy the requirement for one instance of the LWLicenseServices g on the network.	
For ins Service option Server	tallation of LW Data Service on same machine check the option 'LW Data 2. If you want to install the LWDataServices on different machine uncheck the . In most configurations, the LWDataServices install done during the Desktop install will satisfy the requirement for one instance of the LWDataServices g on the network	
Click 'N	Vext'to continue.	
Noto: //	NDataService Configuration settings that people to be configured while	
perform	ina Excel calculations usina Scan Daemon	
1.	Stop the LWDataService	
2.	Navigate to this path:	
	(for an x64 based Operating System)	
	%WINDIR%\SysWow64\Config\SystemProfile	
	(for x86 based Operating System)	
	%WINDIR%\System32\Config\SystemProfile	
3.	Create new folder named "Desktop" in SystemProfile folder	
4.	Launch services.msc. Select LWDataServices. Right click and click	
	"Properties" menu	



LABWORKS License Services - InstallShield Wizard	
Welcome to the InstallShield Wizard for         Librory       The InstallShield Wizard will install LABWORKS License         Services on your computer. To continue, click Next.	
< Back Next > Cancel	
Click 'Next' to continue	
LABWORKS License Services - InstallShield Wizard X Customer Information Please enter your information.	
User Name:	
MyName	The Customer
Company Name: MyCompany	dialog is displayed.
Install this application for:	
Anyone who uses this computer (all users)	User Name and Company Name
	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		
8			The Ready to Install the Program dialog is displayed.
			The installation proceeds.
	InstallShield		
	< Back Install Cancel		
	Click Install to begin the installation.		
		1	
	<b>ULABWORKS</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
10	LWLicenseServices.exe from the CD on desired machine.		LWLicenseServic

		a different machine.
Instal	llation 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.
	Click 'Next' to continue.	
12	LABWORKSDataServices - InstallShield Wizard       X         Customer Information       Please enter your information.         User Name:       MyName         Company Name:       MyCompany         MyCompany       Install this application for:         Install this application for:       Install Shield         InstallShield       < Back	The Customer Information dialog is displayed. User Name and Company Name is specified.

	Enter your User Name and Company Name.	
	Click 'Next'to continue	
	LABWORKSDataServices - InstallShield Wizard	
	Ready to Install the Program The wizard is ready to begin installation.	
	Click Install to begin the installation.	
13	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.	
	LABWORKSDataServices - InstallShield Wizard	
	Q LABWORKS InstallShield Wizard Complete	
14	The InstallShield Wizard has successfully installed LABWORKSDataServices. Click Finish to exit the wizard.	The InstallShield Wizard Complete dialog is displayed. The installation is complete.
	< Back Finish Cancel	

	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			
	< <u>B</u> ack <u>Install</u> Cancel			
	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	Open the file 'Applica Windows (C) Munic Plance Share View Cuick access OneBrive The Postop Couck access Constrive The Postop Couck access Constrive The Postop Couck access Marie Constrive The Postop Couck access Marie Constrive The Postop Couck access Marie Constrive The Postop Couck access Marie Constrive The Postop Couck access Marie Constrive The Postop Couck access Marie Constrive The Postop Couck access Marie Constrive Cons	AtionSpec.xml' using notepad.	The ApplicationSpec. xml is opened.
	23 tems 1 item selected 238 bytes	6/25/2016 74.2 PM File folder 6/25/2016 74.2 PM File folder 6/25/2016 74.2 PM File folder 6/25/2016 64.5 PM File folder 6/25/2016 64.5 PM SML Decument 148 6/24/2016 84.5 PM SML Configuration. 148 6/24/2016 84.5 PM SML Configuration. 9 K8 5/4/2016 84.5 PM PUBLISHPROJ File 6 K8 2/30/2016 81.5 PM PUBLISHPROJ File 6 K8	
2	Then enter the path name of the server e In this example, the V ApplicationSpec.xml - Notepad File Edit Format View Help KAPPSETTINGS> <license_server licensi<br=""><appconfig pro-<br="" refresh="TRI&lt;br&gt;&lt;LSESSIONG LAUNCH_DELAN&lt;br&gt;&lt;PLATFORM_SERVER_PATH F&lt;br&gt;&lt;LOgin_Page Flavor="></appconfig></license_server>	the Webtop will use to access the license file and enter machine .g. LABWORKS-TEST01 as shown in screen shot below. Webtop Server folder is c:\LABWORKS\LWEXE\ 	Path is entered.
3	Also, open 'Application (x86)\Labworks\LWL the same changes as	Changes are completed.	
4	Also, open 'Applicati (x86)\Labworks\LWD same changes as abc	Changes are completed.	
5	Copy 'ClientApp.conf (x86)\Labworks\LWD the same changes as	ig'from <lwexe> to \Program Files PataServices (where the LWDataServices is installed) and perform above.</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.

Se Internet Information Services (IIS) Manager										
🕥 💿 🔯 🕨 LW-ALL1 🕨 App	lication Pools		🖬 🖂 🛐 I 🕢 🗸							
File View Help										
Connections	Application Pools		Actions							
🔍 - 记   🖄   😪		Advanced Settings	<u>? ×</u>							
Start Page	where the second s									
🖻 🌱 LW-ALL1 (LW-ALL1\Administrato	associated with worker processes, contain one or n	E (General)								
Application Pools	different applications.	Enable 22 Bit Applications	V4.0							
🖃 🥥 Defende Web Cite	Filter:	Managed Pipeline Mode	Integrated							
H To Derault web site		Name	DefaultAppPool							
	Name A Status .NET Frame.	Oueue Length	1000							
	ASPINET V4.0 Started V4.0	Start Automatically	True							
	ASPINET V4.0 Cl Started V4.0									
	Classic NET App Started v2.0	Limit	0							
	DefaultionPool Started v4.0	Limit Action	NoAction							
	DeraditApproor Started V1.0	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	90							
		Ping Period (seconds)	30							
		Shutdown Time Limit (seconds)	90							
		Startup Time Limit (seconds)								
		[enable32BitAppOnWin64] If set to true   system, the worker process(es) serving to (Windows on Windows64) mode. Process	for an application pool on a 64-bit operating he application pool will be in WOW64 ies in WOW64 mode are 32-bit processes							
	I		OK Cancel							
	Eastures View									
	reactives view in a concent 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	Expected Results		
1	Use administrativ applications.	e tool, "Internet Informa be belauk Web Site > LWWebTop >> WWebTop Home be > Defauk Web Site > LWWebTop >> WWebTop Home be provided and provide	tion Services Manager" to configur	re the web Internet Information Services Manager is opened.
	incory		78.::	

#### 

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       Image: Constant of the system of the s	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:         WSampleLoginService       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	×
$\leftarrow$ $\rightarrow$ $\circlearrowright$ $\mid$ 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 🛨									_
2 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 / No	o Yes / No			
Server Reverse Lo	okup				Use Ping –a <ipadd< td=""><td>r&gt;</td><td></td></ipadd<>	r>			
IP Client									
Client Reverse Loc	kup				Use Ping –a <ipadd< td=""><td>r&gt;</td><td colspan="3"></td></ipadd<>	r>			
LABWORKS Server	<sup>-</sup> Locat	ion (Loc1)							
Server Files UNC	Server Files UNC								
Server Files Local	Path								
Base Files							User Folder		
User Files							Selection		
SQC Files									
Temporary Files						Workstation ID			
LABWORKS LWPlatformService Folde			er (Loc2)				□ None		

#### **Desktop Client**

Computer Name	ter Name			Domain				Ping By	Ping	
				Name				Name	ByIPAddress	
IP Address							Ping from Server	Yes / No	Yes / No	
Client Reverse Loc						Use Ping –a <ipadd< td=""><td>lr&gt;</td><td></td></ipadd<>	lr>			
IP Server										
Server Reverse Lo					Use Ping –a <ipaddr></ipaddr>					
LABWORKS Client	ion (Loc3)									

## Webtop Server

Computer Name		Domai Name	n		Ping By Name	Ping ByIPAddress		
IP Address		•		•	Ping	g 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.
  - 6.1/6.2/6.3/6.4/6.5/6.6/6.7/6.8/6.8.5/6.9/6.10/7.0
    - 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	x	х	x	x	x	х	x	х	x	х	х	x	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, 6.10,7.0																			

- 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.
  - o Set the folders for the Webtop
  - o Set the database connection
- □ Start LWLicenseServices
- □ Start LWDataServices

## Appendix D – LABWORKS database migration 6.0/6.1/6.2/6.3/6.4/6.5/6.6/6.7/6.8/6.8.5/6.9/6.10/7.0

- 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. If upgrading from 6.0 to 6.10 then run the Updatetool.exe for Service Pack LW70Release.xsp. (Refer Appendix E)
- 8. LWMigrationTool.exe may need to be run.
- 9. 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   Database Owner Username   LABWORKS   Database Password   ***   LABWORKS User ID   LABWORKS   Service Pack   Wr610Release.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, 6.10,7.0.	
5	LW62DMRRelease.xsp, I18NTables.xsp, LWOPC.xsp are service packs for optional software.	Service pack selected and
	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.	run.
	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
	Data Link Properties   Provider Connection Advanced All     Select the data you want to connect to:     OLE DB Provider(s)     Microsoft Jet 3.51 OLE DB Provider   Microsoft Jet 3.51 OLE DB Provider   Microsoft Jet 4.0 OLE DB Provider   Microsoft Office 12.0 Access Database Engine OLE DB Prov   Microsoft OLE DB Provider for Analysis Services 9.0   Microsoft OLE DB Provider for Data Mining Services   Microsoft OLE DB Provider for DTS Packages   Microsoft OLE DB Provider for Indexing Service   Microsoft OLE DB Provider for OLAP Services 8.0   Microsoft OLE DB Provider for OLAP Services 8.0	
	Microsoft OLE DB Provider for SOL Server  The server of 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>Tota Link Properties         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 ODS Packages         Microsoft OLE DB Provider for ODS Provice         Microsoft OLE DB Provider for ODAL Mining Services         Microsoft OLE DB Provider for ODAL Mining Services         Microsoft OLE DB Provider for ODAL Service         Microsoft OLE DB Provider for ODAL Service         Microsoft OLE DB Provider for ODAL Services         Microsoft OLE DB Provider for ODAL Service         Microsoft OLE DB Provider for ODAL Service         Microsoft OLE DB Provider for ODAL Services         Microsoft OLE DB Provider for Search         Mic</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:	
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.

Step	User Input/Action	Expected Results
	Image: Control 100%       Image: Control 100%         Image: Control 100%       Image: Control 100% <th></th>	
	error message displays details about the error.	
	The errors must be corrected prior to continuing.	