

Docusnap – Installing and Configuring

Installing and Configuring Docusnap



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1. INTRODUCTION

The installation and configuration of Docusnap includes the following points:

- Installation and configuration of the Docusnap Client
- Configuration of the Docusnap Server Service

In addition, you need a Microsoft SQL Server instance to run Docusnap.

This HowTo will guide you through the entire installation and configuration process of Docusnap as well as a Microsoft SQL Server Express instance.

Furthermore, the use of a central configuration file is described. This file contains all the necessary configurations of Docusnap and is set up so that every user of Docusnap uses this configuration file.

You can also use the configuration file to deploy Docusnap via a terminal server, for example.



1.1 DOCUSNAP – ARCHITECTURE

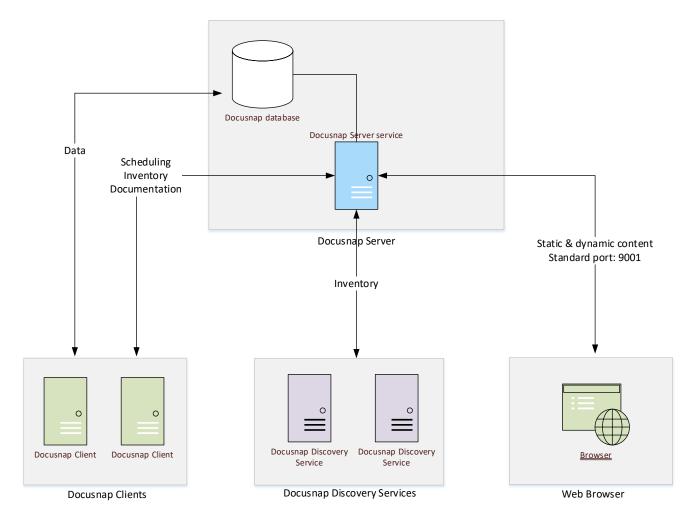


Fig. 1 - Overview of the Docusnap Architecture



2. BASIC INSTALLATION OF DOCUSNAP

2.1 SYSTEM REQUIREMENTS

- Recommended is at least Windows 10 / Windows Server 2016
- Recommended min. 4 GB RAM or more
- Recommended min. 2 CPU cores or more
- Recommended is .NET Framework 4.8

The specifications regarding CPU and RAM refer to Docusnap only. If you run the SQL-Server instance on the same system as the Docusnap Server, the hardware equipment should be adapted accordingly.

2.2 PREPARING THE DATABASE SERVER

A database system is required to store the data in Docusnap. As database system the Microsoft SQL Server Express LocalDB, Microsoft SQL Server Express (from version 2012) or a full Microsoft SQL Server (from version 2012) can be used.

Microsoft SQL Server Express LocalDB is recommended for testing purposes only. If this is used, the Docusnap server service (scheduled execution of tasks), the Docusnap web client and the Docusnap discovery services (decentralized inventory of remote locations) cannot be used.

If the Microsoft SQL Server Express LocalDB has been used for test purposes, the Docusnap database created there can be added to a Microsoft SQL Server Express or full Microsoft SQL Server.

For productive use of Docusnap, we recommend using the current Microsoft SQL Server Express version. In addition to the database instance, the full text search should also be selected during installation.

The Microsoft SQL Server Express is a free solution, which has the following limitations compared to a full-fledged Microsoft SQL Server:

- SQL Server Express from 2012 (recommended is always the latest supported version, 2017, 2019)
 - o Support for one processor, but up to four processor cores
 - o Maximum use of 1 GB (1410 MB) of memory
 - o Database size maximum 10 GB
 - o No SQL Server Agent (automation, e.g. data backup)

The Installation and Configuration of SQL Server chapter describes the installation and configuration of Microsoft SQL Server Express. It is recommended to install and configure it **before** the Docusnap basic installation.



2.3 BASIC INSTALLATION

After the downloaded of the current installation file, the Docusnap installation includes the following steps:

- Welcome screen
- End User License Agreement Consent required
- Select installation directory
- Database selection
- IP Scanner / recommended drivers
- Completion / Installation

In the step Database Selection, you must decide whether you want to use an existing Microsoft SQL server (recommended) or the local database.

Docusnap will not install a Microsoft SQL Server in this step - it must already be available.

🚳 Docusnap 11 Setup	×
Select database Select a source for the Docusnap database:	
 Existing Microsoft SQL Server Assign an already existing Microsoft SQL Server when Docusnap is first launched. Requires SQL Server 2012 (Express) or later. It is adviced to install the SQL Server Management Tools in addition. Local Database The 'Microsoft SQL Server Express LocalDB' installation copies a minimal set of files, to provide a source for the database. Docusnap Discovery Service, Docusnap Web, Scheduling jobs (Docusnap Server) or connecting to the LocalDB remotely is not supported! 	
< Back Next > Cancel	

Fig. 2 - Database selection - Source for the Docusnap database



In the step IP Scanner / recommended drivers you can install the NPCAP driver. This is a prerequisite for the extended IP scan. You can also install the NPCAP driver manually, the setup is located at %ProgramFiles%\Docusnap 11\MSI\npcap-oem.exe

🐣 Docusnap 11 Setup	Х
IP-Scanner / recommended driver NPCAP driver installation	
For the best possible operating system detection of the IP scanner, the NPCAP driver is required. ☑ Install NPCAP	
< Back Next > Cancel	

Fig. 3 - Install NPCAP Driver



3. CONFIGURING DOCUSNAP

After Docusnap and Microsoft SQL Server have been successfully installed, the basic configurations of Docusnap and Docusnap Server can be performed.

3.1 BASIC CONFIGURATION OF DOCUSNAP

3.1.1 ACTIVATION

After starting Docusnap, the first step is to activate the product. This can be done either online or offline.

The activation key is delivered by e-mail. This key is entered in the Activation Key field.

٨	Configuration		-		×
		1			-
		Activation			
	Product Activation				
	Activation Key:	3260b4f5-6ac0-4075-8211-xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx		~	
	_	Offline Activation Activate			
	process on <u>https://www.docu</u> If you did not receive an ema Optional Settings	u <u>snap.com/en/buy/shop</u> . ail, please contact our <u>Sales Department</u> .			
		ner Experience Improvement Program			
	✓ License check successful	<u>N</u> ext Ca	ncel]

Fig. 4 - Basic Configuration - Product activation



How to activate the Docusnap installation online

After entering the key press the Activate button. A permanent connection to our license server (https://license.docusnap.com) must be possible.

Procedure for offline activation of the Docusnap installation

If the computer with the Docusnap installation does not have an Internet connection or the online activation fails, you can also activate Docusnap via offline activation.

After entering the activation key press the Offline Activation button and select Create Activation Request.

This activation file will be uploaded to the https://www.docusnap.com/en/offline-activation website. After successful activation via the website, the license file can be downloaded. This is loaded into Docusnap and the offline activation is completed.



3.1.2 START OPTIONS

After successful activation, the next step is to select the desired functionality of the Docusnap installation. Depending on this selection, the further assistance steps are released.

• Configure Docusnap Client

- o Classic user interface of Docusnap
- o Multi-user environment: connection of the Docusnap Client to a central database
- Configure Docusnap Server
 - o Central component in multi-user environments
 - o Automation of inventory and documentation tasks
 - o Connection endpoint for Docusnap Discovery Services
 - o Provision of information for the Docusnap Web Client

The Docusnap Server can also be set up later.

٨	Configuration		- 1		×
	1	2			
	Activation	Start Options			
	Installation & Configuration				
	Configure Docusnap Client				
	☑ Configure Docusnap Server)	
	(i)Docusnap Server, Web Client and Discovery Service can't be used with LocalDB. For these features an S	QL Server must be selected.			
	Start Options				
	Docusnap Quickstart (Only the Docusnap Client is configured)				
		<u>N</u> ext Ca	ncel		

Fig. 5 - Basic Configuration - Feature selection



3.1.3 DATABASE CONNECTION

The following information requires the Installation and Configuration of the Microsoft SQL Server (Express).

Information about the SQL server and the database:

- SQL server name or IP address
- server name\instance name or IP address\instance name
- Name of the database

Authentication

- Windows authentication: The prerequisite for this is that the logged on user can log on to the selected database.
- SQL Server Authentication: If user accounts have been created on the SQL Server, this authentication can be used.

The Docusnap database can only be created using the wizard and the Create button. If you create a new Docusnap database, you need a privileged user (e.g. dbcreator).

The users need db_owner authorizations for the later operation and thus for the establishment of the connection to the Docusnap database. To do this, select the Connect/Create button.



After the necessary data has been entered, you can create the database by clicking on the Connect/Apply button.

When creating a new database, you have the option of including the Docusnap demo client in the database. This contains demo data.

	1	2	3	4	
Activ	ation	Start Options	Database	Settings	Steps 5-7
crosoft SQL	. Server Database				
Use Local I	Database		Authentication	Windows-Authentication	
QL Server:	KRE-VPC-TEST01		▼ User Name:	Docusnap	
atabase:	Docusnap	Create New D	atabase	×	
			d database does not exist on the :	500/05	Connect/Create
				server.	
tings		🕑 Do you wan	t to create a new database?		
	ut in Seconds:	Uo you wan	it to create a new database? e with 'DocusnapSports Demo Co	mpany'	
	ut in Seconds:	Uo you wan		mpany'	
tings uery Timeor	ut in Seconds:	Uo you wan	e with 'DocusnapSports Demo Co		
	ut in Seconds:	Uo you wan	e with 'DocusnapSports Demo Co		
	ut in Seconds:	Uo you wan	e with 'DocusnapSports Demo Co		
	ut in Seconds:	Uo you wan	e with 'DocusnapSports Demo Co		

Note: The demo client cannot be added afterwards for technical reasons.

Fig. 6 - Basic Configuration - Database configuration - including Docusnap Demo client



3.1.4 SETTINGS

In step 4, the Docusnap system paths are specified. By default, documentation, reports, input masks and other documents are stored in these paths. In addition, you will find customizations and other settings there.

Best practice is to set up a central Docusnap directory that is accessible via the network by means of sharing. In most cases, the Local and Team Settings paths can be combined - separating them only makes sense if, for example, you need to scan with an additional standalone Docusnap system on a remote network. With this centralized sharing path, you are prepared to use Docusnap with multiple users and client installations. For example:

- \\DocusnapServer\Docusnap\Documentation
- \\DocusnapServer\Docusnap\TeamSettings
- ...

ATTENTION: If a path is referred to, for example, in a user profile, other users of the application may not have access to the data stored there. If you want to use the Docusnap Server and several people access the application, always use the corresponding network shares.

ه ا	Configuratio	on				 	 				-	□ ×
)—		3)	4 -	(5	 			
	Steps 1	-2		Databas	e	Settings	Er	cryption	0	Steps 6-7		
Bas	se											
Ba	ase Path		C:\Docusna	эр							1	
\checkmark	Adjust settings	s individ	dually						 			
Do	cumentation											
D	ocumentation I	Path:	C:\Docusn	ap\Document	ation						1	
Att	achments											
C	heck-out Path:		C:\Docus	nap\CheckOut	t						1	
Set	ttings											
Lo	ocal Settings:	C:\Doo	cusnap\Loca	alSettings							1	
Te	eam Settings:	C:\Doo	cusnap\Tear	mSettings							1	
								Back	<u>N</u> ext	0	ancel	

Fig. 7 - Basic Configuration - File paths



3.1.5 ENCRYPTION

Docusnap offers the possibility to store passwords. To use this password module, a new encryption file must be created or an existing one selected. Otherwise, this functionality is deactivated in the application. This encryption file provides an encrypted storage of the passwords within the database.

٨	Configura	ation				- 🗆 ×
			4	5	6	7
	Step	is 1-3	Settings	Encryption	Server Start Settings	Finish
	Encryption File	e				
	the password	d module is hidden.			acryption file can read them. If no	
	🖉 Create Ne		Select Existi	ing File	Disable Encryption	n
	Create Encryp					
	Create File:	C:\Docusnap\Crypto\Do	cusnapCrypto.dcr			?
					Back	Next Cancel

Fig. 8 - Basic Configuration - Creating the encryption file

An encryption file can only be created once per database. There is no way to replace or recover passwords in case of loss.

For more information on how to use passwords or additional information in general, please refer to the appropriate HowTo in our Knowledge Base: Add additional information in Docusnap.



3.2 CONFIGURING DOCUSNAP SERVER

3.2.1 SERVER START SETTINGS

The Docusnap Server is a Windows service. In order to start the Docusnap and use its functions, the start information and the connection to the Docusnap database must be stored once.

If the Windows service is running with the Local System account and the database is configured with Windows authentication, the service cannot be started because it cannot connect to the database. In this case, SQL Server authentication must be used. You can also authorize the local system account to access the database if the Docusnap Server and SQL Server are available on the same system.

Please also note the notes regarding the necessary authorizations when a user is used to run the service.

- Administration rights on the system
- Local security policy
 - o Log on as a service
 - o Replace a process level token

For more information, see the help that you call by pressing F1.

	figuration					-	· □ ,
)	5	6		7		
Steps 1	1-4	Encryption	Server Start Setting	s Serve	er Database	Steps 8-9	
Configure Doc	usnap Server:						
Startup Type:	Automatic		✓ Languag	e: English			•
User:	INTERN\Docusnap	_Inventory	Passwor	d:	*****		
✓ Execute Inver	ntory in Own Process						
for the specifie	art the inventory in a d user. For further in	formation, refer to the h	elp manual (F1).				
for the specifie Debugging	d user. For further in	formation, refer to the h	elp manual (F1).				
Debugging	d user. For further in	formation, refer to the h	elp manual (F1). Reset Log				
Debugging	d user. For further in g Mode	formation, refer to the h					
Debugging	d user. For further in g Mode	formation, refer to the h					
Debugging	d user. For further in g Mode	formation, refer to the h					
Debugging	d user. For further in g Mode	formation, refer to the h					

Fig. 9 - Docusnap Server - Configuring the server service



3.2.2 SERVER DATABASE

The Docusnap Server service also requires a connection to the previously created database.

Please note again the authentication at the database for the server service. If the Windows authentication is used, you must pay attention to who executes the Windows service and authorize accordingly!

	figuration	6		7	8	9
Steps 1	-5	Server Start Settings	Server	Database	Server Settings	Finish
Aicrosoft SQL Se		Server Start Settings	Server	Julubuse	Server Settings	THIST
incrosoft SQL SE				Authentication	SQL Server-Authentication	.
SQL Server: K	RE-VPC-TEST01		•	User Name:	Docusnap	
Database: D	ocusnap			Password:	****	
						Connect/Create
ettings						
Query Timeout ir			60-			
Query Timeout ir incryption Modu Encryption:			60 €	File	Create New	File
Query Timeout ir	ile	Crypto\DocusnapCrypto.c	Select Existing	File	Create New	File
Query Timeout ir	ile	Crypto\DocusnapCrypto.c	Select Existing	File	Create New	
Query Timeout ir	ile	Crypto\DocusnapCrypto.c	Select Existing	File	□Create New	
Query Timeout ir	ile	Crypto\DocusnapCrypto.c	Select Existing	File	Create New	

Fig. 10 - Docusnap Server - Database connection



3.2.3 SERVER SETTINGS

The account with which the service is started must have access to the specified paths. You must also make sure that the paths match those of the client configuration - see Data Path Settings.

With a click on Next and then Finish the configuration of Docusnap and the Server Service is completed.

Server Conf	igura	tion			- 🗆 ×
)—	6	7	8	9
Steps 1	-5	Server Start Settings	Server Database	Server Settings	Finish
Documentation					
Documentation	Path:	C:\Docusnap\Documentation			?
Settings					
Team Settings:	C:\Do	cusnap\TeamSettings			?
Local Settings:	C:\Do	cusnap\LocalSettings			?
▲ The path for th	ne Tean	n Settings will be set for client and serve	er	Back	Next Cancel

Fig. 11 - Docusnap Server - Path settings



3.2.3.1 ADVANCED DOCUSNAP SERVER CONFIGURATION

During the initial configuration of the Docusnap Server service, two configuration steps are skipped - but you should do these later - Server Mail Settings and Server API.

To do this, open the configuration of the Docusnap Server in the title bar - Docusnap Server Configuration:

🚱 Docusna	p 11		‡ <mark>≋·</mark> ?· – ⊟ ×
. 🚱	Inventory	 Docusnap Discovery Service Config Docusnap Server Configuration 	uration
Discovery	📕 Windows (AD) 🙀 🖵 SNMP	•	Groups 😭
nventory	All Wizards	Server Configuration – 🗆 🛪	¢
Documentation	> ⊕ Overview > இ Docusnap Sports	1 2 3 4 5 Server Start Settings Server Database Server Mail Settings Server API Server Settings	
License Management		Startup Type: Automatic Language: English	Succe Number Failed Suc
L All Jobs		User: INTERN\Docusnap_Inventory Password: ************************************	0 100 0 100 0 100
ර ^{ුර} Connect		Remark: To start the inventory in an own process, the local security policies 'Replace a process level token' and 'Log on as a service' are required for the specified user. For further information, refer to the help manual (F1).	0 100 1 0% 0 100
Physical Infrastructure		Debugging	0 100 0 100
Ф <mark>ф</mark> Management			

Fig. 12 – Docusnap Server – Additional configuration



Server Mail Settings

Navigate to Step 3 – Server Mail Settings – and define the configuration that applies to you so that Docusnap can send you reports, documentation or notifications by e-mail:

Server Con	figuration				- 🗆 >
1)	2	3	4	5
Server Start	Settings	Server Database	Server Mail Settings	Server API	Server Settings
Configure Ema	ail Settings:				
SMTP Settings					
SMTP Server:	mail.intern.local				×
Server Requir	es Authentication		SSL Encryption		25 🜩
Authentication User:			X Password:		X
Sender:	docusnap@itelio.	com			
Check Settings					
Test Address:	docusnap@itelio.	com			Check S <u>e</u> ttings

Fig. 13 - Docusnap Server – Additional configuration – Server mail settings



Server API

The Server API is used for communication between Docusnap Server, Docusnap Client and Docusnap Discovery Services. Furthermore, the Server API with the schema and port to be configured below is also available for Docusnap Web.

Within step 4 - Server API - you can configure the Server API. Relevant for the configuration is the scheme - http or https with a certificate created by Docusnap itself or with a certificate from the computer store of the system.

The port must also be specified. With the command **netstat** -ano | find "9001" you can check whether the port on the system is already in operation by another application.

Server Configuration				- 🗆 ×
1	2	3	4	5
Server Start Settings	Server Database	Server Mail Settings	Server API	Server Settings
Use Discovery Service and Do	usnap Web			
Scheme:	□ http □ https (self-signe	ed certificate) 🖂 https ((from certificate store)	Select Certificate
External Hostname (optional):			Port:	9001 Proxy
Activate HTTP Security Heade				
Authentication Scheme (only rele		bled)		
Basic Authentication (https is	recommended)			
Integrated Windows Authenti	cation			
only NTLM				
Anonymous Authentication (/	ttention: this option grants ever	ryone full access)		
Docusnap User Permissions				
Dedicated Domain Controller:				
Debugging Docusnap Web				
Enable Logging				
Logging Path:				Max. Age:
			Back	<u>N</u> ext Cancel

Fig. 14 - Docusnap Server – Additional configuration – Server API

Regarding Docusnap Web you will also find the authentication scheme within the Server API. Here you should enable Basic and Integrated Windows Authentication by default. Note here that authentication is only active if user management has also been activated in Docusnap. Until this is implemented, the Anonymous Authentication is valid!

You can find more information about how to log in to Docusnap Web in the corresponding HowTo in our Knowledge Base: Docusnap Web Configuration.



Please note the following with the HTTP Security Headers option:

Enabling this option causes the Web client to no longer display the embedded reports, maps and documents due to the higher security requirement!

This option denies loading X-frames, which provides protection against clickjacking.

Clickjacking attacks use multiple transparent/opaque layers that cause a user to perform actions that they do not want to perform or are unaware that they are performing - such as clicking a button or clicking a link.



If you have made any changes to the Server API (schema and/or port), you must then adjust the client's Server API connection. The customization can be done in the General Options - Connections - Server API Connection.

🛞 Docusna	ip 11			C 🕸 🛛	• ? • -	⊟ ×
O Discovery	Inventory	Options	- = >	<	~	
Inventory	··· All Wizards	(General	General System Path Licensing Databases Connections	stem Groups	м	
Documentation	>	Inventory Documentation	Update Options Check for Updates on Startup Timeout: Seconds			
License Management		E IT Security	Proxy Settings	Number Succe 1 2	Number Failed	Suc ▲ 100 100
L All Jobs		License Management	Do not Use Proxy Use System Settings Set up Manually Address: Port: 8080	1 1 2	0 0 0	100 100 100
Connect			User: Password:	0 7	1 0	0% 100
Physical Infrastructure			Server API Connection	1	0	10(10()
С _С Management			CEnable Server API Connection URL: https://KRE-VPC-TEST01:9001/ Transport: Auto]		

Fig. 15 - Docusnap Server – Additional configuration – Change Server API connection



4. SETTING UP A CENTRAL CONFIGURATION FILE

In the previous chapter Configuration Docusnap the necessary steps concerning the configuration of Docusnap were described.

If you do not want to perform these steps with every Docusnap Client installation and additionally want to make sure that every user uses the same configurations, you can set up a central configuration file.

The executed client configurations were all stored in a configuration file. This can be found in the following path of the user who performed the configuration: **%AppData%\Docusnap\Configuration.xml**.

Create a new folder within your Docusnap Base Path - e.g. Configuration. Move the Configuration.xml file to this folder.

Also copy a Docusnap 11 program link into this folder.

4.1 DOCUSNAP SHORTCUT

Now these two files have to be linked together. To do this, open the properties of the program link and define the following parameter in the target:

-UseConfig \\Systemname\Sharename\Configuration\Configuration.xml

"C:\Program Files\Docusnap 11\Docusnap.exe" -UseConfig "\\SRVDocusnap\Docusnap\Configuration\Configuration.xml"

In addition, you must change the name of the link, otherwise it will be removed and recreated when Docusnap is updated.

If you have now installed a new Docusnap Client, copy the new shortcut containing the UseConfig parameter to the desktop of the system and execute it. Docusnap can then be started without a new configuration.

Another purpose of the central configuration file is the installation of Docusnap on a terminal server. Set up the central configuration file here and add the corresponding program shortcut to the public desktop.

4.2 CENTRAL ADJUSTMENT OF THE SYSTEMS

Alternatively, you can also customize the following file on each installed Docusnap client as well as on the server: %ProgramData%\Docusnap\DocusnapSettings.xml

In this you can add the central configuration file in the XML tag <AlternativeConfigFile/>, this must be changed as follows:

<AlternativeConfigFile>"\\SRVDocusnap\Docusnap\Configuration\Configuration.xml</AlternativeConfigFile>



5. INSTALLATION AND CONFIGURATION OF THE SQL SERVER

The following is a description of how to install and configure an SQL Server Express 2019 instance for use with Docusnap.

5.1 INSTALLING MICROSOFT SQL SERVER

You can download the necessary installation files directly from Microsoft.

Choose Custom or Download Media:

Basic	Custom	Download Media
Select Basic installation type to install the SQL Server Database Engine feature with default configuration.	Select Custom installation type to step through the SQL Server installation wizard and choose what you want to install. This installation type is detailed and takes longer than running the Basic install.	Download SQL Server setup files now and install them later on a machine of your choice.

Fig. 16 – Choose SQL-Server Installation Type



If you want to download the installation media first, select The Express Advanced package.

SC	L Server 2019			© – ×
E:	xpress Edition			
•	ecify SQL Server installer down	load		
SELE(Engl	CT LANGUAGE ish	•		
WHIC	CH PACKAGE WOULD YOU LIKE TO DOWNLOAD?			
0	Express Core (255 MB) SQL Server Engine only			
0	Express Advanced (796 MB) SQL Server Engine, Full Text Services, and Reporting	g Services		
0	LocalDB (53 MB) Lightweight version of Express Edition with all of its	programmability featu	res, but runs in user ma	ode
Or, g	o to the Microsoft Azure portal to provision SQL Server in the	e cloud		
SELEC	CT DOWNLOAD LOCATION			
C:\U	sers\Admin\Downloads	<u> B</u> rowse		
		<u>C</u> lose	< <u>P</u> revious	<u>D</u> ownload
				15.2002.4709

Fig. 17 - Download SQL Server Express installation files

Note: Only English can be selected for download (as of 05.11.2021) - an error message will appear if German is selected.

Important: To also have the Enterprise Search functionality in Docusnap, the Express Advanced package must be selected in the download.

Not all steps of the Setup Wizard are explained below. Only the items that need to be adjusted for use with Docusnap are described. Please leave all other configuration steps at default or adapt them to your needs.



5.1.1 INSTALLATION CENTER

Please start the installation file of Microsoft SQL Server Express. Select the installation of a new, standalone SQL Server installation. At the same time you can select **Install SQL Server Management Tools as a** precaution and download the installation files for SQL Management Studio - it is recommended to install this.

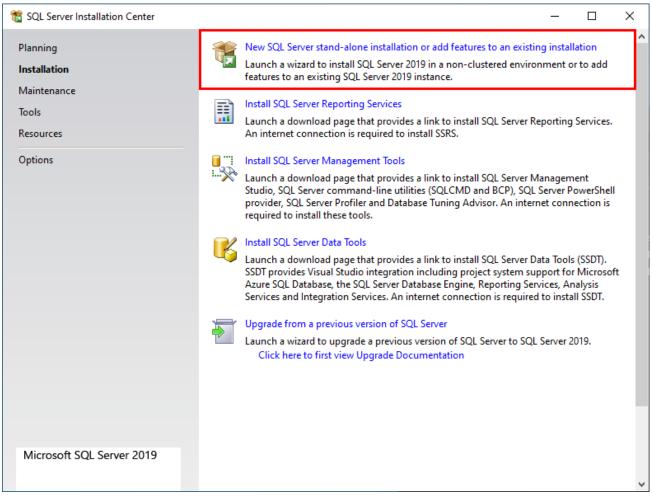


Fig. 18 - SQL Server Installation - Installation Center



5.1.2 FEATURE SELECTION

In the feature selection step, the following must be selected:

- Instance Features
 - o Database Engine Services
 - SQL Server Replication
 - Full-Text and Semantic Extraction for Search
- Shares Features
 - o Client Tools Connectivity
 - o Client Tools Backwards Compatibility
 - o Client Tools SDK
 - o SQL Client Connectivity SDK

髋 SQL Server 2019 Setup			- 🗆 X	
Feature Selection Select the Express features to in	stall.			
Global Rules Product Updates Install Setup Files Install Rules Installation Type License Terms Feature Selection Feature Rules Instance Configuration Server Configuration Database Engine Configuration Feature Configuration Rules Installation Progress Complete	Looking for Reporting Servit Eeatures: Instance Features SQL Server Replication Machine Learning Services SQL Server Replication Machine Learning Services SQL Server Replication Machine Learning Service SQL Server Replication Machine Learning Services SQL Client Tools Connectivity Client Tools Backwards C Client Tools SDK SQL Client Connectivity S LocalDB Redistributable Features Select <u>A</u> <u>Unselect All</u> Instance root directory: Shared feature directory (<u>x</u> 86):	r vices and Language Ext c Extractions for Search re for External Data r HDFS data sources ompatibility DK C:\Program Files\Mice C:\Program Files\Mice	Feature description: Includes the Search engine that supports Full-Text Extraction for fast text search as well as Semantic Extraction for key phrases (likely tags) and similarity search on content stored in SQL Server. Prerequisites for selected features: Already installed: Windows PowerShell 3.0 or higher Microsoft Visual C++ 2017 Redistributable Drive C: 1735 MB required, 95322 MB available	
			< <u>B</u> ack <u>N</u> ext > Cancel	

Fig. 19 – Feature Selection



5.1.3 INSTANCE CONFIGURATION

Within the instance configuration, you can either use the default instance name (MSSQLSERVER) or define your own instance name.

髋 SQL Server 2019 Setup					_		×
Instance Configuration	1						
Specify the name and instance	ID for the instance of S	QL Server. Instance ID	becomes part of the i	nstallation path.			
Global Rules	O <u>D</u> efault instance						
Product Updates Install Setup Files	Named instance:	Docusnap					
Install Rules							
License Terms Feature Selection	Instance <u>I</u> D:	DOCUSNAP					
Feature Rules							
Instance Configuration	SQL Server directory:	C:\Program Files\Mic	rosoft SQL Server\MS	SQL15.DOCUSNAP			
Java Install Location Server Configuration	Installed instances:						
Database Engine Configuration	Instance Name	Instance ID	Features	Edition	Ver	sion	
Consent to install Microsoft R	<shared compone<="" td=""><td></td><td>Conn, BC, SDK</td><td></td><td>14.0</td><td>.1000.169</td><td></td></shared>		Conn, BC, SDK		14.0	.1000.169	
Consent to install Python							
Feature Configuration Rules Installation Progress							
Complete							
			< 8	ack <u>N</u> ext >		Cance	I

Fig. 20 - SQL Server Installation - Instance Configuration - Choose Instance Name



5.1.4 DATABASE MODULE CONFIGURATION

Please select the **mixed mode** authentication mode and assign a password for the SQL Server system administrator account (sa).

髋 SQL Server 2019 Setup		- 0	×
Database Engine Config	guration		
Specify Database Engine authen parallelism, Memory limits, and F	tication security mode, administrators, data directories, TempDB, Max degree of ilestream settings.		
Global Rules Product Updates Install Setup Files Install Rules License Terms Feature Selection Feature Rules Instance Configuration Java Install Location Server Configuration Database Engine Configuration	Server Configuration Data Directories TempDB Memory User Instances FILESTRE Specify the authentication mode and administrators for the Database Engine. Authentication Mode Image: Control of the Database Engine. Authentication Mode Image: Control of the Database Engine. Image: Control of the Database Engine. Mixed Mode (SQL Server authentication and Windows authentication) Specify the password for the SQL Server system administrator (sa) account. Enter password: Image: Control of the Control of	AM	
Consent to install Microsoft R Consent to install Python Feature Configuration Rules Installation Progress Complete	Specify SQL Server administrators VORDEFINIERT\Administratoren (Administratoren) SQL Server administ unrestricted access t Engine. Add <u>C</u> urrent User <u>A</u> dd		se
	< <u>B</u> ack <u>N</u> ext >	Cano	cel

Fig. 21 - SQL Server Installation - Database Engine Configuration - Active SA User

Don't forget to take care of a data backup for the Docusnap database. Either via the SQL server itself or via backup software in the company.



5.2 CONFIGURING SQL SERVER EXPRESS

5.2.1 SQL SERVER NETWORK CONFIGURATION

SQL Express instances are not configured for remote access by default. However, if you are running a Docusnap client outside the Docusnap server, it requires remote access to the database. To do this, start the SQL Server Configuration Manager.

Navigate as follows:

• SQL Server Network Configuration - Protocols for "INSTANCE NAME"

Enable TCP/IP.

◆ ◆ 2 🖫 🔒 🛛						
 SQL Server Configuration Manager (Local) SQL Server Services SQL Server Network Configuration (32bit) SQL Native Client 11.0 Configuration Protocols for SQLEXPRESS Protocols for DOCUSNAP SQL Native Client 11.0 Configuration 	Protocol Name Shared Memory Named Pipes TCP/IP	Status Enabled Disabled Disabled	TCP/IP Properties Protocol IP Addresses General Enabled Keep Alive Listen All	Yes 30000 Yes	?	×
			Enabled Enable or disable TCP/IP pr	otocol for this server instar	nce	

Fig. 22 - SQL Server Express Configuration - SQL Server Network Configuration



5.2.2 STARTING THE SQL BROWSER SERVICE

This step is necessary for the listing of the SQL Server in the Docusnap configuration and for the negotiation of the communication port. Please set the start mode of the service to Automatic and then start the SQL Server Browser service.

SQL Server Services i) SQL Server (DOCUSNAP) R SQL Server Network Configuration (32bit) i) SQL Server (DOCUSNAP) R SQL Server Network Configuration (32bit) i) SQL Server (SQLEXPRESS) R SQL Server Network Configuration iii SQL Server (DOCUSNAP) R Protocols for SQLEXPRESS iii SQL Server Reporting Services (DOCUSNAP) R Image: Protocols for DOCUSNAP iii SQL Server Reporting Services (DOCUSNAP) R SQL Server Agent (DOCUSNAP) iii SQL Server Agent (DOCUSNAP) R SQL Server Agent (SQLEXPRESS) iii SQL Server Agent (SQLEXPRESS) S	Running Running Running Stopped Stopped	Automatic Automatic Other (Boot, Syst	em, Disabled or Unknown) em, Disabled or Unknown)	Log On As NT Service\MSSQL NT Service\MSSQL NT Service\MSSQL NT Service\ReportS NT Service\ReportS NT AUTHORITY\NE	736 3260	
Image: SQL Server Network Configuration (32bit)	Running Running Running Stopped Stopped	Automatic Manual Automatic Automatic Other (Boot, Syste Other (Boot, Syste		NT Service\MSSQL NT Service\MSSQL NT Service\MSSQL NT Service\ReportS	3200 5864 736 3260	
SQL Native Client 11.0 Configuration (32bit) ID SQL Server (SQLEXPRESS) SQL Server Network Configuration ID SQL Server (SQLEXPRESS) Image: Protocols for SQLEXPRESS ID SQL Server Reporting Services (DOCUSNAP) Image: Protocols for DOCUSNAP ID SQL Server Agent (DOCUSNAP) Image: SQL Native Client 11.0 Configuration IS SQL Server Agent (DOCUSNAP) Image: SQL Native Client 11.0 Configuration IS SQL Server Agent (DOCUSNAP)	Running Running Stopped Stopped	Manual Automatic Automatic Other (Boot, Syst Other (Boot, Syst		NT Service\MSSQL NT Service\MSSQL NT Service\ReportS	5864 736 3260	
SQL Server Network Configuration SQL Server Network Configuration SQL Server Launchpad (DOCUSNAP) Protocols for DOCUSNAP SQL Native Client 11.0 Configuration SQL Server Reporting Services (DOCUSNAP) SQL Server Agent (DOCUSNAP) SQL Server Agent (SQLEXPRESS) SQL Server Agent (Running Running Stopped Stopped	Automatic Automatic Other (Boot, Syste Other (Boot, Syste		NT Service\MSSQL NT Service\ReportS	736 3260	
Protocols for SQLEXPRESS Protocols for DOCUSNAP SQL Server Launchpad (DOCUSNAP) SQL Server Agent (DOCUSNAP) SQL Server Agent (DOCUSNAP) SQL Server Agent (DOCUSNAP) SQL Server Agent (SQLEXPRESS) SQL Server Agent (SQLEXPRES) SQL Server Agent (Running Stopped Stopped	Automatic Other (Boot, Syst Other (Boot, Syst		NT Service\ReportS	3260	
Protocols for DOCUSNAP SQL Native Client 11.0 Configuration SQL Server Agent (DOCUSNAP) SQL Server Agent (DOCUSNAP) SQL Server Agent (SQLEXPRESS) SQL Server Agent (SQLEXPRESS) SQL Server Agent (SQLEXPRESS)	Stopped Stopped	Other (Boot, Syste Other (Boot, Syste				
SQL Value Clerk 11.0 Comparation	Stopped	Other (Boot, Syst		NT AUTHORITY\NE		
SQL Server Agent (SQLEXPRESS) S			em, Disabled or Unknown)		0	
SQL Server Browser F	Running	Automatic		NT AUTHORITY\NE	0	
				NT AUTHORITY\LO	2212	
			Log On Service Advance		m Files/Micros	-0.501
			Binary Path	"C:\Program Files\Microsoft St		oft SQL
			Error Control	1		
			Exit Code	1077		
			Host Name	VPC-INSTA		
			Name Process ID	SQL Server	Agent (DOCU	SNAPJ
			SQL Service Type	SQL Agent		
			Start Mode	Automatic		
			State	Stopped		-
			June	stopped		

Fig. 23 - SQL Server Express Configuration - SQL Server Browser Service



5.2.3 DATABASE USERS AND PERMISSIONS

The Docusnap database itself is not created via SQL Management Studio, but automatically during the initial configuration of Docusnap. Please note that it is only possible to assign user rights to the database after it has been created.

The users who connect to the Docusnap database must have **db_owner** permissions.

In the following example, the SQL Server Management Studio first creates an SQL user **Docusnap** and then assigns it membership in the db_owner role for the Docusnap database.

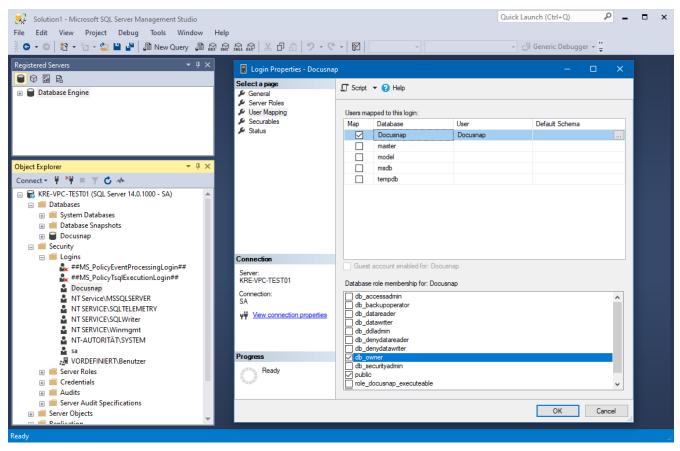


Fig. 24 - SQL Server Express Configuration - Database permissions



To use SQL Server authentication, SQL Server and Windows authentication mode must be enabled for mixed authentication.

When using Windows authentication mode only, all accessing users or groups must be authorized for access in SQL Server Management Studio. This applies in particular to the service account used for the Docusnap Server Service.

🔀 Solution 1 - Microsoft SQL Server Management Studio File Edit View Project Debug Tools Window Help		Quick Launch (Ctrl+Q)
💿 🗸 💿 🏠 🖌 📩 🤟 🔛 💾 🔐 🖨 New Query 🌗 🔬 🎡 📾	愛 米 己 台 ラ・ペ・ 図	👻 🗐 Generic Debugger 👻
Registered Servers - + ×	Server Properties - KRE-VPC-TEST01	– 🗆 X
😧 🖨 Database Engine	Select a page Script General Memory Processors Security Connections Database Settings Advanced SQL Server and Windows SQL Server and Windows	
Object Explorer ▼ ↓ × Connect ▼ ↓ ×↓ ■ ▼ ◆ ↓ □ € KRE-VPC-TEST01 (SQL Server 14.0.1000 - SA) □ Databases □ Databases □ Database Snapshots □ Docump □ Docump	Permissions Login auditing None Failed logins only Successful logins only Both failed and success	ful logins
 Security Logins ##MS_PolicyEventProcessingLogin## ##MS_PolicyTsqlExecutionLogin## Docusnap NT Service\NSSQLSERVER NT SERVICE\SQLTELEMETRY NT SERVICE\SQLWriter 	Server proxy account Connection Server: KRE-VPC-TEST01 Password: Connection: SA Options Y ^{II} View connection properties Constable C2 audit tracing Coros database ownersh	
 sa VORDEFINIERT\Benutzer Server Roles Credentials Audits Server Audit Specifications Server Objects 	Progress Ready	OK Cancel

Fig. 25 - SQL Server Express Configuration - Database authentication



5.2.4 ENABLING SQL SERVER IN THE WINDOWS FIREWALL

In order to access the SQL Server and the Docusnap database via the network, a corresponding firewall rule must be activated for the SQL Server and SQL Browser Service when the Windows Firewall is activated.

You create the firewall rules as follows:

Control Panel - Windows (Defender) Firewall - Advanced Settings - Right Click Inbound Rules

- Rule type = Program
- Program This program path:
 - o %ProgramFiles%\Microsoft SQL Server\MSSQL15.MSSQLSERVER\MSSQL\Binn\sqlservr.exe
 - The path can be different MSSQL14.DOCUSNAP Docusnap is the name of the SQL instance and 14 is the version number of the SQL Server
 - o Furthermore, the installation directory may differ

Repeat the procedure for the sqlbrowser.exe, which can be found in the following path by default:

%ProgramFiles(x86)%\Microsoft SQL Server\90\Shared



5.3 OPTIONAL STEP: UPDATING YOUR LOCALDB TO SQL SERVER (EXPRESS)

After the installation of Microsoft SQL Server Express or a fully-featured Microsoft SQL Server with Management Tools, you can add your local DB to it.

The local database (*.mdf and *.ldf files) is located in the user directory of the user who installed the local database and Docusnap.

The two files must be copied to the SQL server. You can use Microsoft SQL Server Management Studio to append them. Use a user with **sysadmin** permissions (SA or similar).

Right click on Databases - Attach

Object Explorer Image: Connection of the server s	🙀 Microsoft SQL Server Management Studio				- 0	×
Object Explorer • • • • • • • • • • • • • • •	File Edit View Debug Tools Window Help			line (-
Connect) - (? - 印 - 印 图 》	1	· 100	•	23
Image: Programmability Image: Programmability Image: Programmabil		1 Attach Databases			- 0	×
Roles VPC-INSTALLX:DOCUSNAP Ganection: Asymmetric Keys VPC-INSTALLX:DSX Gentificates	Connect - VPC-INSTALL-XLDOCUSNAP (SQL Server 13.0.1601 - VPC-INSTALL A Databases System Databases Database Diagrams Database Diagrams Database Diagrams Database Diagrams Database Diagrams Docurnap	Select a page	Databases to attach: MDF File Location	Add	Atach As Remove	×
BeportServerSDOCUSNAP Progress Add Catalog. Remove ReportServerSDOCUSNAPTempDB Progress Add Catalog. Remove Security Isogins Progress Add Catalog. Remove Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security Image: Security <	Docusnap Roles Roles Schemas Gos Certificates Gos Symmetric Keys Gos Symmetric Keys ReportServerSDOCUSNAP ReportServerSDOCUSNAPTempDB Security Logins & ##MS_PolicyEventProcessingLogin## # ##MS_PolicyEventProcessingLogin## # ##MS_PolicyEventProcessingLogin##	VPC-INSTALL-X-DOCUSNAP Connection: VPC-INSTALL-X-DSX VPC-INSTALL-X-DSX		Add Catalog .		

Fig. 26 - Updating the LocalDB to SQL Server

Now, click Add to add the file location and select the *.mdf file.

The Attach Databases panel shows information related to the database. Here, you can e.g. change the database name in the Attach as section.



6. PROVIDING DEMO DATA

As already described in the chapter Step 3 - Database, you can import demo data when you create a new Docusnap database.

If you confirm the selection regarding the DocusnapSports Demo Company, you will find two clients in your database. The client DocusnapSports cannot be used any further and will only provide you with demo data and will not be taken into account in the license count.



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Version history

Date	Description
September 05, 2016	Adaptations according to RTM Docusnap X
September 27, 2016	Docusnap Server Revision
October 25, 2018	Screenshots updated; New architecture of the web browser
July 26, 2019	Screenshots and texts updated
	New chapter added - Setting up a Central Configuration File
August 22, 2019	Added a note in chapter 3.2 regarding the configuration of the server service.
January 27, 2020	Adding the NPCAP driver path; Correcting the UseConfig parameter in the central configuration; Restoring the DocusnapDemo database
May 05, 2020	Version 2.0 - Revision of the HowTos for Docusnap 11
November 04, 2021	Version 2.2 – Added another possibility of a central configuration file, SQL server installation extended by full text search
July 12, 2022	Version 2.3 – System requirements updated (.NET Framework 4.8)

