## Installation Guide for Doctor On-Line Server Software

The Doctor Online Server requires a computer running a 64-bit version of Windows 7, or Windows 10 operating system.

The installation process will install the following items onto your computer:

.NET Framework 4.6 SQL Server 2012 Express Doctor On-Line Server Doctor On-Line Manger Doctor On-Line Viewer

The installation folder consists of the following files:

SQLEXPRADV_x64_ENU.exe	Application to install SQL Server 2012 Express
Doctor6OnlineServerSetup.exe	Application to install the Doctor Online Server and Manager
Doctor6OnlineViewerSetup.exe	Application to install the Doctor Online Viewer
ISSetupPrerequisite	Folder containing .NET Framework 4.6

The computer that is to be used to perform the data acquisition should have all the above software installed upon it. Additional computers can have the Doctor Online Viewer installed to allow the system to be viewed from other locations.

If you do not have the folder *ISSetupPrerequisites* the .NET Framework can still be installed correctly if you are currently connected to the internet.

## **SQL Server Install**

To install SQL server run the app *SQLEXPRADV\_x64\_ENU.exe*, this will initially extract files before starting the actual install. Once extracted you will be prompted by the Windows User Account Control to confirm that you wish to perform this action, click the **Yes** button to proceed. A brief pause will occur before the next window is presented.

SQL Server Installation Center

Once the files have been extracted you will be presented with the SQL Server Installation Center. This provides checks to ensure that the install is possible and to configuration settings for the type of install required.

You will start at the *Installation* stage of the install.



Click on the option for **New SQL server stand-alone installation or add features to an existing installation**, this will start the SQL Server 2012 Setup process which goes through several stages:

#### Stage 1 Setup Support Rules

Ideally your computer will be already compatible for a correct installation. However, if there are any issues that need addressing you will be presented with the *Setup Support Rules* dialog. Typically this just requires a reboot of the computer before continuing. If there are any other issues listed contact Icon research for assistance.

11	SQL Server 2012 Setup	- • ×
Setup Support Ru	es	
Setup Support Rules ide corrected before Setup c	tify problems that might occur when you install SQL Server Setup sup an continue.	port files. Failures must be
Setup Support Rules	Operation completed. Passed: 8. Failed 1. Warning 0. Skipp	ed 0.
	Hide details << <u>View detailed report</u>	<u>R</u> e-run
	Rule	Status
	Setup administrator	Passed
	Setup account privileges	Passed
	Restart computer	Failed
	Windows Management Instrumentation (WMI) service	Passed
	Consistency validation for SQL Server registry keys	Passed
	Long path names to files on SQL Server installation media	Passed
	SQL Server Setup Product Incompatibility	Passed
	.NET 2.0 and .NET 3.5 Service Pack 1 update for Windows	2008 Passed
	Edition WOW64 platform	Passed
		OK Cancel

### Stage 2 Licence Terms

You will be presented with the terms and conditions for SQL Server. Click the **I accept the licence terms** option and then click **Next** to continue.

12	SQL Server 2012 Setup – 🗖	×
License Terms To install SQL Server 2012, you	a must accept the Microsoft Software License Terms.	
Setup Support Rules	MICROSOFT SOFTWARE LICENSE TERMS	^
Election	MICROSOFT SOL SERVER 2012 EXPRESS	
Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Reporting Services Configuration Error Reporting Installation Configuration Rules	These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft updates, supplements, Internet-based services, and support earches	~
Complete	con C	) rint
	If accept the license terms.     Gend fasture usage data to Microsoft. Feature usage data includes information about your hardware     configuration and how you use SQL Server and its components.     See the Microsoft SQL Server 2012 Privacy Statement for more information.	
	< ĝack Next > Cancel Help	

### Stage 3 Product Updates

The setup will now attempt to find product updates across the internet. If you have internet access you should allow it to perform this as it ensures you have the latest updates for SQL server. After an update it may require the computer to reboot before continuing.

If you do not have internet access then you will see the following error message in which case you should click **Next** to continue.

1 SQL Server 2012 Setup	
Product Updates Always install the latest u	pdates to enhance your SQL Server security and performance.
License Terms Product Updates Install Schup Files	SQL Server Setup could not search for updates through the Windows Update service. You can either check again or click Next to continue. To troublehoot issues with your Windows Update service, we the link below, more your your Windows Update service as find updates interactively through the Windows Update control panel. Error <u>Ox80224020</u> : Exception from HRESULT 0x8024402C Check again
	Learn more about SQL Server product updates
	< <u>Back</u> Next> Cancel

Stage 4 Install Setup Files

The installer will now copy the required files for SQL Server. This will take a significant amount of time to complete and the windows may disappear for a minute or so between actions.

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#### Stage 5 Feature Selection:

The default features as shown below should not be changed unless you have a specific reason to do so. Click **Next** to continue.



#### Stage 6 Instance Configuration:

The default features as shown below should not be changed unless you have a specific reason to do so. Click **Next** to continue.

Instance Configuration	1 ID for the instance of SQL	Server. Instance	ID becomes part of 1	the installation path.	
Setup Support Rules Feature Selection Installation Rules	<ul> <li><u>D</u>efault instance</li> <li>Named instance:</li> </ul>	SQLExpr	55		
Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Reporting Services Configuration Error Reporting Installation Configuration Rules Installation Progress Complete	Instance ID: Instance <u>r</u> oot directory:	SQLEXPRESS C:\Program Files\Microsoft SQL Server\			
	SQL Server directory: Reporting Services direct Installed instances:	C:\Progra tory: C:\Progra	um Files\Microsoft SQ um Files\Microsoft SQ	IL Server\MSSQL11.SQ IL Server\MSRS11.SQLI	LEXPRESS EXPRESS
	Instance Name I	Instance ID	Features	Edition	Version
			< <u>B</u> ack	Next > Car	Help

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### Stage 7 Server Configuration:

Change the *Startup type* for the SQL Server browser service to *Automatic*. Once you have made these changes click **Next** to continue.

SQL Server 2012 Setup Server Configuration Specify the service accounts and	collation configuration.				
Setup Support Rules Feature Selection Installation Rules	Service Accounts Collation	a separate account for each	SQL Server serv	ice.	
Instance Configuration	Service	Account Name	Password	Startup Typ	e
Disk Space Requirements	SQL Server Database Engine	NT Service\MSSQL\$SQL		Automatic	-
Server Configuration	SQL Server Reporting Services	NT Service\ReportServer		Automatic	-
Database Engine Configuration	SQL Full-text Filter Daemon Launc	NT Service\MSSQLFDLa		Manual	
Reporting Services Configuration	SQL Server Browser	NT AUTHORITY\LOCAL		Automatic	-
Installation Configuration Rules Installation Progress Complete					
		< <u>B</u> ack <u>N</u> ext	> Can	cel He	elp

### Stage 8 Database Engine Configuration:

Click the option for **Mixed Mode**, you will then be required to enter a password for the SQL Server system administrator (sa) account. This is a useful method for later testing and diagnostics so enter a password that you will remember. Once you have made these changes click **Next** to continue.

t SQL Server 2012 Setup			-	
Database Engine Config	guration	administrators and data directories.		
Setup Support Rules Feature Selection Installation Rules Instance Configuration Dick Space Requirements Server Configuration Database Engine Configuration Reporting Services Configuration Error Reporting Installation Configuration Rules Installation Configuration Rules Installation Progress Complete	Server Configuration Specify the authent Authentication Mo Windows authent Mixed Mode (SC Specify the password: Confirm password: Specify SQL Server Louis //Clouve (L	Data Directories       User Instances       FILESTR         Data Directories       User Instances       FILESTR         de       -       -       -         tication mode       -       -       -         Userver authentication and Windows authentication and Windows authentication and Windows authents       -       -         of for the SQL Server system administrator (resource)       -       -       -         administrators       -       -       -       -         administrators       -       -       -       -       -         additionary of the SQL Server system administrator (resource)       -	EAM tabase Engine intication) sa) account.	5. SQL Server administrators have unrestricted access to the Database Engine.
		<u>Seck</u>	d>	Cancel Help

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### Stage 9 Reporting Service Configuration:

The default features as shown below should not be changed unless you have a specific reason to do so. Click **Next** to continue.

📸 SQL Server 2012 Setup	
Reporting Services Co Specify the Reporting Services	nfiguration configuration mode.
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration <b>Reporting Services Configura.</b> Error Reporting Installation Configuration Rules Installation Progress Complete	<ul> <li>Reporting Services Native Mode</li> <li>Install and gonfigure.</li> <li>Installs and configures the report server in native mode. The report server is operational after serve gonghetes.</li> <li>Installs the report server files. After installation, use Reporting Services Configuration Manager to configure the report server for native mode.</li> <li>Reporting Services SharePoint Integrated Mode</li> <li>Installs the report server files. After installation use SharePoint Central Administration to complete the configuration. Verify the SQL Server Reporting Services service is started and create at least one SQL Server Reporting Services service application. For more information, click Help.</li> </ul>
	< Back Next > Cancel Help

#### Stage 10 Error Reporting:

The default features as shown below should not be changed unless you have a specific reason to do so. Click **Next** to continue.

1 SQL Server 2012 Setup	
Error Reporting Help Microsoft improve SQL Se	river features and services.
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Reporting Services Configuration <b>Error Reporting</b> Installation Configuration Rules Installation Progress Complete	Specify the information that you would like to automatically and to Microsoft to improve future releases of SQL Server. These settings are optional. Microsoft treats this information as confidential. Microsoft downloaded and installed on your machine automatically, depending on your Automatic Update strings.         See the Microsoft SQL Server 2012 Privacy Statement for more information.         Read more shout Microsoft Update and Automatic Update.         Image: See the Microsoft SQL Server Fror Reports to Microsoft or your corporate report server. This setting only applies to services that run without user interaction.
	< gack Cancel Help

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#### Stage 11 Installation:

The installation process will now commence. This can take a significant amount of time to complete. Once finished you will get a summary report as below. If any of the features did not succeed contact Icon research for assistance.

SQL Server 2012 Setup Complete Your SQL Server 2012 installati	on completed successfully.	
Setup Support Rules Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Reporting Services Configuration Error Reporting Installation Configuration Rules	Information about the Setup operation or possible r Feature Management Tools - Basic SQL Server Data Tools Detabase Engine Services - Native Detabase Engine Services SQL Server Renlication SQL Server Renlication Details:	next steps: Status  Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded Succeeded
Installation Progress Complete	Viewing Product Documentation for SQL S Only the components that you use to view and been installed. By default, the Help Viewer con SQL Server, you can use the Help Library Man your local computer. For more information, see schtte://og.microsoft.com/fwink/?Linkl0=22468 1224/831 Summary log file has been saved to the following lo C/Program File/Microsoft SQL Server/110/Setup E PC 20151112.124318.bt	erver manage the documentation for SQL Server have ager component uses the online library. After installing ager component to download documentation to Use Microsoft Books Online for SQL Server. 32 (http://go.microsoft.com/fwlink/?LinkIDE cation: locotstrapil.ogi/20151112 124318/Summary Louie:
		Close Help

#### **Testing SQL Server:**

From the toolbar start button, open the folder for *Microsoft SQL Server 2012* and then select the application *SQL Server Management Studio*.

When prompted to Connect to Server, select the *SQL Server Authentication* method of Authentication, enter *sa* as the Login name, and for the password enter the phrase you supplied as part of the installation process. Once these details have been entered click **Connect** to test.

🚽 Connect to Server		
SQL Ser	r <b>ver</b> :2012	
Server type:	Database Engine 💌	
Server name:	LOUIE-PC\SQLEXPRESS -	
<u>A</u> uthentication:	SQL Server Authentication	
Login:	sa 🗸 🗸	
Password:	••••••	
	Remember password	
	t Cancel Help Options >>	

If all has gone well you will be presented with a window similar to this.



If the login fails, try again in case you mistyped the password. if this also fails try one further time but in this case select the *Windows Authentication* method of Authentication. This does not need a Login or password to connect.

🚽 Connect to Server	
SQL Se	rver <sup>-</sup> 2012
Server type:	Database Engine 👻
Server name:	LOUIE-PC\SQLEXPRESS
<u>Authentication:</u>	Windows Authentication 🔹
<u>U</u> ser name:	Louie-PC\Louie
Password:	
	Remember password
	ct Cancel Help Options >>

If the Windows authentication works then SQL server has been installed, but either the System Administrator account has not been configured correctly or SQL server is not configured for Mixed mode authentication. Contact Icon Research for assistance.

### **Configure SQL Server for Remote Access**

By default SQL server only allows connections from the computer it is installed upon. To allow Doctor Online Viewer to be used on other computers on the network SQL server needs to be configured for remote access.

There are four items that need to be checked, two of which should be correct is the installation steps were followed correctly.

## **Check 1: SQL Server Connection Properties**

From the toolbar start button, open the folder for *Microsoft SQL Server 2012* and then select the application *SQL Server Management Studio*. Logon using the Windows Authentication method (no password required).

Once connected right click on the first item in the left pane (SQLExpress entry) and select its *Properties* option.

Make sure that the settings for the *Remove server connections* are as below. Once checked you can close the application.

Server Properties - LOUIE-PC\SQLEXPRESS				
Select a page General	📓 Script 🔻 🚺 Help			
Monoy     Processors     Sourty     Connectant     Advanced     Advanced     Pemissions	Connections  Maximum number of concurrent connections (0 = unlimited):			
Connection	Remote server connections			
Server: LOUIE-PC\SQLEXPRESS Connection: Louie-PC\Louie	Allow remote connections to this server Remote guery timeout (in seconds, 0 = no timeout):     500     +-     Require distributed transactions for server to server communication			
Progress				
Ready	Configured values     Durning values			
	OK Cancel			

Check 2: SQL Server TCPIP Properties

From the toolbar start button, open the folder for *Microsoft SQL Server* 2012, then the folder *Configuration Tools*, and then select the application *SQL Server Configuration Manager*.

Open the item *SQL Server network Configuration* on the left pane and select the entry for *Protocols for SQLExpress*. Change the Status for the *TCP/IP* protocol to *Enabled*.



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Once it has been changed, right click and select its *Properties*.

Select the **IPAddresses** tab and scroll down to the bottom option for *IPAll*.

Remove any entry for *TCP Dynamic Ports*, do not even leave a value zero. Set the entry for *TCP port* to *1433*.

Once changed click **OK** to return to the top level of the application.

	•	
TCP Port		
IP8		
Active	Yes	
Enabled	No	
IP Address	127.0.0.1	
TCP Dynamic Ports	0	
TCP Port		
IP9		
Active	Yes	
Enabled	No	
IP Address	fe80::5efe:192.168.101.9	3%24
TCP Dynamic Ports	0	
TCP Port		
ΤΡΔΙΙ		E
TCP Dynamic Ports		
TCP Port	1433	-
CD Deat		
CFFUIL		

### Check 3: SQL Server Browser Service

Click on the option *SQL Server Services* in the left pane and check that the entry for *SQL Server Browser* is in a *Running* state and set for *Automatic* Start Mode. Once checked you can close the application.

Sql Server Configuration Manager Eile Action View Help	2					
💎 🖈   🔼   🕒 📑   🚺						
SQL Server Configuration Manager (Local)	Name	State	Start Mode	Log On As	Process ID	Service Type
SQL Server Services SQL Server Network Configuration (32bit) SQL Network Configuration (32bit)	<ul> <li>SQL Server (SQLEXPRESS)</li> <li>SQL Full-text Filter Daemon Launcher (SQ</li> <li>SQL Server Reporting Services (SQLEXPRE</li> <li>SQL Server Agent (SQLEXPRESS)</li> <li>SQL Server Browser</li> </ul>	Running Running	Automatic Manual	NT Service\MSSQL NT Service\MSSQL	1696 2664	SQL Server
SQL Server Network Configuration		Running	Automatic	NT Service\ReportS NT AUTHORITY\NE NT AUTHORITY\LO	1852	Report Server
<ul> <li>Protocols for SQLEXPRESS</li> <li>SQL Native Client 11.0 Configuration</li> </ul>		Stonned Running	Other (Boot, Syste Automatic		0 SQL Agen 1976	SQL Agent

## Check 4: Firewall Settings

The computer firewall must be configured to allow SQL server messages to pass through it unhindered. The example below is for the standard Windows Firewall found in Windows 7. As there are many other different firewall suppliers you may have to consult your local IT department for assistance.

From the control panel open the Windows firewall.



Click the option Advanced Settings on the left hand pane.



Select the option Inbound Rules on the left hand pane, then add the following four rules one at a time by clicking the *New Rule…* button on the right hand pane.

#### Click New Rule...

Select **Port** option and click **Next** to continue Select **TCP** option and enter port number *1433* then click **Next** to continue Select *Allow the Connection* option and click **Next** to continue Tick all options of **Domain**, **Private**, **Public** and click **Next** to continue Enter name: *SQL* - *TCP 1433* and click **Finish** to add the rule.

#### Click New Rule ...

Select **Port** option and click **Next** to continue Select **UDP** option and enter port number *1434* then click **Next** to continue Select *Allow the Connection* option and click **Next** to continue Tick all options of **Domain**, **Private**, **Public** and click **Next** to continue Enter name: *SQL* - *UDP 1434* and click **Finish** to add the rule.

## Click New Rule...

Select **Program** option and click **Next** to continue Click the **Browse** button and select the file *C:\Program Files\Micosoft SQL Server\MSSQL11.SQLEXPRESS\MSSQL\Binn\sqlserver.exe* and click **Next** to continue Select *Allow the Connection* option and click **Next** to continue Tick all options of **Domain, Private, Public** and click **Next** to continue Enter name: *SQL Server* and click **Finish** to add the rule.

## Click New Rule...

Select **Program** option and click **Next** to continue Click the **Browse** button and select the file *C:\Program Files (x86)\Microsoft SQL Server\90\Shared\sqlbrowser.exe* and click **Next** to continue Select *Allow the Connection* option and click **Next** to continue Tick all options of **Domain, Private, Public** and click **Next** to continue Enter name: *SQL Browser* and click **Finish** to add the rule.

## Installation of Doctor On-Line Server (DOS) and Doctor On-Line Manager (DOM)

To perform the install run the application *Doctor6OnlineServerSetup.exe*.

This install also checks that the .NET Framework 4.6 is installed on your computer, and if not will install it. if this process is required will see is this window.

ctor6On	ineServerSetup - InstallShield Wizard octor6OnlineServerSetup requires the following items to be installed on your computer. lick Install to begin installing these requirements.
Status	Requirement
Pending	Microsoft .NET Framework 4.6 Full
	instal Cancel

Click the **Install** button and the .NET Framework will be installed onto your computer. Note that if you do not have the folder *ISSetupPrerequisites* this will require access to the internet.

You may be prompted by the Windows User Account Control to confirm that you wish to perform this action, click the **Yes** button to proceed, this will take several minutes to complete.

After the install the computer may request a reboot before proceeding, if this is the case click **Yes** to do so and the installation will continue automatically after the reboot.

#### InstallShield wizard

The Installshield Wizard will now present a series of stages to allow the setup process to be customised.

Stage 1: Welcome: Click **Next** to continue.

🛃 Doctor6OnlineServerSetup	InstallShield Wizard
2	Welcome to the InstallShield Wizard for Doctor6OnlineServerSetup
	The InstallShield(R) Wizard will install Doctor6OnlineServerSetup on your computer. To continue, dick Next.
X)	WARNING: This program is protected by copyright law and international treaties.
	< Back Next > Cancel

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### Stage 2 Destination Folder:

It is advised not to change the name of the folder used unless you have a definite reason for doing so. Click **Next** to continue.



Stage 3 Ready to Install:

Click **Install** to start the installation process. You may be prompted by the Windows User Account Control to confirm that you wish to perform this action, click the **Yes** button to proceed, this will take several minutes to complete.



Stage 4 InstallShield Wizard Completed:

The install has completed successfully, click **Finish** to close the application.

Doctor6OnlineServerSetup -	InstallShield Wizard		
<u>ی</u>	InstallShield Wizard Completed		
	The InstallShield Wizard has successfully installed Doctor6OnlineServerSetup. Click Finish to exit the wizard.		
	< Back Finish Cancel		

Stage 5 Optional Service Configuration:

The DoctorOnlineServer is installed to start Automatically when the computer starts, however due to different startup configurations some computers need this to be altered to allow some extra time for their other systems to settle before the DoctorServer is started.

### To do this:

1. Open the windows Control Panel and then within the Administrative Tools section open the Services tool.

2.Scroll down to the entry for DoctorOnlineServer and right click to open its properties.3.Change the dropdown list entry for *StartupType* from *Automatic* to *Automatic (delayed start).*4.Click **OK** and close the Services tool.

Doctor O	nline Sen	ver Properties (Local Computer)	×	
General	Log On	Recovery Dependencies		
Service	name:	DoctorOnline Server		
Display	name:	Doctor Online Server		
Descrip	Description: Controls data acquisition from Icon Research DK200 devices.			
Path to "C:\Pro	executabl gram Files	e: (x86)\Doctor6Online\Server\IconResearch.Doctor.Onlin	ne	
Startup	up type: Automatic (Delaved Start)			
Service	status:	Running	-	
S	itart	Stop <u>P</u> ause <u>R</u> esume		
You can specify the start parameters that apply when you start the service from here.				
Start pa	ra <u>m</u> eters:			
		OK Cancel Anni	v	

#### Stage 6 Firewall Settings

The DOS and DOM need to be given access through the firewall.

Open the firewall in the same manner as for the SQL Server installation.

Select the option Inbound Rules on the left hand pane, then add the following two rules one at a time by clicking the *New Rule...* button on the right hand pane.

#### Click New Rule...

Select **Program** option and click **Next** to continue Click the **Browse** button and select the file *C:\Program Files (x86)\Doctor6Online\Server\ IconResearch.Doctor.Online.Server.exe* and click **Next** to continue Select *Allow the Connection* option and click **Next** to continue Tick all options of **Domain, Private, Public** and click **Next** to continue Enter name: *Doctor6 On-Line Server* and click **Finish** to add the rule.

Click New Rule...

Select **Program** option and click **Next** to continue Click the **Browse** button and select the file *C:\Program Files (x86)\Doctor6Online\Server\ IconResearch.Doctor.Online.DOM.exe* and click **Next** to continue Select *Allow the Connection* option and click **Next** to continue Tick all options of **Domain, Private, Public** and click **Next** to continue Enter name: *Doctor6 On-Line Server Manager* and click **Finish** to add the rule.