Passwordstate Enterprise Password Management

SQL Server 2022 Express

Installation Instructions

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1 SQL Server 2022 Express Install

Ensure the server you intend to install SQL Express 2022 has access to the internet. Part of this installation process requires SQL to download some source files automatically. If you don't have internet access, you can run this same installer on another machine that does, but choose the "Download Media" link in the first screenshot below. You can then transfer the full source files to your database server and perform the install manually.

If you haven't done so already, please download SQL Server 2022 Express installer from the following link - <u>https://www.microsoft.com/en-us/sql-server/sql-server-downloads</u>

Installation Instructions

- Run the SQLServer2022-SSEI-Expr.exe
- At the 'Installation type' screen, select 'Custom'



16.2211.5693.3

• Choose a location where the SQL 2022 Source files will download to, and click Install:



The installer will now download the necessary source files:



• At the Installation Screen, select the "New SQL Server stand-alone installation or add features to an existing installation"



• Accept the terms of the licensing and click Next

髋 SQL Server 2022 Setup	- 0	×
License Terms To install SQL Server 2022, you	u must accept the Microsoft Software License Terms.	
License Terms Global Rules Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Feature Configuration Rules Installation Progress Complete	SQL Server 2022 Express Edition YOU MUST ACCEPT THE SOFTWARE LICENSE TERMS. SEE BELOW. Please read the full license terms provided at (aka.ms/useterms). DATA COLLECTION. The software may collect information about you and you use of the software and send that to Microsoft. Microsoft may use this information to provide services and improve Microsoft's products and service. Your opt-out rights, if any, are described in the product documentation. Some features in the software may enable collection of data from users of your applications that access or use the software. If you use these features to enable data collection in your applications, you must comply with applicable law, including getting any required user consent, and maintain a prominent privace data. You can learn more about Microsoft's data collection and use in the product nocumentation and the Microsoft Privacy Statement at https://doc.microsoft.com/fwlink/2Linkld_521830. You acres to comply.with applications and the Microsoft Privacy Statement at the software and Privacy Statement SQL Server transmits information about your installation experience as well as other usage and performance data. Azure Arc connection also transmits the configuration data to allow you to mana and protect your SQL Server instance using Azure Ports and services. To learn more about data processing and privacy controls, and to turn off the collection of certain information, see the documentation.	ur s. e le y rir Print
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• Deselect the Azure Extension for SQL Server option, and click the 'Next' button

髋 SQL Server 2022 Setup		-		×
Azure Extension for SQ	L Server			
Azura Extension for SOL Senver	is required to enable Microsoft Defend	ler for Cloud, Runsiew, and Azure Active Directory		
Azure extension for side server	is required to enable microsoft Derend	ier for cloud, Parview, and Azare Active Directory.		
License Terms	Azure Extension for SQL Server	To install Azure extension for SQL Server, provide you	r Azure	
Global Rules	×	account or a service principal to authenticate the SQL instance to Azure. You also need to provide the Subsc	Server	
Product Updates		Resource Group, Region, and Tenant ID where this ins	tance will b	e
Install Setup Files		registered. For more information for each parameter,	visit	
Install Rules		https://aka.ms/arc-sql-server.		
Azure Extension for SQL Serv	🔿 Use Azure Login			
Feature Selection	Use Service Principal			
Feature Rules	Azure Service Principal ID*			_
Instance Configuration	Azure Service Principano			
Server Configuration	Azure Service Principal Secret*			
Database Engine Configuration				
Feature Configuration Rules				
Installation Progress				
Complete	Azure Subscription ID*			
	Azure Resource Group*			
	Azure Region*			
	Azure Tenant ID*			
	Proxy Server URL (optional)			
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• At the 'Feature Selection' screen, accept the default checked options then click on the 'Next' button

髋 SQL Server 2022 Setup	· · · ·	·	- 0	×
Feature Selection Select the Express features to ins	stall.	⊳		
License Terms Global Rules Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	€ Looking for Reporting Service Eeatures: Database Engine Services SQL Server Replication Machine Learning Services Full-Text and Semanti PolyBase Query Service Shared Features LocalDB Redistributable Features	es? <u>Download it from</u> vices and Language Ext c Extractions for Search e for External Data	m the web Feature description: The configuration and operation of each instance feature of a SQL Server instances. SQI Server instances can operate side-by-side on the same computer. Prerequisites for selected features: Already installed: Windows PowerShell 3.0 or higher Microsoft Visual C++ 2017 Redistributabl To be installed from media: Microsoft MPI v10 Disk Space Requirements Drive C: 1840 MB required, 25775 MB availabl	
	Select <u>A</u> II Unselect All Instance root directory: Shared feature directory: Shared feature directory (x86):	C:\Program Files\Mil C:\Program Files\Mic C:\Program Files (x86	rosoft SQL Server\ rosoft SQL Server\)\Microsoft SQL Server\ < Back Next > Cance	

• At the 'Instance Configuration' screen, accept the default SQLExpress instance and click on the 'Next' button

髋 SQL Server 2022 Setup		-		×
Instance Configuration				
Specify the name and instance	ID for the instance of SQL Server. Instance ID becomes part of the installation path.			
License Terms	O Default instance			
Global Rules	Named instance: * SQLExpress			
Product Updates				
Install Setup Files				
Install Rules	Instance ID: SQLEXPRESS			
Feature Selection				
Feature Rules	SQL Server directory: C:\Program Files\Microsoft SQL Server\MSSQL16.SQLEXPRESS	5		
Instance Configuration				
Server Configuration	Installed instances:			
Database Engine Configuration	Instance Name Instance ID Features Edition	Ver	sion	
Feature Configuration Rules				
Installation Progress				
Complete				
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• At the 'Server Configuration' screen, accept the default settings and click on the 'Next' button

🐮 SQL Server 2022 Setup				_		×
Server Configuration						
Specify the service accounts and	collation configuration.					
License Terms Global Rules	Service Accounts Collation		201.0			
Product Updates	Microsoft recommends that you use	a separate account for each	SQL Server servic	ce.		_
Install Setup Files	Service	Account Name	Password	Startup	Туре	
Install Rules	SQL Server Database Engine	NT Service\MSSQL\$SQL		Automa	rtic	~
Azure Extension for SQL Server	SQL Server Launchpad	NT Service\MSSQLLaunc		Automa	itic	~
Feature Selection	SQL Full-text Filter Daemon Launc	NT Service\MSSQLFDLa		Manual		
Feature Rules	SQL Server Browser	NT AUTHORITY\LOCAL		Disable	d l	\sim
Instance Configuration						
Database Engine Configuration Feature Configuration Rules Installation Progress Complete	This privilege enables instant file i to information disclosure by allow <u>Click here for details</u>	nitialization by avoiding zero	ing of data page	es. This may	/ lead	
'		< Back	: Next	>	Cance	I

• At the 'Database Engine Configuration' screen, check 'Mixed Mode' authentication, specify a strong password for the 'sa' account. The 'Server Administrator' account is a local SQL account with full permissions to administer your databases and settings within SQL. Note this password down, and save it into Passwordstate when you can access it.

Your own Active Directory account will also be added in here with full permissions, and if desired you can add more Active Directory accounts on this screen. You should now click on the '**Next**' button

🃸 SQL Server 2022 Setup	– 🗆	×
Database Engine Config	juration	
Specify Database Engine authen parallelism, Memory limits, and	tication security mode, administrators, data directories, TempDB, Max degree of Filestream settings.	
License Terms Global Rules Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration	Server Configuration Data Directories TempDB Memory User Instances FILESTREAM Specify the authentication mode and administrators for the Database Engine. Authentication Mode Image: Configuration	
Feature Configuration Rules Installation Progress Complete	Specify SQL Server administrators Admin) SQL Server administrators have unrestricted access to the Database Engine. Add Current User Add	
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• SQL Server Express will being installing and within a few minutes you'll be presented with the 'Complete' screen. You can Close to finish the install

髕 SQL Server 2022 Setup			-		×
Complete Your SQL Server 2022 installatio	n completed successfully with product updates.				
License Terms Global Rules Product Updates Install Setup Files Install Rules Azure Extension for SQL Server Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Information about the Setup operation or possible next Feature Feature Machine Learning Services and Language Extensi Database Engine Services SQL Server Replication SQL Browser SQL Writer Setup Support Files Details: Install successful. Summary log file has been saved to the following locat C:\Program Files\Microsoft SQL Server\160\Setup Boo \Summary Vanilla 20240722 124429.txt	steps: Status Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded			
				Close	

Installing the SQL Server Management Tools

• On the Installation screen run the Install SQL Server Management Studio Tools (If you need to launch the installer again, you can run setup.exe from C:\SQLServer2022\ExpressAdv_ENU (or wherever you specified to download the source files to earlier in this guide)



• A web page will launch, and you'll need to click the following download link (Name may change slightly compared to the below screenshot) and run the **SSMS-Setup-ENU.exe** file that is downloaded



Click the Install button



• The SQL Management Studio Tools will now begin installing



• Click **Restart** to finish the install if required, otherwise the installation is complete



2 SQL Server Express Considerations

If you intend to use SQL Server Express to host your Passwordstate database, please consider the following before installing Passwordstate:

 If you're using SQL Server Express on a different server to where you installed Passwordstate, please ensure the TCP/IP Protocol is enabled (use SQL Server Configuration Manager -> SQL Server Network Configuration), and also the Windows Service 'SQL Server Browser' is set to 'Automatic' Startup Type and has been started. You will need to restart SQL Server Express after changing these settings



- 2. By default, SQL Server Express installs with an 'instance' name of **SQLExpress**. When you're configuring Passwordstate for first time use, under the '**Database Settings**' page, please ensure you have specified the name of the instance correctly i.e. **HostName\SQLExpress**
- 3. If you intend to also install the High Availability instance of Passwordstate, SQL Server Express can only be used as the Subscriber for data replication, not the Publisher or Distribution database.

4. By default, SQL Express configures the TCP/IP Protocol to communicate on a dynamic port. If you have a firewall enabled on your database server, you may need to set a static port in the TCP/IP properties which will match your firewall rule. Restart the service again after configuring the option in the screenshot below:

P Port 4 tive abled Address P Dynamic Ports P Port 5	Yes No 127.0.0.1 0	
tive abled Address P Dynamic Ports P Port	Yes No 127.0.0.1 0	
tive labled Address P Dynamic Ports P Port 5	Yes No 127.0.0.1 0	
abled Address P Dynamic Ports P Port 5	NO 127.0.0.1 0	
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	Address P Dynamic Ports P Port is tive abled Address P Dynamic Ports P Port NII P Dynamic Ports P Port	Address fe80::5efe:192.168.0.6%12 P Dynamic Ports D P Port Ves abled No Address P Dynamic Ports P Port 1433

3 SQL Server Memory Size Management

By default, SQL Server is configured to consume all available memory. If you have SQL Server installed on the same machine as where Passwordstate is installed, it's recommended you cap the amount of memory SQL Server uses, as we generally recommend keeping up to 2GB of memory free at all times.

Below is a screenshot of the 'Properties' of your SQL Server, where you can modify the memory settings. The SQL Server Windows Services should be restarted after making any changes here.

Object Explorer	Server Properties - win2k19		×
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🖃 🐻 win2k19sgl1 (SQL Server 14.0.3281.6	Select a page	🖵 Script 🔻 😮 Help	
	General General General General Frocestons Security Connections Database Settings Advanced Permissions	Server memory options Minimum server memory (in MB): 0 Maximum server memory (in MB): 2147483647 Other memory options	_
	\ \	Index creation memory (in KB, U = dynamic memory):	- 1
	Connection	0	- 1
-	Server:	Minimum memory per query (in KB):	- 1
	WINZK195QL1	1024	- 1
	HALOX\msand		- 1
	w View connection properties		- 1
	Progress		
	Ready	Configured values O Running values	
		OK Cancel	