

Laboratory Information Management System

J Street LIMS Installation Guide



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Table of Contents

System Requirements	4
SQL Server Requirements	4
Installing SQL Server Express	5
Port Configuration	12
Firewall Configuration	13
Installing J Street LIMS	19
Contact Us	23

System Requirements

- **Computer:** 1 GHz or faster processor.
- **O/S:** Windows 10 or 11.
- Hard Drive: 3.0 GB free for typical installation.
- Monitor: 1024 x 768 or higher resolution.
- RAM: 1 GB RAM (for 32-bit Office); 2 GB RAM (for 64-bit Office).
- Database: An existing Microsoft SQL Server instance (2014 or newer version) using Windows Authentication mode (See SQL Server Requirements below). *Please note that SQL Server should ONLY be installed on the server or HOST computer and is not needed on any additional computers.
- **ODBC Driver:** Either 'ODBC Driver 13 for SQL Server' or 'SQL Server Native Client 10.0' or newer ODBC driver. We recommend <u>ODBC Driver 17 for SQL Server</u>.
 - Each workstation that will be running LIMS will need the proper ODBC driver.
 - Note for users with multiple licenses that it is best practice that all LIMS workstations use the same ODBC driver.
- Miscellaneous:
 - *Please note that each workstation that needs access to the Excel templates, Messaging component, or PDF viewing/creating will need the appropriate additional software applications.
 - Microsoft Office (32-bit or 64-bit) for Excel interface.
 - o Outlook 2016 or newer (for Messaging component. Email delivery for reports).
 - PDF viewing software (for User's Guide and other documentation).
 - PDFCreator version 3.x or newer (for Messaging created PDF files). Not required if you don't intend to use the optional Messaging component.

SQL Server Requirements

J Street LIMS v6 requires an existing Microsoft SQL Server instance (2014 or newer version) using Windows Authentication mode. The J Street LIMS database can be added to any existing SQL Server instance. If your organization does not already have a SQL Server instance, you can download and install the <u>free SQL Server Express</u> version.

SQL Server Express can be installed on any LIMS or non-LIMS workstation in a peer-to-peer network or on a dedicated Windows server and **ONLY INSTALLATION IN THE ONE LOCATION IS NEEDED**. If you have a single-user J Street LIMS license and no network, install SQL Server Express on the dedicated LIMS workstation.

For existing Annual Subscribers who use an older version of the software (MSC-LIMS version 4), it is necessary to migrate the LIMS' Microsoft Access .accdb database to the new SQL Server database. This step is not necessary for customers using MSC-LIMS version 5, which already uses a SQL Server database. We offer self-service instructions for this process, but we recommend our Support team's white-glove migration service for a fee of \$600. This service includes an initial database conversion for testing version 6 and a second conversion when you feel comfortable migrating production from version 4 to version 6. MSC-LIMS version 4 Full System License customers must contact Support for a database review, as any customized databases may require additional work to migrate, billed hourly

at J Street's current shop rate.

IMPORTANT: In order to set up the LIMS Database, ensure that you have also installed **SQL Server Management Studio (SSMS)**. SSMS is a Microsoft tool for viewing and configuring SQL Server database structures. SSMS is an included download component of most modern versions of SQL Server 2019 and newer. If your SQL Server version does not include SSMS, you can <u>download it for</u> <u>free from Microsoft</u>.

Installing SQL Server Express

If your organization does not already have a SQL Server instance, you can download and install the free SQL Server Express. Note that you will need to install a SQL Server Express version with tools that includes **SQL Server Management Studio (SSMS).** While any SQL Server version 2014 or newer will work with J Street LIMS, the 2016 and 2017 versions of SQL Server Express do not include a single download that includes SSMS. For that reason, we recommend installing SQL Server Express 2019 or newer for simplicity. Follow the steps below to install.

- 1. Close any other applications that are running. Log on to Windows as a user with administrative privileges.
- 2. Visit the <u>Microsoft SQL Server Express</u> download page and click the Download button. Once the .exe executable file has downloaded, open the file to begin installation.



3. Choose the "Custom" edition to configure specific installation instructions.



4. Specify your C-Drive in the Media Location field and click "Install". After clicking "Install," you will be taken to a Progress screen. With a high-speed internet connection, the download and extraction will take a few minutes.



5. When the download and extraction is complete, the SQL Server Installation Center will open. Click on "New SQL Server stand-alone installation..." and the SQL Server 2019 Setup application will launch in a separate window. Check the box to accept the license terms and Privacy Statement and click Next. The Microsoft Update screen will appear next. Check the box to use Microsoft Update to check for updates.







6. The **Install Setup Files** screen will appear next and will show a progress bar. After a short time, this page will close, and the **Install Rules** page will appear.

髋 SQL Server 2019 Setup					-		×
Install Setup Files							
If an update for SQL Server Se	tup is found a	and specified to be included	l, the update will be in	nstalled.			
License Terms							
Global Rules							
Microsoft Update	Task		Sta	tus			
Product Updates	Scan for p	product updates	Con	npleted			
Install Setup Files	Download	d Setup files	Skip	ped			
Install Rules	Extract Se	tup files	Skip	ped			
Feature Selection	Install Set	tup files	In P	rogress			
Feature Rules							
Feature Configuration Rules							
Installation Progress							
Complete							
complete							
				< Deels	March 5	Conner	
				~ DOCK	INCAL >	Callus	
SOI Server 2010 Setun							×
Install Rules							~
instan nares							
Setup rules identify potential	problems that	t might occur while running	g Setup. Failures must	be corrected b	efore Setup		
can continue.							
Install Rules	Operation	n completed. Passed: 3. Fai	ed 0. Warning 1. Sl	kipped 0.			
Feature Selection			-				
Feature Rules							
Instance Configuration	Hide det	tails <<				Re	-run
lava Install Location	10-00	-				<u>11</u> c	
Server Configuration	View deta	illed report					
Server Configuration	Dereite	Pula			Chatra		
Database Engine Configuration	Result	Kule			Status		
Consent to install Microsoft R		Consistency validation fo	r SQL Server registry k	eys	Passed		
Consent to install Python		Computer domain contro	oller		Passed		
Feature Configuration Rules		Windows Firewall			Warning		
Installation Progress		SOL 2019 minimum CTD	or Ungrade and Cide	hy Side Support	Dassed	4	
Complete		Sec 2019 minimum CTP	or opyrate and side	by side support	Passeu		
					2		
				< Bark	2 Next a	Canc	el

It is recommended that if any Rules display Warnings in the Status column, click on the warning and a Rule Check Result box will display with a description. Click "OK", and then "Next" to proceed.

7. The **Feature Selection** screen will appear next. In the "Features:" box, uncheck all Features except for "Database Engine Services" and click "Next."

📸 SQL Server 2019 Setup			- 0	×
Feature Selection Select the Express features to in	stall.			
Global Rules Microsoft Undate	Looking for Reporting Servi	ces? Download it fro	om the web	
Product Updates	Eeatures:		Feature description:	
Product Updates Install Setup Files Install Retup Files License Terms Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Instance Features Database Engine Services Database Engine Services Machine Learning Ser R Python Java Full-Text and Semant PolyBase Query Servic Java connector for Construction Select All	n vices and Language ic Extractions for Sec ce for External Data r HDFS data sources	The configuration and operation of each instance feature of a SQL Server instance is isolated from other SQL Server instances. SQL Prerequisites for selected features: Already installed: Unidows PowerShell 3.0 or higher To be installed from media: Disk Space Requirements Drive C: 1003 MB required, 107531 MB available	
	Instance root directory:	C:\Program Files\Mi	icrosoft SQL Server\	
	Shared feature directory:	C:\Program Files\Mi	icrosoft SQL Server\	
	Shared feature directory (<u>x</u> 86):	C:\Program Files (x8	36)\Microsoft SQL Server\	
			< <u>B</u> ack <u>Next</u> Cance	el .

8. The **Instance Configuration** screen will appear next. Here, specify the Named instance as "LimsExpress" and designate the Instance ID: "LIMSEXPRESS". Then click "Next."

t SQL Server 2019 Setup					-		×
Instance Configuration Specify the name and instance	ID for the instance of S	QL Server. Instance ID	becomes part of t	he installation path.			
Install Rules Feature Selection Feature Rules	O Default instance Ngmed instance:	LinsExpress					
Instance Configuration Java Install Location Server Configuration Database Engine Configuration	Instance (D:	LIMSEXPRES	s				
Database Engine Configuration Consent to install Microsoft R Consent to install Python Feature Configuration Rules Installation Progress Complete	SQL Server directory: Installed instances	C/Program Files/Mi	rosoft SQL Server	MSSQL15.SQLEXPRESS			
	Instance Name	Instance ID	Features	Edition	Ver	sion	
				< Back Next >		Cance	

9. The **Server Configuration** screen will appear next. Ensure the Startup Type is set to Automatic for both services then click "Next."



10. The Database Engine Configuration screen will appear next. Here, select "Windows authentication mode" in the Authentication Mode bullet list. Next, specify your SQL Server administrators. If you have IT or networking staff, it is recommended to add their Windows account as a SQL Server administrator. We also recommend adding the J Street LIMS "super-user" account (whoever will be responsible for managing permissions) via the [Add...] button. Please note that SQL Server administrators have unrestricted access to the Database Engine. Once you have selected or added the appropriate SQL Server administrators, click "Next."

髋 SQL Server 2019 Setup	- 0
Database Engine Confi Specify Database Engine authe parallelism, Memory limits, and	iguration intication security mode, administrators, data directories, TempD8, Max degree of Flietream settings.
Global Rules Microsoft Update Product Updates Install Setup Files Install Rules License Terms Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules	Server Configuration Data Directories TempDB Memory User Instances FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Authentication Mode Image: Configuration Mo
Installation Progress Complete	LIMS-Win10-NoOftLimsAdmin (LimsAdmin) SQL Server administrators have unrestricted access to the Database Engine. Add Current User Add Remove Image: Concelement of the Database Engine. SQL Server administrators have unrestricted access to the Database Engine. SQL Server administrators have unrestricted access to the Database Engine. Add Current User Add Remove < gack

IMPORTANT: If you have installed SQL Server Express on a workstation in a peer-to-peer network, you must add the identical Windows login names and passwords to the SQL Server Express workstation for all LIMS workstation logins that will be accessing SQL Server.

11. The **Installation Progress** screen will appear next. An installation progress bar will load as SQL Server is installed according to your configurations. When installation has completed successfully, click "Next" and the **Complete** screen will appear confirming your installation. Click "Close" and proceed to install your J Street LIMS application.

🐮 SQL Server 2019 Setup			_		\times
Installation Progress					
Global Rules					
Microsoft Update					
Product Updates	Install_sql_engine_core_shared_Cpu64_Action : InstallFiles. Copying new files				
Install Setup Files					
License Terms					
Feature Selection					
Feature Rules					
Instance Configuration					
Server Configuration					
Database Engine Configuration					
Feature Configuration Rules					
Installation Progress					
Complete					
		<u>N</u> ext >		Cancel	
🐮 SQL Server 2019 Setup			_		×
Complete					
Your SQL Server 2019 installat	ion completed successfully with product updates.				
Global Rules	Information about the Setup operation or possible next steps:				
Product Updates					
Install Setup Files	Peature Status				
Install Rules	Database engine services Succeeded				
License Terms					
Feature Selection					
Feature Rules					
Feature Rules Instance Configuration					
Feature Rules Instance Configuration Server Configuration					
Feature Rules Instance Configuration Server Configuration Database Engine Configuration	Details:				

Summary log file has been saved to the following location:

C\Program Files\Microsoft SQL Server\150\Setup Bootstrap\Log\20221026_153740\Summary_LIMS-Win10-NoOf_20221026_153740.txt

Close

Installation Progress Complete

Port Configuration

On the computer/server where you just installed SQL Server, you now need to set a static port for the SQL Server instance. We will use a non-standard port to avoid conflicts with other SQL Server instances which may already be installed.

- 1. Launch SQL Server Configuration Manager from the Start Menu.
- 2. Go to 'SQL Server Network Configuration' > 'Protocols for LimsExpress'.
- 3. Right-click 'TCP/IP' and choose "Enable."



4. Right-click 'TCP/IP', select 'Properties', and switch to the 'IP Addresses' tab. Scroll to the bottom of the tab. Clear the 'TCP Dynamic Ports' field in the 'IPAll' section, and then input 14330 into the 'TCP Port' field. Click [OK] to save settings and close the Properties dialog.



5. Confirm with 'OK' and restart the SQL Server service for 'LimsExpress'.



Firewall Configuration

On the computer/server that you just installed SQL Server on you now need to open your SQL Server's Configuration Manager. You can find this by searching the apps installed on the computer/server or by typing "Configuration Manager" in your computer/server's search.

We need to ensure that the connection is allowed from the computer/server (so you can connect to the database from other computers):

Go to Windows Defender Firewall> Advanced Settings> Inbound Rules. Use the instructions below to complete the setup.

We will be creating two new rules named:

- SQL Server (LimsExpress)
- SQL Server Browser Service

📓 Windows Defender Firewall wit	h Advanced Security								
File Action View Help									
🗢 🄿 🙍 🖬 🖬 🖬									
Pindows Defender Firewall with	Inbound Rules								
Inbound Rules Outbound Rules	Name	Group	Profile	Enabled	Action	Override	Program	Local Address	^
🌆 Connection Security Rules	Routing and Remote Access (L2TP-In)	Routing and Remote Access	All	No	Allow	No	System	Any	
> 🔜 Monitoring	Routing and Remote Access (PPTP-In)	Routing and Remote Access	All	No	Allow	No	System	Any	
	Secure Socket Tunneling Protocol (SSTP-In)	Secure Socket Tunneling Pro	All	No	Allow	No	System	Any	
	Skype	Skype	Domai	Yes	Allow	No	Any	Any	
	🔮 Skype	{78E1CD88-49E3-476E-B926	All	Yes	Allow	No	C:\Progra	Any	
	🔮 Skype	{78E1CD88-49E3-476E-B926	All	Yes	Allow	No	C:\Progra	Any	
	SNMP Trap Service (UDP In)	SNMP Trap	Domain	No	Allow	No	%System	Any	
	SNMP Trap Service (UDP In)	SNMP Trap	Private,	No	Allow	No	%System	Any	
	🧭 softphone.exe		Private	Yes	Allow	No	C:\users\k	Any	
	🔮 softphone.exe		Public	Yes	Allow	No	C:\users\k	Any	
	🔮 softphone.exe		Public	Yes	Allow	No	C:\users\k	Any	
	🥑 softphone.exe		Private	Yes	Allow	No	C:\users\k	Any	
	🥑 Solitaire & Casual Games	Solitaire & Casual Games	Domai	Yes	Allow	No	Any	Any	
	🔮 Start	Start	Domai	Yes	Allow	No	Any	Any	
	🔮 Store Experience Host	Store Experience Host	Domai	Yes	Allow	No	Any	Any	
	🔮 teams.exe		Public	Yes	Allow	No	C:\users\k	Any	
	🔮 teams.exe		Public	Yes	Allow	No	C:\users\k	Any	
	🔮 teams.exe		Private	Yes	Allow	No	C:\users\k	Any	
	🔮 teams.exe		Private	Yes	Allow	No	C:\users\k	Any	
	TPM Virtual Smart Card Management (DC	TPM Virtual Smart Card Man	Private,	No	Allow	No	%System	Any	

CREATE "SQL Server (LimsExpress) RULE 1. Click NEW RULE in the right panel

- 2. Select Port>Next
- 3. Select TCP> Specific Port: 14330

💣 New Inbound Rule Wizard			
Protocol and Ports Specify the protocols and ports to	which this rule applies.		
Steps: a Rule Type a Protocol and Ports a Action a Profile a Name	Does this rule apply to TCP or U TCP UDP Does this rule apply to all local p All local ports Specific local ports:	OP? ots or specific local pots? 14330 Example: 80, 443, 5000-5010 Kent > Cancella Control Cont	-sel

4. Select "Allow the Connection" > Next



5. Select all options> Next:



6. Name the rule "SQL Server (LimsExpress)". Click Finish.

💣 New Inbound Rule Wizard		×
Nome		
Specify the name and description of	f this rule.	
Steps:		
Rule Type		
Protocol and Ports		
Action		
Profile	Name: DOI Dow on (Line Entrance)	
Name	Suit Server (Umstepress)	
	Description (optional):	
	< Back Finish Canoe	4

CREATE "SQL Server Browser Service" RULE

- 1. Click NEW RULE in the right panel
- 2. Select Port>Next

3. <u>Select UDP> Specific Port: 1434</u>

🍻 New Inbound Rule Wizard					×
Protocol and Ports Specify the protocols and ports to v	which this rule applies.				
 Protocol and Ports Rule Type Protocol and Ports Action Profile Name 	 Does this rule apply to TCP or UE TCP UDP Does this rule apply to all local por All local ports Specific local ports:)P? Its or specific loc 1434 Example: 80,	cal ports? . 443, 5000-5010 < Back	Next >	Cancel

4. Select "Allow the Connection" > Next

🐝 New Inbound Rule Wiza	ird	×
Action Specify the action to be taken v	vhen a connection matches the conditions specified in the rule.	
Specify the action to be taken v Steps: Protocol and Ports Action Profile Name	when a connection matches the conditions specified in the rule. What action should be taken when a connection matches the specified conditions? • Allow the connection This includes connections that are protected with IPsec as well as those are not. • Allow the connection if it is secure This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node. Customize Block the connection Block the connection	4

5. Select all options> Next:



6. Name the new rule "SQL Server Browser Service" then click Finish.

Name Specify the name and description of this rule. Specify Profile Name SQL Server Browser Service Description (optional): <	📸 New Inbound Rule Wizard		×
Specify the name and description of this rule. Steps: • Rule Type • Protocol and Ports • Action • Profile • SOL Server Browser Service • Name Description (optional):	Name		
Steps: Rule Type Protocol and Pots Action Profile SoL Server Browser Service Description (optional): Description (optional): Sol Server Browser Service Back Einish 	Specify the name and description of	of this rule.	
Rule Type Protocol and Pots Action Profile Name SQL Server Browser Service Description (optional): (unit in the integration of the	Steps:		
Protocol and Ports Action Profile Name SQL Server Browser Service Description (optional): () () () () () () () () () () () () () (Rule Type		
Action Profile Name SOL Server Browser Service Description (optional): () () () () () () () () () () () () () (Protocol and Ports		
Profile Name SOL Server Browser Service Description (optional): (a)	Action		
Name Solt. Server Browser Service	Profile	Name:	
Pescription (optional):	Name	SQL Server Browser Service	
< Back Finish Cancel		Description (optional):	
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		< <u>B</u> ack <u>F</u> inish Cano	el

Installing J Street LIMS

Before installing J Street LIMS, ensure your workstation(s) meets the System Requirements Addendum, which can be found on <u>https://jstreetlims.com/terms-conditions/</u>. Upon successful payment for your software, a member of the J Street LIMS Support team will provide you with an ***.exe** executable file to initiate installation, and a **License Key** which will be copy/pasted into a dialogue box to initiate your software after installation.

IMPORTANT: If you have employees or on-hand experts for IT or network support, it is recommended that you involve them in the LIMS installation process so they can assist with any server/database pathways or address any error messages, should you receive them.

- 1. If you do not have an existing SQL Server instance, install SQL Server Express with SQL Server Management Studio. See the previous section <u>Installing SQL Server Express</u> for instructions.
- 2. Close any other applications that are running. Ensure you are logged onto Windows as a user with Administrative privileges.
- 3. Download the executable file (for this example, **JStreetLIMS60013.exe**) provided by the LIMS Support team. Note that future iterations may have a different number sequence at the end. Once downloaded, double click on the file to launch the installation wizard.
- 4. The J Street LIMS install wizard will open. Take note of the location on your C-Drive where the application will be installed. For easier access after installation, check the box to create a desktop shortcut. Click "Next".

💕 J Street LIMS Install	×
	Welcome to the install wizard for J Street LIMS 6.0.0.13
	This will install J Street LIMS 6.0.0.13 on your computer in the following folder:
	C:\Program Files (x86)\J Street LIMS 6.0.0.13
	Change When you are ready to install, click the 'Next' button.
	Cancel Next >

5. The J Street LIMS License Agreement dialogue box will appear next. Here you will find a link to the Terms & Conditions page of the J Street LIMS website. Choose and review the

appropriate license agreement depending on your license type (Annual Subscription vs. Full System). After reading and reviewing the license agreement, click "Next".

e, you agree to its Terms & A
, and agree to it
,

6. A progress bar will display as the J Street LIMS front-end application installs. After a few seconds, the installation will complete and the following confirmation screen will appear. Checkmark the box to open the application upon clicking OK in order to connect the ODBC Driver, Server location, and SQL Server Database. Then click "OK".



7. The first time you open the J Street LIMS application, you will need to connect it to the appropriate ODBC Driver, Server location, and SQL Server Database. Per the system requirements, we recommend ODBC Driver 17 for SQL Server. Choose your appropriate driver from the dropdown list. Next, type the name of your SQL Server instance (in this example, called ".\sqlexpress"). Next, type in the name of your SQL Server database (in this example, we use an old demo database with example data that resides on the .\sqlexpress

server). Lastly, click "Connect."

and paste.

Open J Street LIMS D	latabase	
SQL Server	Driver: ODBC Driver 17 for SQL Server Server: .\sqlexpress Database: MscLimsDemoDB	Connect Cancel

NOTE: You may receive error messages if you choose the incorrect ODBC driver, incorrect server or database locations, or if there are typos in any of the text fields. Please consult with your IT or network resources if this is the case.

The J Street LIMS License Code application screen will appear next. Here, you will copy & paste the license code provided by the J Street LIMS Support team. This process confirms the number of licenses you've purchased and stores that information in the database. For Annual Subscribers, we will email you a new license code every year to renew your subscription. After pasting the license code in the text field, click "Apply License".
 * Note: Do not include the "Begin License" or "End License" in the license key you copy

Street LIMS License	
Enter license key in space below:	
Apply License	
Licensed to:	Missing or invalid license
0-Workstation License	
	Close

9. After applying your license code, your company name and quantity of licenses purchased will populate below the "Licensed to:" field. Confirm this is correct based on your purchase order or agreement, and then click "Close".

After a successful connection of the ODBC driver, server, SQL Server database, and license key, a message will appear confirming attachment of the SQL Server Database. Next, click "OK".



10. You are now ready to begin using and configuring J Street LIMS. Begin with Chapter 2: Quick Start of the J Street LIMS User's Guide, which will give step-by-step instructions for familiarizing yourself with the system, adding users, configuring Menu options and sample/project parameters, and much more. The core functions and of the LIMS are thoroughly explained in additional chapters. We also recommend reviewing Chapter 7: System Setup for additional instructions on configuring J Street LIMS. If you have any questions or issues, browse through Support content on our online Knowledge Base, or email Support@JStreetLIMS.com.

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