

Instalare SQL Server 2022 Express (x64) si pregatire pentru ForIT - Forms

Tip	Document tehnic
Autor	Foris Zoltan
Versiunea	-
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Prefata

Cateodata este necesara instalarea (sau reinstalarea) manuala a serverului de baze de date **Microsoft SQL Server 2022 Express (x64)** pentru ca setup-ul **ForITFormsServer.exe** nu reuseste sa instaleze automat din diverse motive (lipsa updateuri, necesitate restart, etc.). Versiunea 2022 se poate instala doar pe sisteme de operare pe 64-bit.

Ce este MS SQL Server si cum este folosit in ForIT - Forms

MS SQL Server este un server de baze de date relationale (RDBMS) care dispune de un limbaj de programare SQL (Structured query language), prin intermediul caruia programele interactioneaza cu datele inregistrate si stocate in bazele de date.

MS SQL Server este implementat (pe sistemul de operare Windows) sub forma unui serviciu (Windows Service). Comunicarea intre programe si serviciul MS SQL Server este realizata prin 3 protocoale: TCP/IP, Named Pipes si Shared Memory Provider. Local, programele folosesc Named Pipes sau Shared Memory Provider, iar de la distanta (de pe alt calculator) comunicarea este realizata prin protocolul TCP/IP. Portul implicit este 1433.

MS SQL Server dispune de o versiune simplificata, limitata si gratuita, MS SQL Server Express, care este folosit si de programul de gestiune ForIT - Forms, insa versiunea Express in mod implicit nu expune portul 1433 si nici nu permite conexiuni de la distanta - de pe alt calculator (aceste configurari sunt efectuate de catre setupul ForIT - Forms si / sau de catre utilitarul ForITFormsSQLInit).

Securitatea datelor este garantata prin autorizarea implicita Windows, sau autorizarea combinata Windows + autorizare SQL Server.

MS SQL Server stocheaza datele in fisiere. Extensia acestor fisiere sunt:

- .mdf: fisier care contine datele (in anumite situatii pot sa apara si fisiere .ndf)
- .ldf: fisier log

Pentru integritatea bazei de date, amandoua fisiere sunt vitale.

Pentru fiecare baza de date MS SQL Server Express creeaza (cel putin) o pereche de fisiere .mdf si .ldf care se numesc astfel: <nume_baza_date>.mdf si <nume_baza_date>_log.ldf si sunt stocate implicit in folderul de instalare a serverului de baze de date:

C:\Program Files\Microsoft SQL Server\MSSQL16.SQLEXPRESS\MSSQL\DATA .

Incepand cu versiunea v5.1.x, fisierele de baze de date folosite de catre programul de gestiune ForIT - Forms sunt create in folderul de instalare a programului de gestiune ForIT - Forms:

C:\Program Files (x86)\ForIT Solutions\ForIT - Forms\SQLDatabases .

Instante

Pe un calculator este posibila instalarea a mai multor instante de SQL Server. O instanta este identificata prin nume (implicit este SQLEXPRESS si nu trebuie modificat pentru ForIT - Forms), fiecare instanta avand propriul set de fisiere (programe si date). SQL Server suporta 50 de instante pe un calculator. Conectarea la o instanta particulara se realizeaza prin NUME_SAU_IP\INSTANCE_NAME, spre ex. SERVER\SQLEXPRESS, unde SERVER este denumirea calculatorului si SQLEXPRESS este numele instantei. Conectarea la o instanta locala se poate face prin .\SQLEXPRESS, unde punctul indica calculatorul local (localhost).

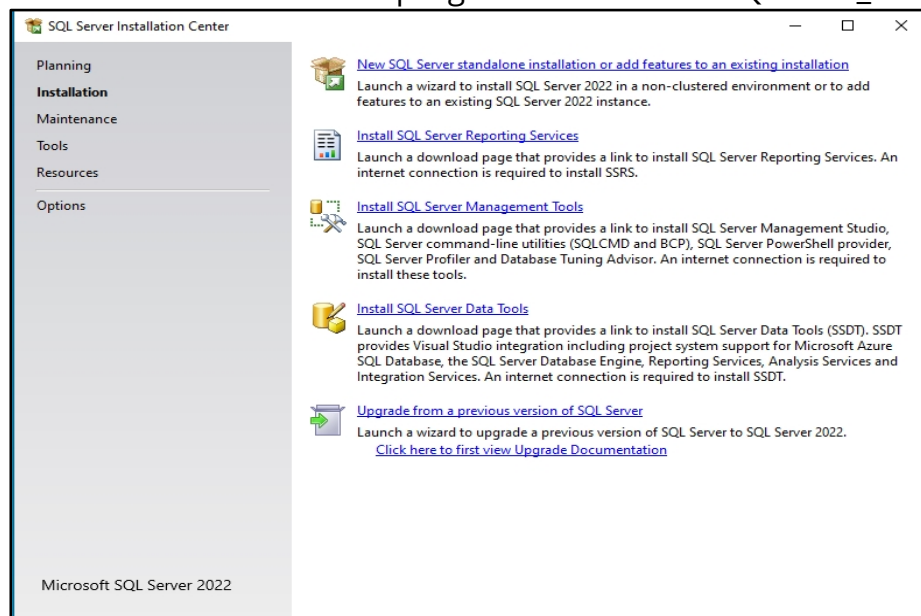
ForIT - Forms se poate configura sa foloseasca oricare instanta, folosind utilitarul Configurare Retea, insa nu este recomandata folosirea unei alte instante decat SQLEXPRESS (necesita interventia de la ForIT Solutions, reconfigurarea tuturor statilor implicate). Totusi, in anumite situatii, daca clientul dispune de o licenta de SQL Server si doreste folosirea serverului propriu de baze de date, este necesara optiunea de conectare la o instanta specifica sau implicita (fara denumire).

Instalare SQL Server 2022 Express (x64)

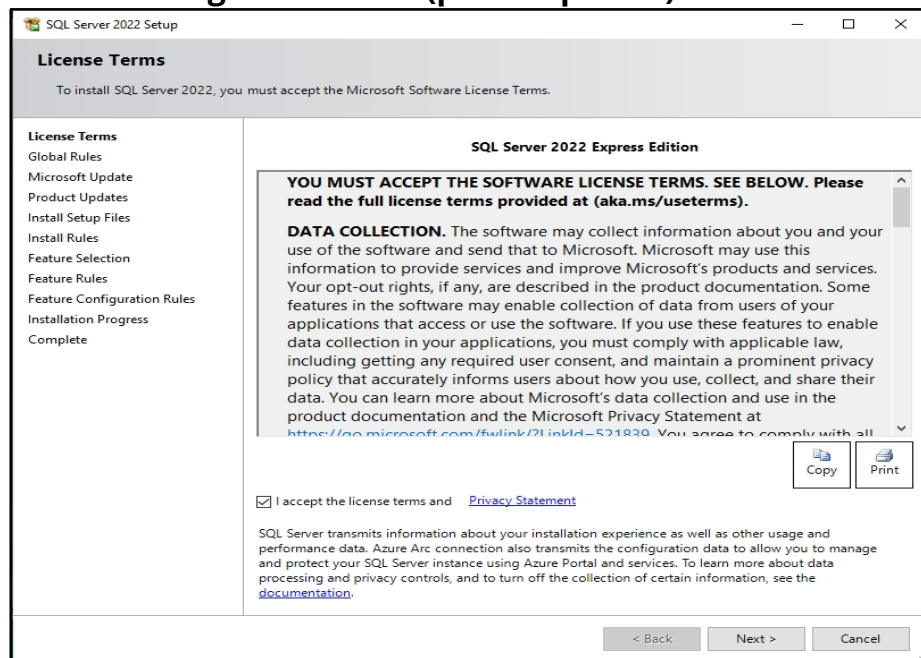
1. Se descarca kitul de instalare

https://download.foritsolutions.com?id=sqlexpr_x64_enu .

2. Se lanseaza in executie programul descarcat: SQLEXP_x64_ENU.exe .

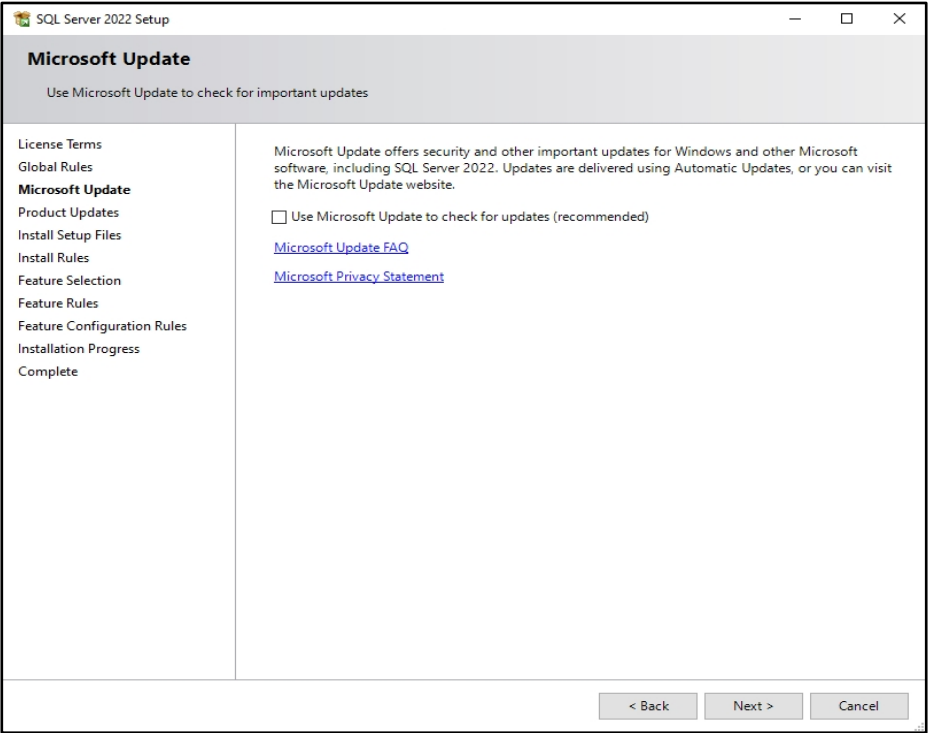


3. Se alege optiunea de instalare **New SQL Server stand-alone installation or add features to an existing installation (prima optiune)**.

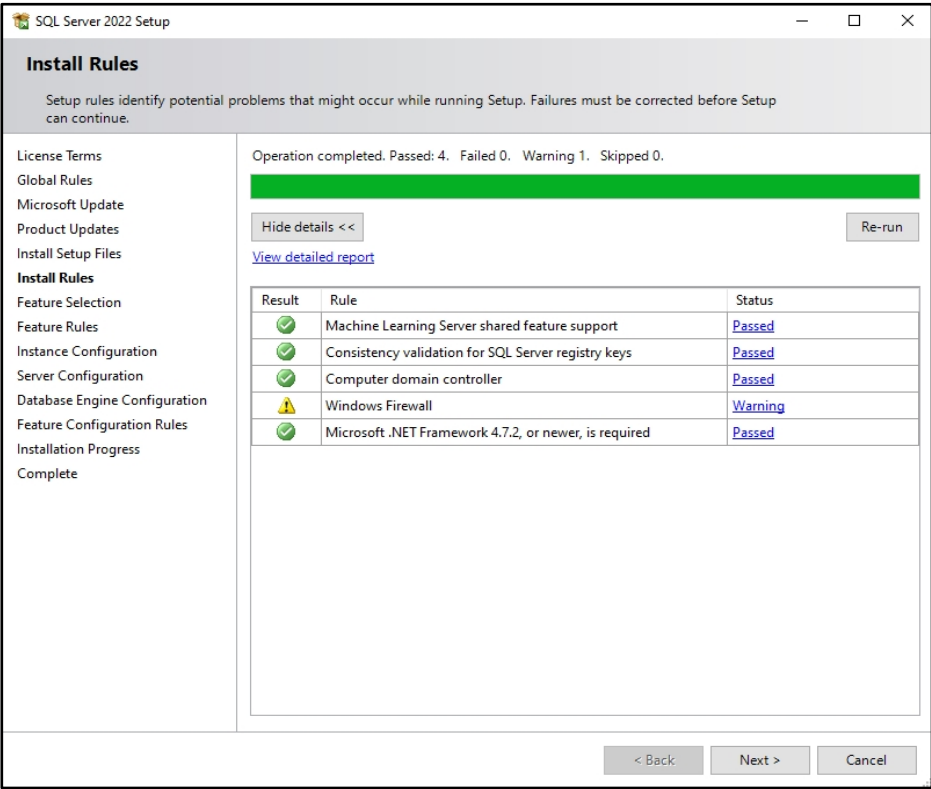


Se bifeaza **I accept the license terms** si se apasa butonul **Next**.

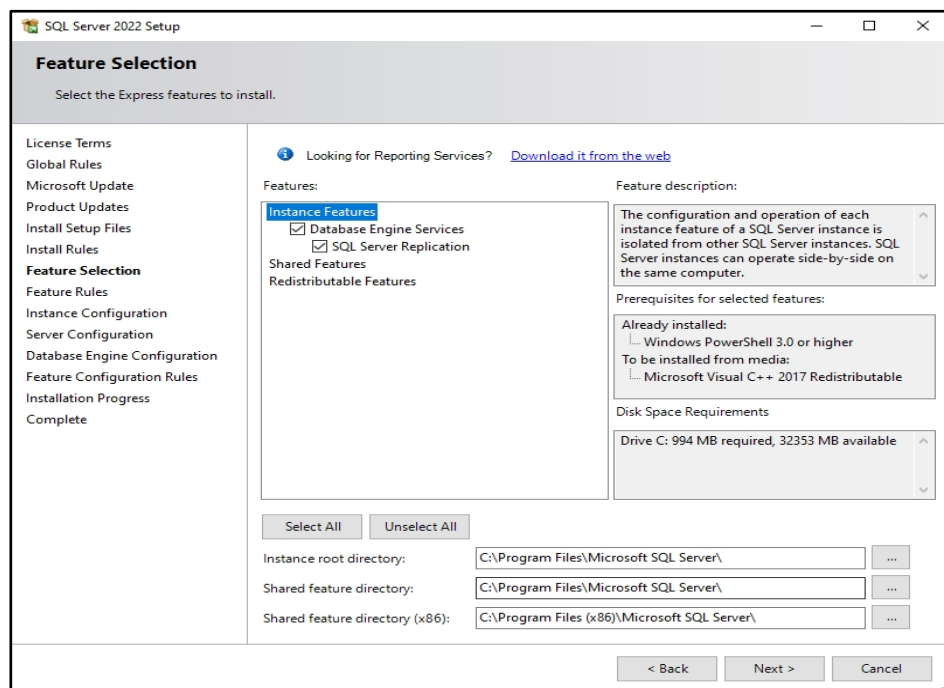
4. Se apasa butonul **Next** .



5. Se apasa butonul **Next**.



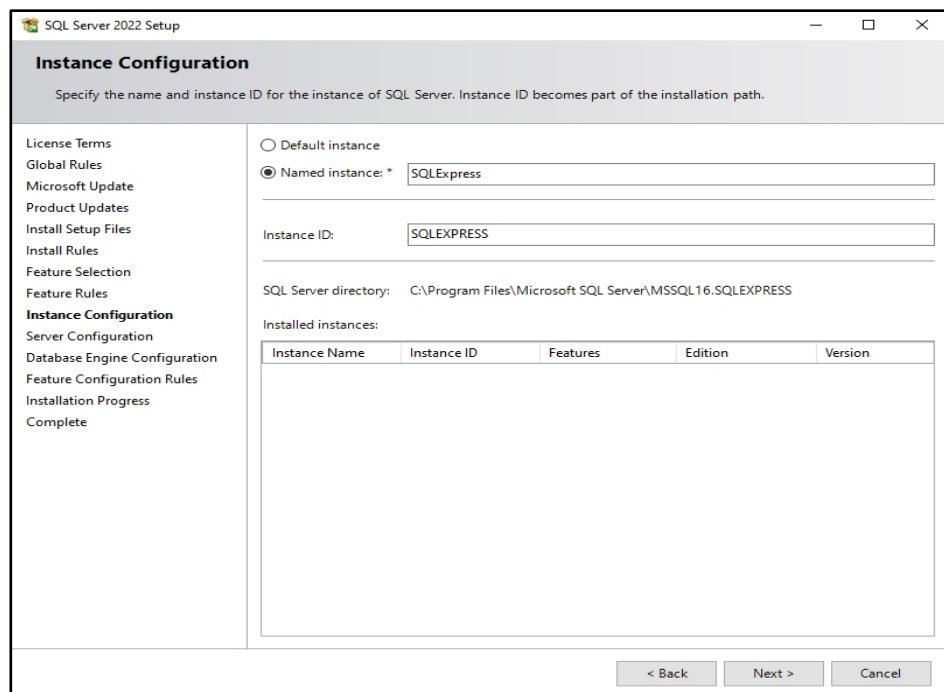
6. Se bifeaza (daca nu este bifat) **Database Engine Services** si **SQL Server Replication**.



The screenshot shows the 'Feature Selection' window of the SQL Server 2022 Setup. The left sidebar lists various setup steps, with 'Feature Selection' currently selected. The main area is titled 'Select the Express features to install.' and contains a 'Features' list on the left and a 'Feature description' on the right. In the 'Features' list, 'Instance Features' is expanded, showing 'Database Engine Services' and 'SQL Server Replication' both checked. Below the list are 'Select All' and 'Unselect All' buttons. At the bottom, there are text boxes for 'Instance root directory:', 'Shared feature directory:', and 'Shared feature directory (x86):', each followed by a browse button (...). The 'Feature description' on the right provides details about the selected features, prerequisites (Windows PowerShell 3.0 or higher, Microsoft Visual C++ 2017 Redistributable), and disk space requirements (994 MB required, 32353 MB available). Navigation buttons '< Back', 'Next >', and 'Cancel' are at the bottom right.

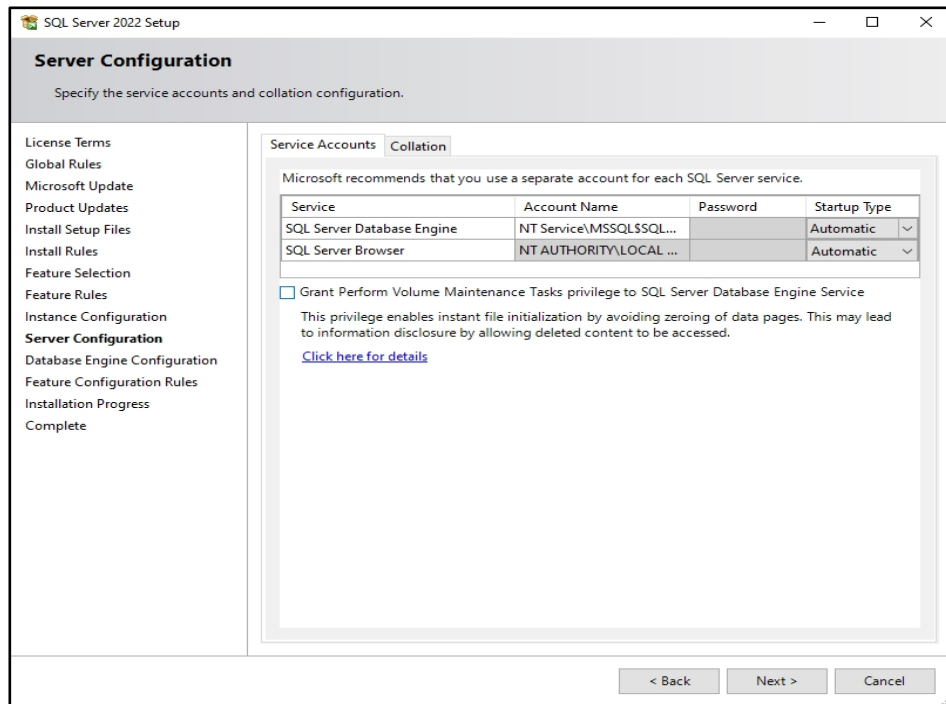
Se apasa butonul **Next**.

7. Se apasa butonul **Next**.



The screenshot shows the 'Instance Configuration' window of the SQL Server 2022 Setup. The left sidebar shows 'Instance Configuration' as the current step. The main area is titled 'Specify the name and instance ID for the instance of SQL Server. Instance ID becomes part of the installation path.' It contains radio buttons for 'Default instance' and 'Named instance: *'. The 'Named instance' option is selected, and the text 'SQLExpress' is entered in the adjacent field. Below this, the 'Instance ID' field contains 'SQLEXPRESS'. The 'SQL Server directory' is shown as 'C:\Program Files\Microsoft SQL Server\MSSQL16.SQLEXPRESS'. Under 'Installed instances:', there is an empty table with columns: Instance Name, Instance ID, Features, Edition, and Version. Navigation buttons '< Back', 'Next >', and 'Cancel' are at the bottom right.

8.a. Pe pagina **Service Accounts** se selecteaza pentru **SQL Server Browser** Startup Type **Automatic**



SQL Server 2022 Setup

Server Configuration

Specify the service accounts and collation configuration.

License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Installation Progress
Complete

Service Accounts Collation

Microsoft recommends that you use a separate account for each SQL Server service.

Service	Account Name	Password	Startup Type
SQL Server Database Engine	NT Service\MSSQL\$SQL...		Automatic
SQL Server Browser	NT AUTHORITY\LOCAL ...		Automatic

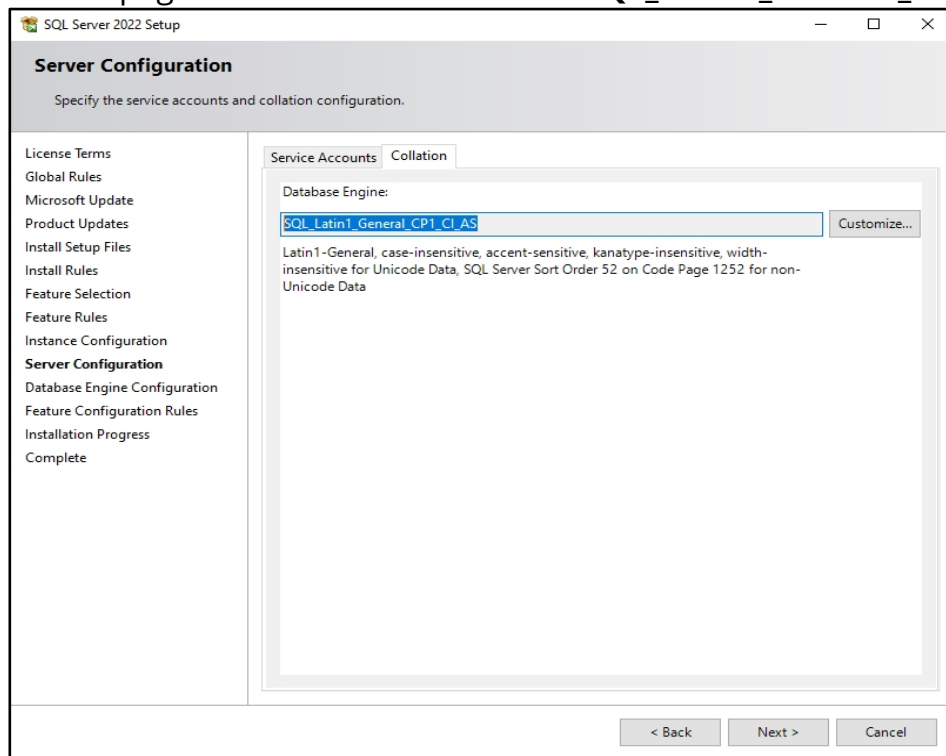
☐ Grant Perform Volume Maintenance Tasks privilege to SQL Server Database Engine Service

This privilege enables instant file initialization by avoiding zeroing of data pages. This may lead to information disclosure by allowing deleted content to be accessed.

[Click here for details](#)

< Back Next > Cancel

8.b. Pe pagina **Collation** se selecteaza **SQL_Latin1_General_CP1_CI_AS**



SQL Server 2022 Setup

Server Configuration

Specify the service accounts and collation configuration.

License Terms
Global Rules
Microsoft Update
Product Updates
Install Setup Files
Install Rules
Feature Selection
Feature Rules
Instance Configuration
Server Configuration
Database Engine Configuration
Feature Configuration Rules
Installation Progress
Complete

Service Accounts Collation

Database Engine:

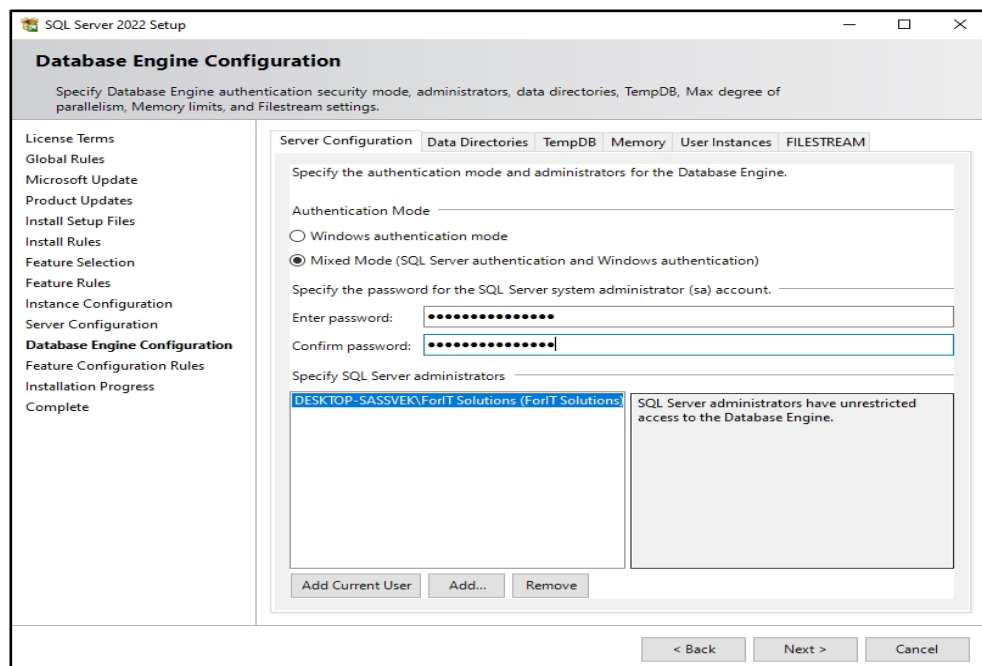
SQL_Latin1_General_CP1_CI_AS Customize...

Latin1-General, case-insensitive, accent-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort Order 52 on Code Page 1252 for non-Unicode Data

< Back Next > Cancel

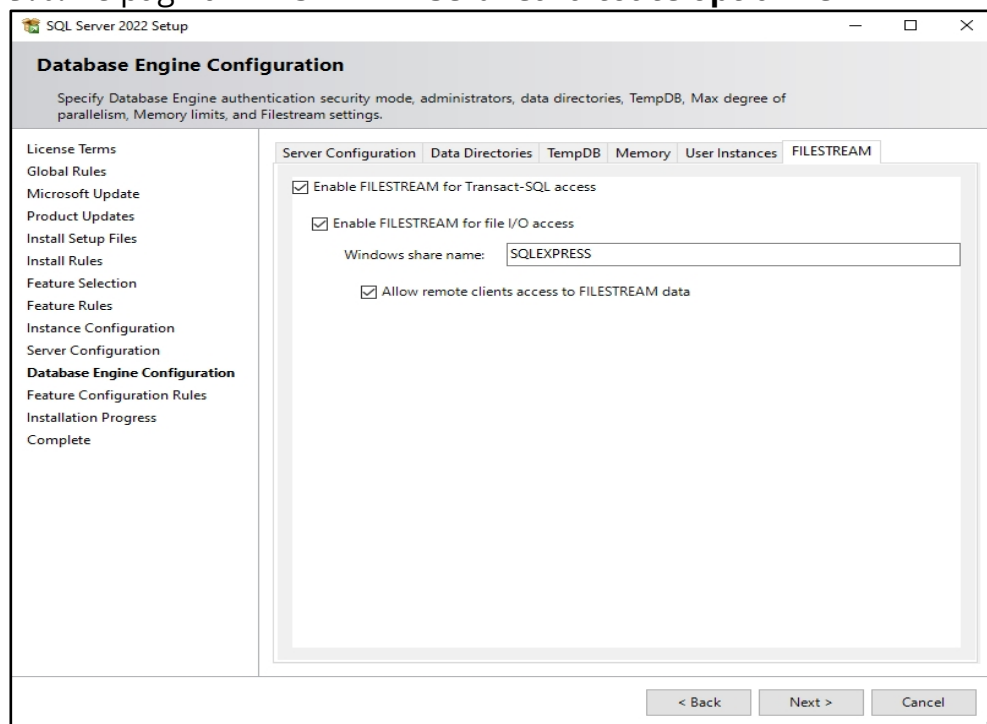
Se apasa butonul **Next** .

9.a. Pe pagina Server Configuration se selecteaza Mixed Mode (SQL Server authentication and Windows authentication)

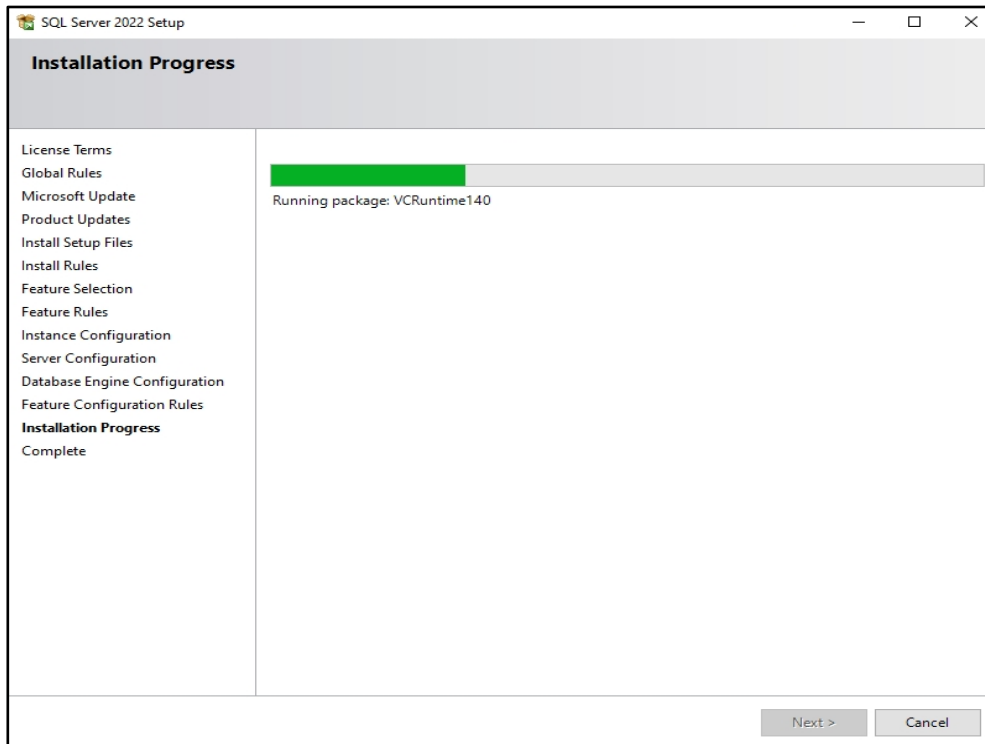


Se introduce o parola complexa si se confirma (poate sa fie orice parola complexa care contine litere mari, mici, semnul exclamarii, liniuta, fara spatii, aceasta parola nu va mai fi folosita niciodata) si se apasa butonul **Next**, dupa care se asteapta pana cand se termina instalarea.

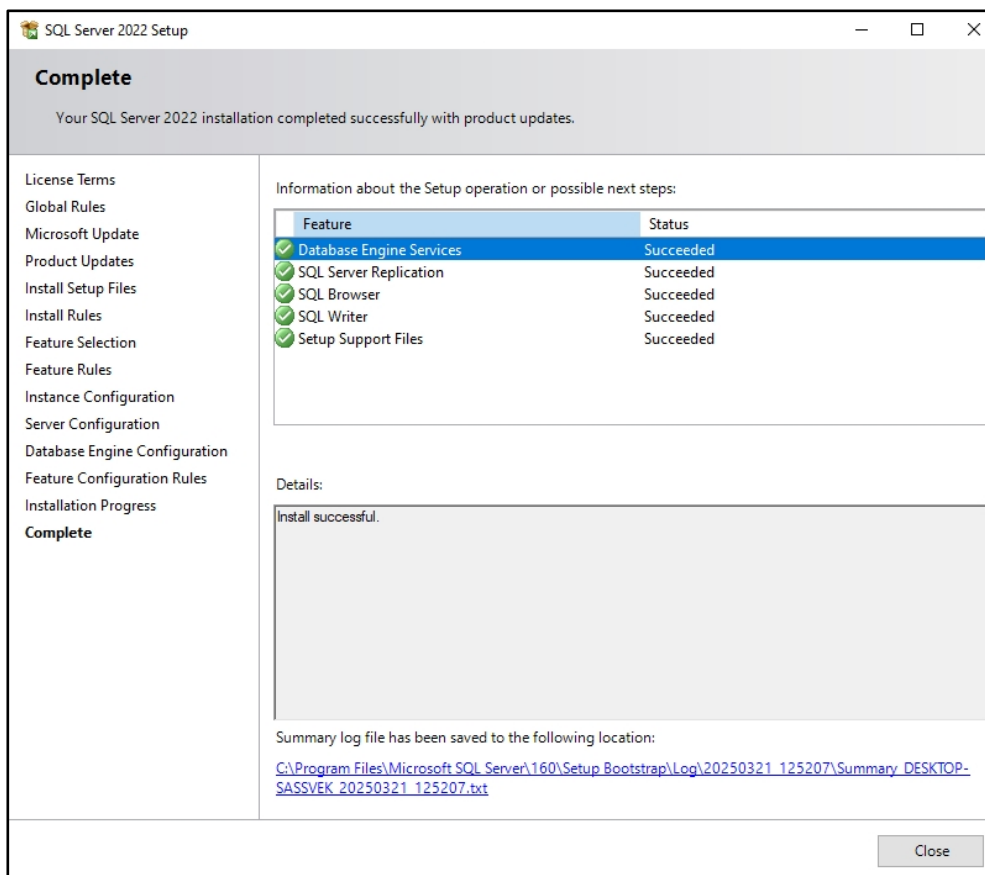
9.b. Pe pagina FILESTREAM se bifeaza toate optiunile



Se apasa butonul **Next**.



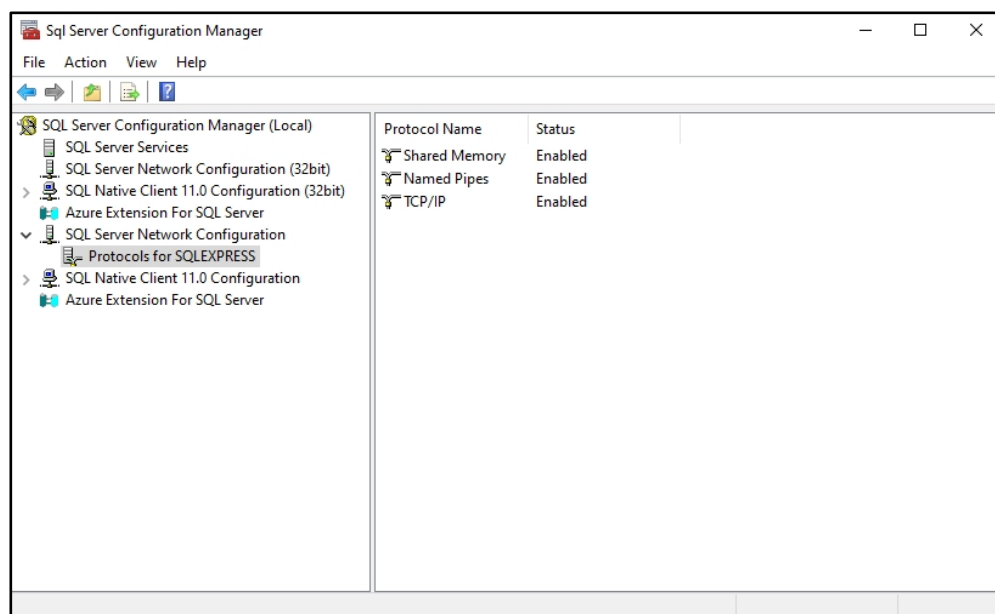
10. Dacă instalarea s-a terminat cu succes, kitul de instalare afiseaza urmatoarea pagina:



Se apasa butonul **Close** si se inchid celelalte ferestre deschise de setup.

Configurarea protocoalelor de retea

1. Se lanseaza programul **Sql Server Configuration Manager**.

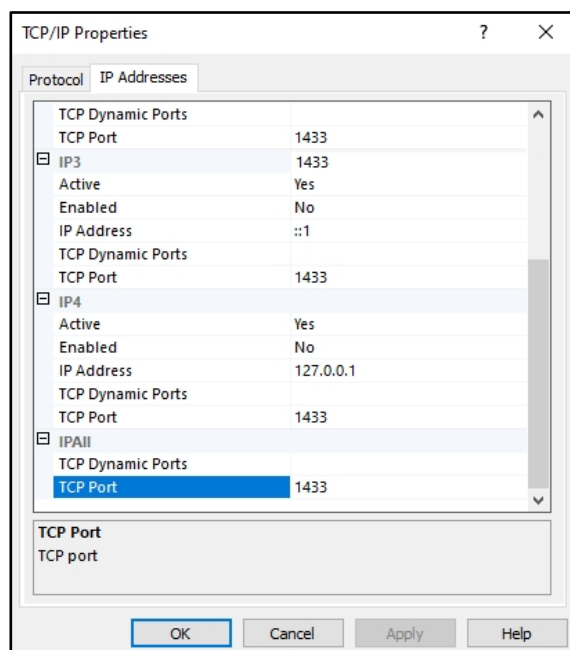


2. Se selecteaza din stanga SQL Server Network Configuration -> Protocols for SQLEXPRESS.

3. In partea dreapta click dreapta pe **Named Pipes** si **Enable**.

4. In partea dreapta click dreapta pe **TCP/IP** si **Enable**.

5. Dublu-click pe **TCP/IP**, dupa care este afisata urmatoarea fereastra



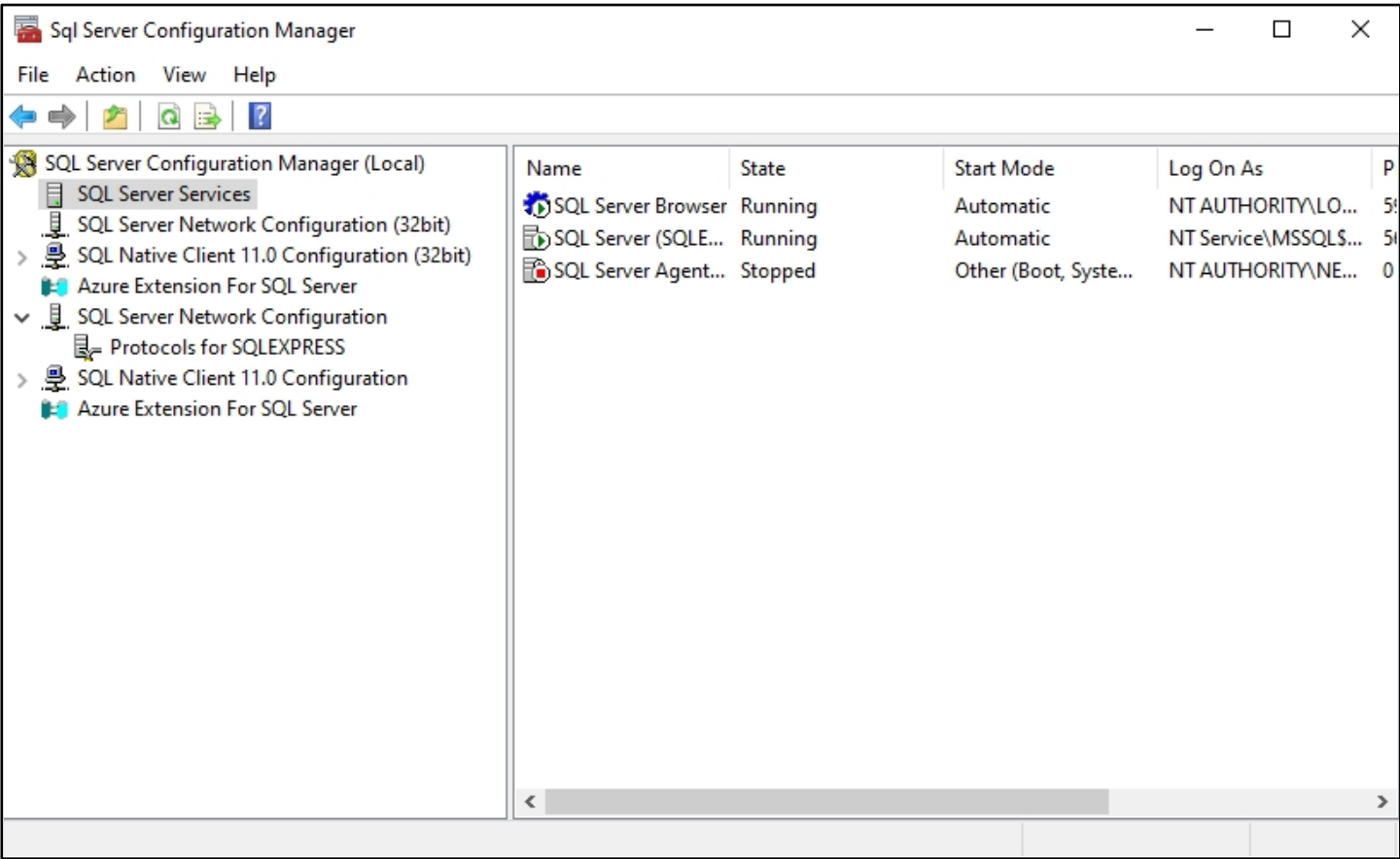
- Pentru fiecare IP se sterge valoarea **TCP Dynamic Ports** (sa nu fie nimic acolo, nici spatiu, nici 0, nimic);

- Pentru **TCP Port** se introduce valoarea **1433**

- Se repeta acest pas pentru fiecare IP, IP1, IP2, IP3, ..., IPAll
- Se apasa butonul Apply

Restartarea serviciilor SQL

- Din partea stanga se selecteaza **SQL Server Services**
- In partea stanga click dreapta pe **SQL Server (SQLEXPRESS)** si **Restart**
- In partea stanga click dreapta pe **SQL Server Browser** si **Restart**

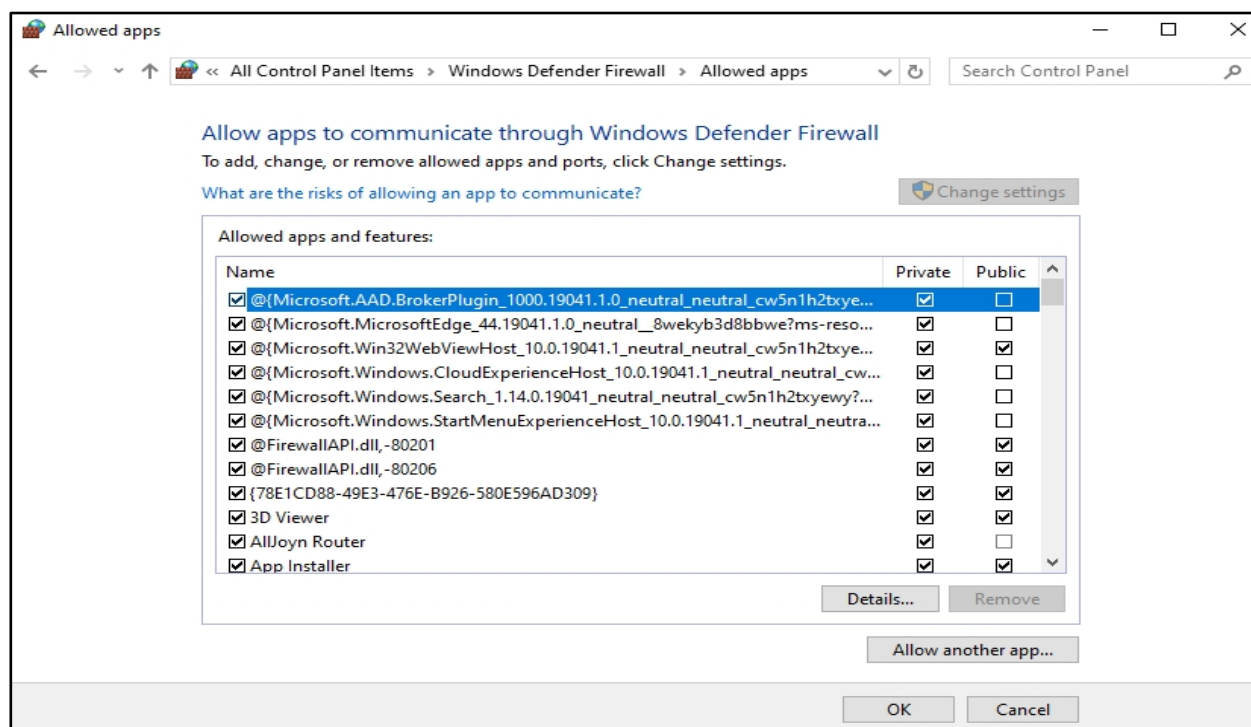


Configurarea Firewall pentru SQL Server

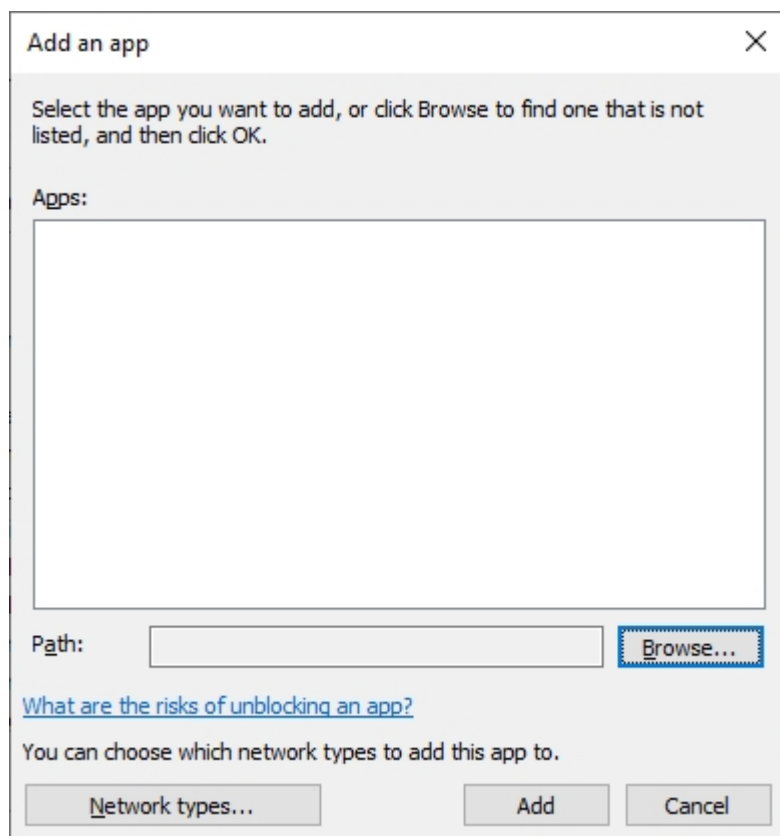
Din **Control Panel** se lanseaza **Windows Defender Firewall**



Din partea stanga se apasa butonul **Allow an app or feature through Windows Defender Firewall**.



Se apasa butonul **Change Settings**, dupa care butonul **Allow another app...**



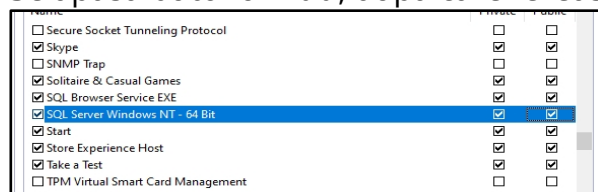
Se apasa butonul Browse si se cauta in sistemul de fisiere sqlservr.exe care este instalat de obicei aici:

C:\Program Files\Microsoft SQL Server\MSSQL16.SQLEXPRESS\MSSQL\Binn\sqlservr.exe, dupa care se apasa butonul **Add**.

Pasii de mai sus se repeta si pentru **SQL Server Browser**, se apasa butonul **Allow another app...** si se selecteaza fisierul sqlbrowser.exe care de obicei este instalat aici:

C:\Program Files (x86)\Microsoft SQL Server\90\Shared\sqlbrowser.exe

Se apasa butonul **Add**, dupa care fereastra de exceptii trebuie sa arate asa:



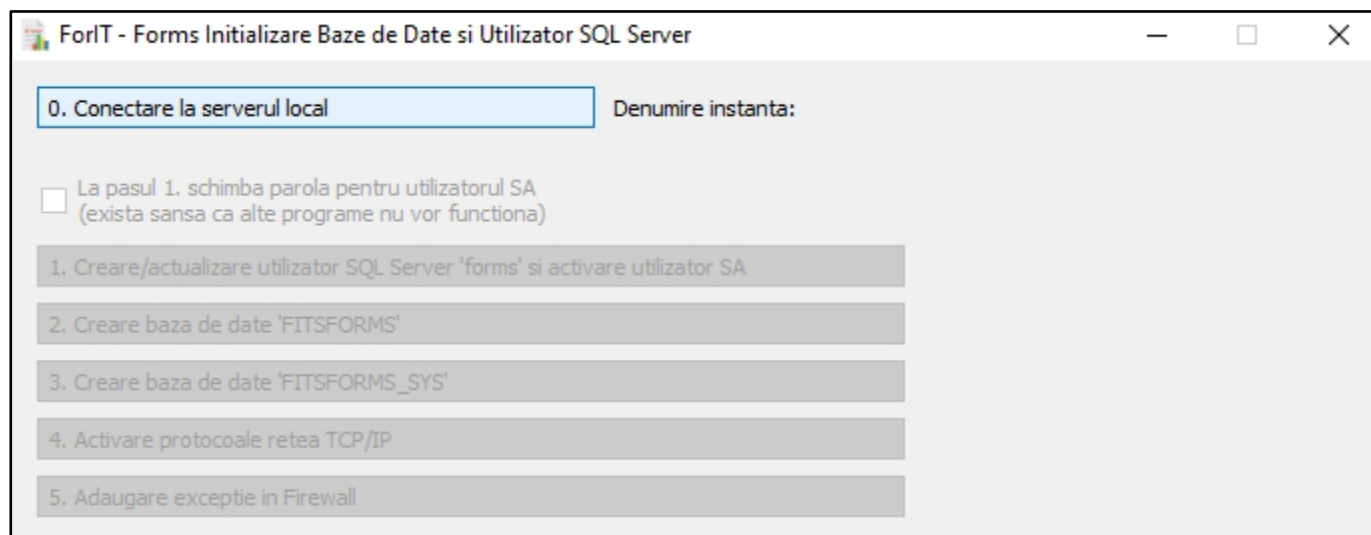
Pentru amandoua inregistrari (**SQL Server Browser Service EXE** si **SQL Server Windows NET - 64 Bit**) se bifeaza amandoua retele **Private** si **Public**.

La final, se apasa butonul OK.

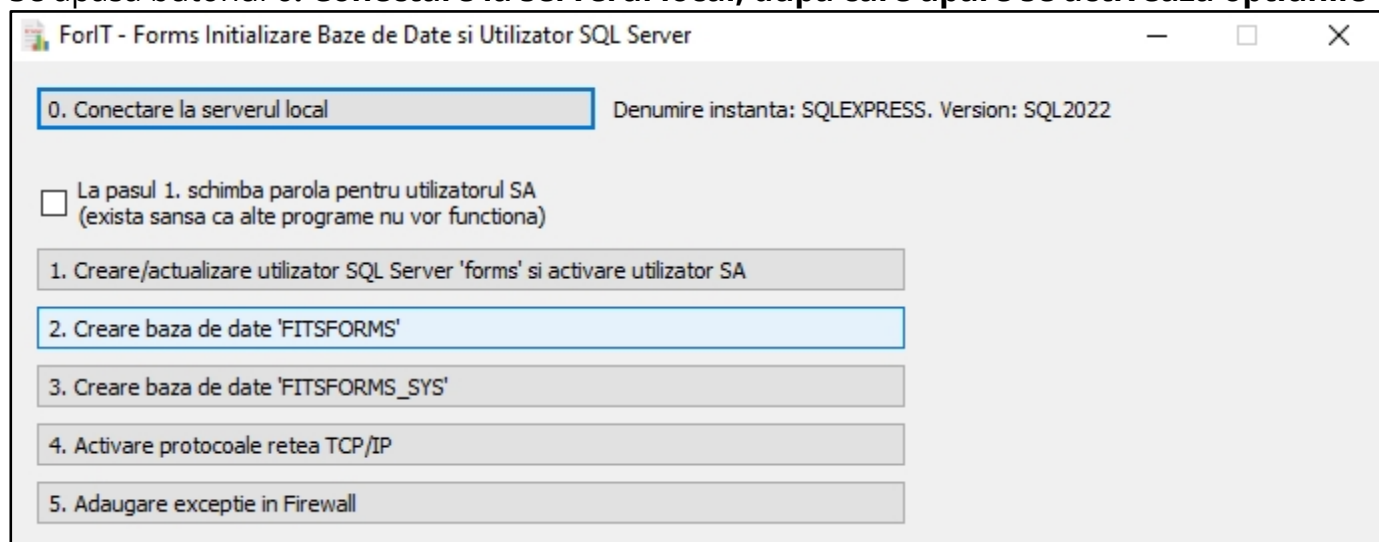
Initializarea bazelor de date si a utilizatorului implicit

Pentru acest pas, se descarca utilitarul ForITFormsInitSQL:

<https://download.foritsolutions.com/ForITFormsInitSQL.exe>



Se apasa butonul **0. Conectare la serverul local**, dupa care apare se activeaza optiunile



Pentru crearea/actualizarea utilizatorului 'forms' se apasa butonul **1. Creare/actualizare utilizator SQL Server 'forms' si activare utilizator SA** (acest buton este util si atunci cand se doreste doar actualizarea utilizatorului 'forms' de la versiunea 4, sau de la o versiune mai recenta de 5 - cand parola era alta)

Pentru crearea bazelor de date implicite FITSFORMS si FITSFORMS_SYS se apasa **butoanele 2, 3**.

Butonul 4 activeaza protocoalele de retea (vezi sectiunea **Configurarea protocoalelor de retea**).

Butonul 5 adauga exceptiile necesare in Windows Firewall (vezi sectiunea **Configurarea Firewall pentru SQL Server**).

Daca ati parcurs toate etapele acestui ghid, butoanele 4 si 5 nu trebuie apasate, pentru ca protocoalele de retea sunt deja activate si exceptiile necesare in Windows Firewall sunt deja configurate.

Daca este instalat un alt antivirus, aceste exceptii trebuie configurate folosind interfata de configurarea a antivirusului respectiv. De asemenea, trebuie adaugat la exceptii porturile 1433 si 1434.

In acest moment SQL Server 2022 Express este instalat, utilizatorul 'forms' si bazele de date sunt create. De asemenea, SQL Server 2017 permite conexiuni de pe alte calculatoare si a fost adaugat exceptie pentru programele / serviciile SQL Server (cam asta incearca sa rezolve setupul ForITFormsServer.exe, cateodata fara succes).

Reluati setup-ul ForITFormsServer.exe.