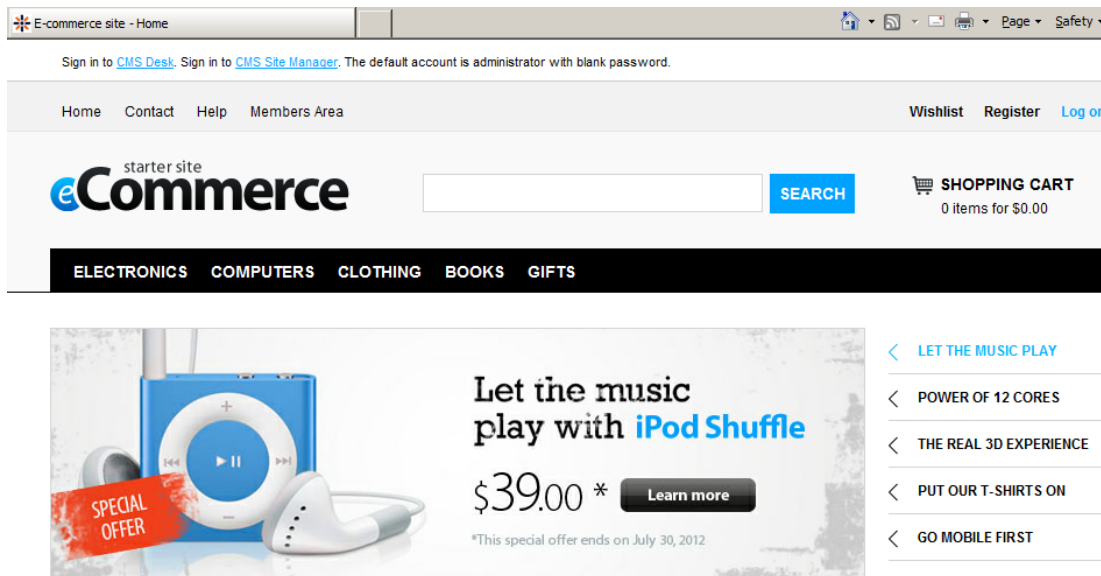


Database Encryption with DbDefence and Web Applications.

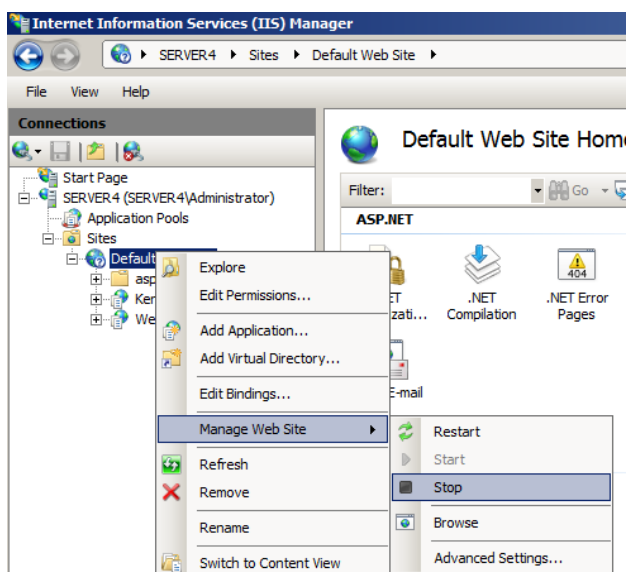
In this article we will show how to apply encryption to the database, restrict access, but still have a web site running without writing a line of code!

For Web Applications demo we used Kentico CMS. It is large and complex CMS available for evaluation. After installation Kentico in E-commerce mode it looks like a typical e-shop:

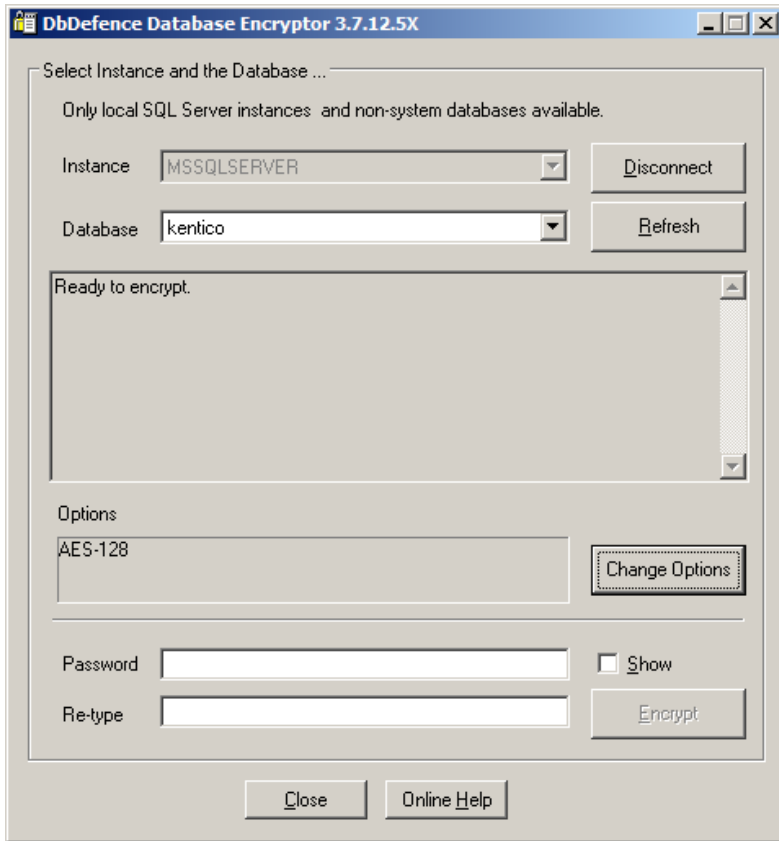


During installation it installs its database on existing SQL Server. We are going to encrypt it and show how it affects running CMS and other clients.

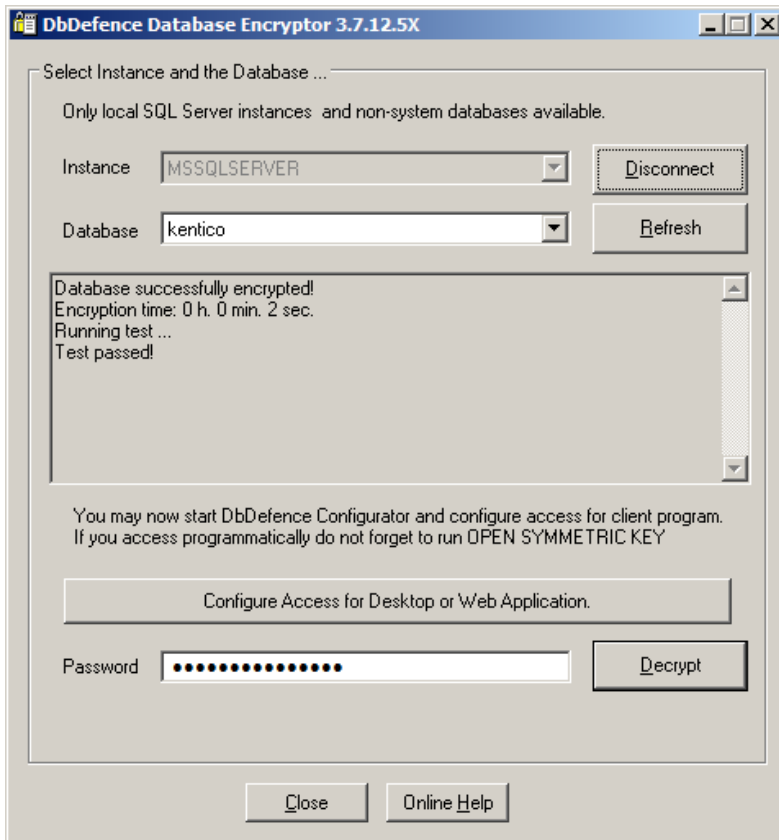
First of all you need to stop web server, otherwise existing database connection from web site won't let Encryptor to perform operations on the database. You can stop the web site from IIS Manager:



Run DbDefence Encryptor to encrypt existing Kentico CMS database now.

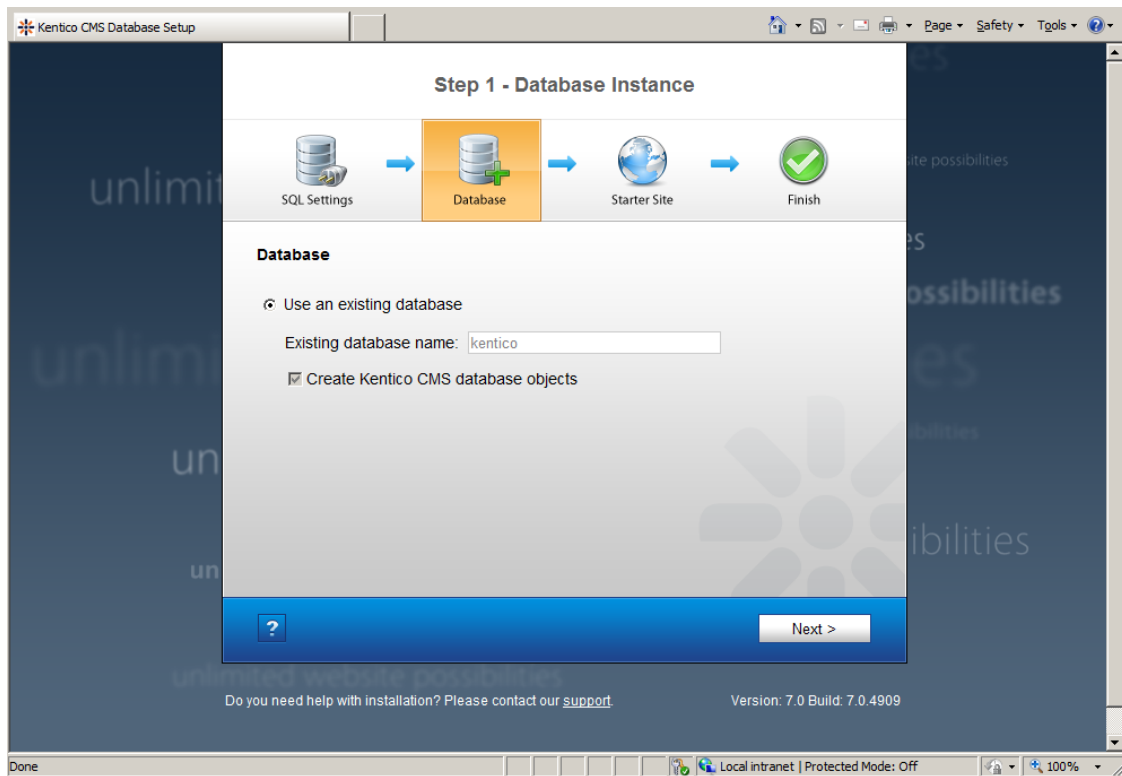


Enter complex password, because usually existing password policy denies simple passwords.



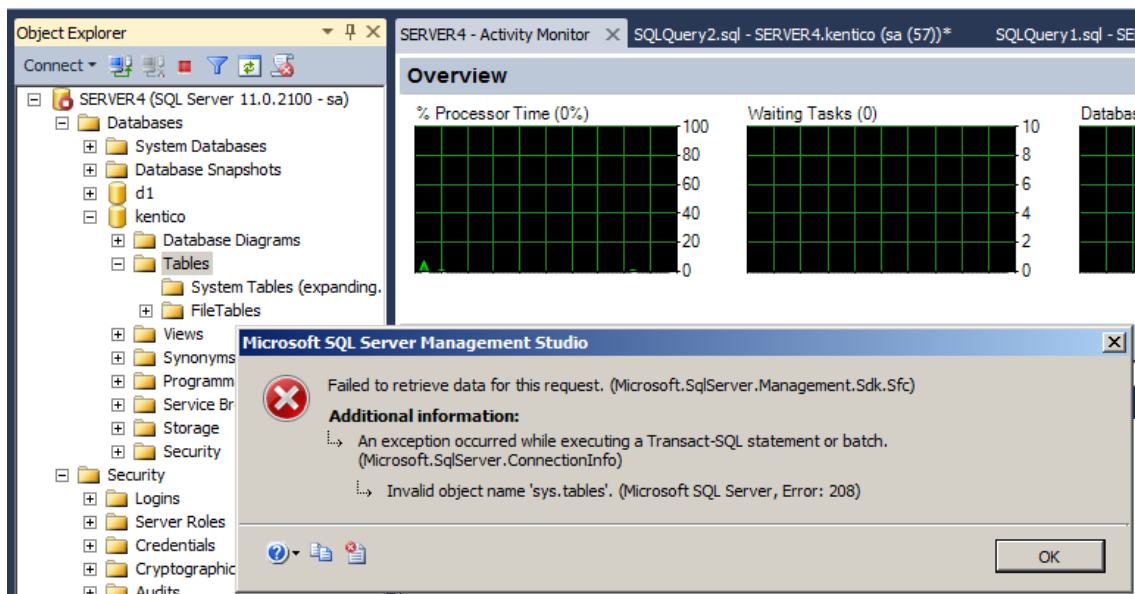
After we entered a password and encrypted the database Encryptor offers to configure existing applications to access just encrypted database. You may also decrypt it whenever you want.

But let's see how CMS reacts on database encryption and open webpage again:



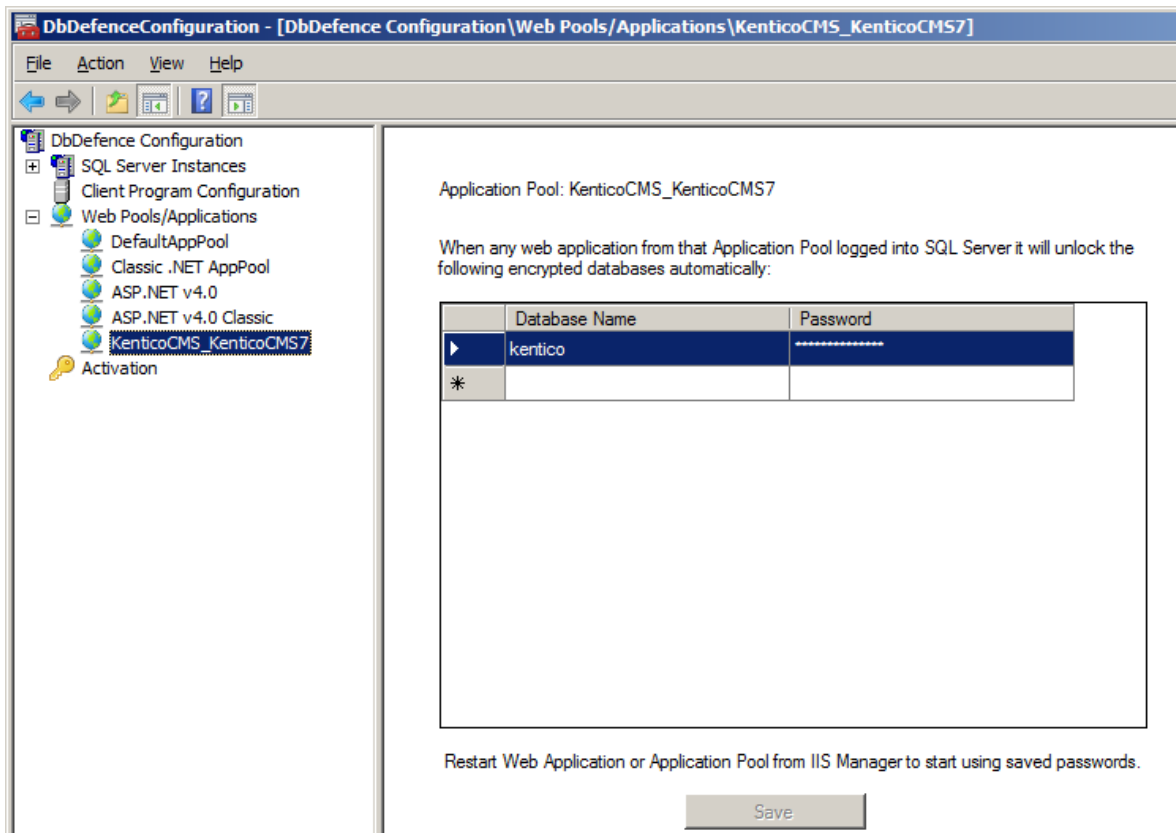
CMS can't access database, but programmers handle that exception professionally and offer to setup a new database. So we see that old database can't be used anymore.

When someone tries to access Kentico database directly with SSMS there are no tables:

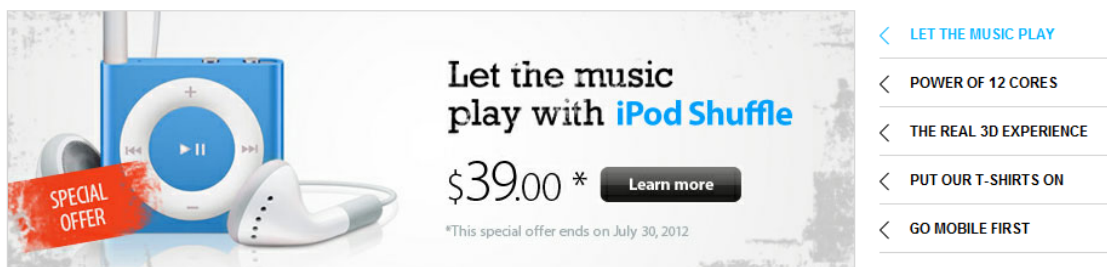
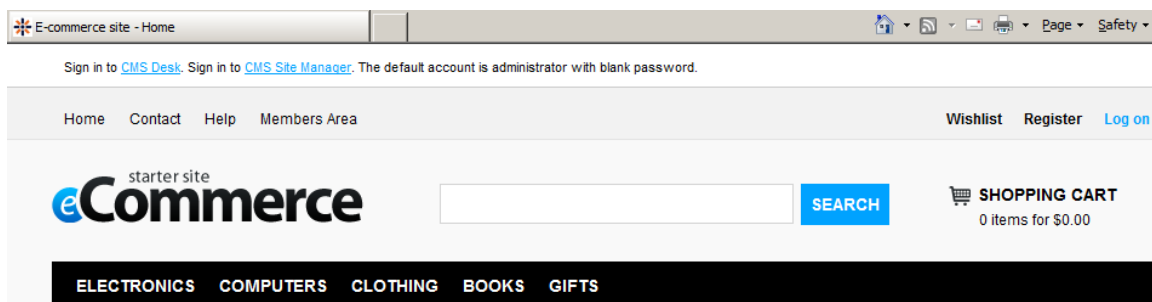


So the database is closed for all unauthorized applications.

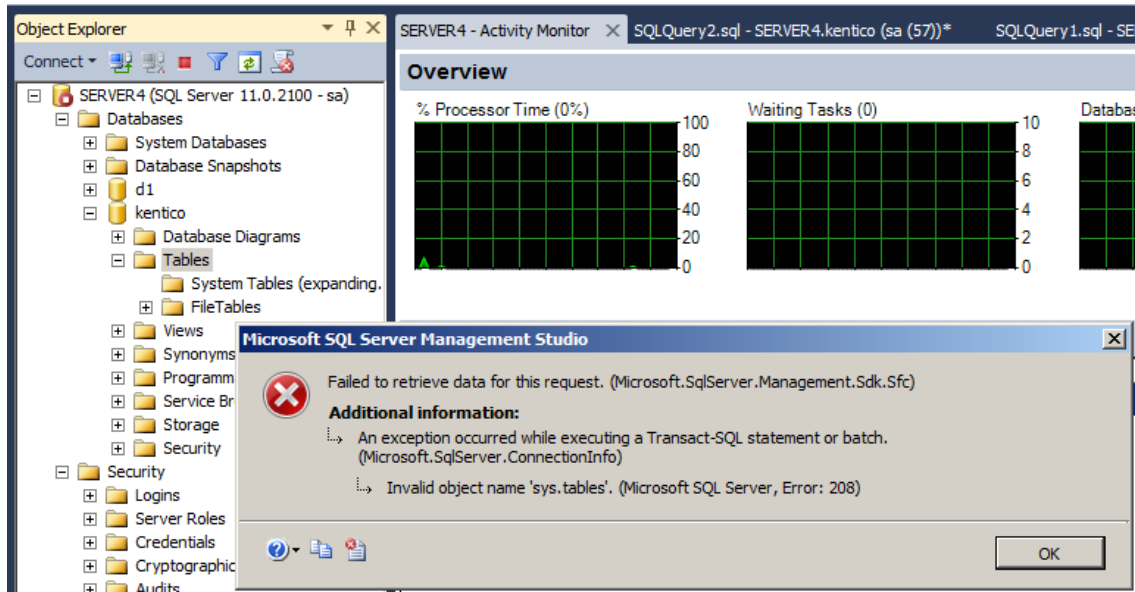
Let's authorize CMS to use locked database. We need to start DbDefence Configurator and enter database name and it's password we used previously for encryption. Configurator lists existing pool names. Luckily Kentico creates its pool name and we do not need to guess which one is that. Enter database name, password and press Save.



Start Web Site from IIS manager and open Kentico web page again. Here it is. Running like nothing happened.



At the same time trying to access database with SSMS we're still getting an error:



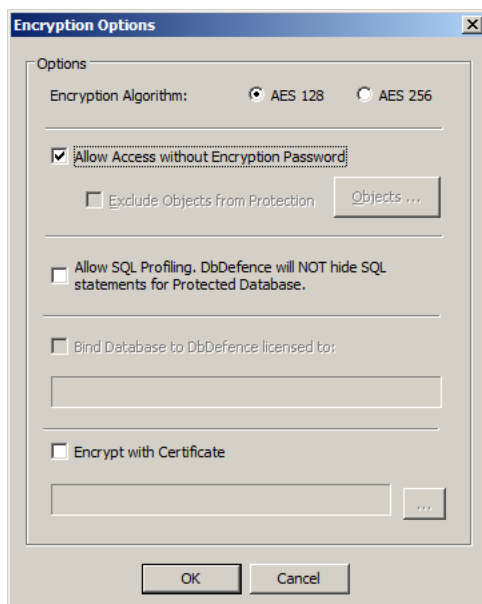
If you want SSMS to run in "unlocked mode" too you need to add ssms.exe (SSMS main application file) in Configurator in Client Program Configuration Section and assign database/password in the same way.

Update: There is a newer method accessing encrypted database. You may allow access to encrypted database for certain SQL Server logins automatically.

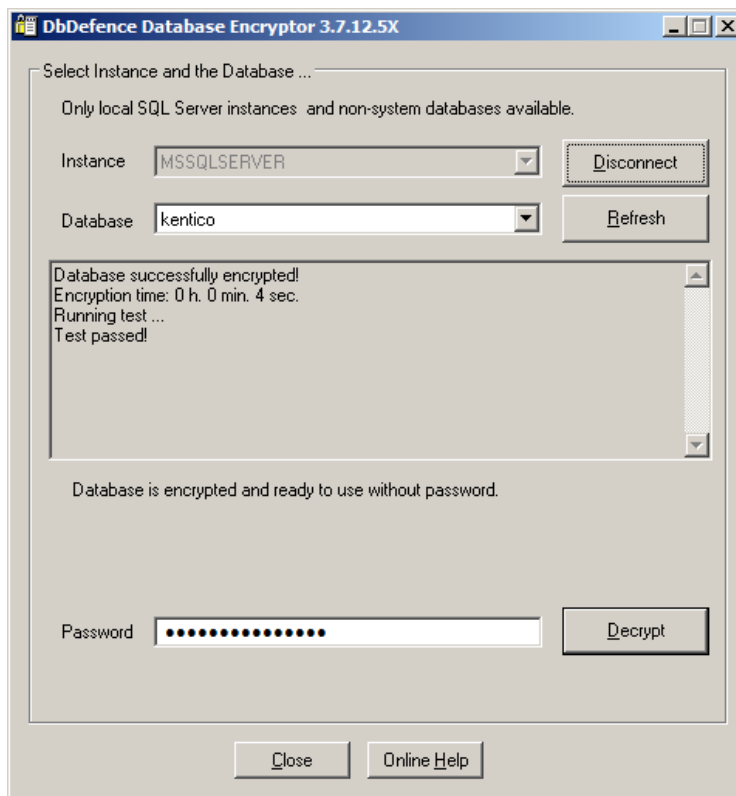
Read more at [http:// www.dbdefence.com/support/dbdefence-documentation/automatic-keys](http://www.dbdefence.com/support/dbdefence-documentation/automatic-keys)

ALTERNATIVELY, if you want to just encrypt files and DO NOT RESTRICT access for applications you need to set up a special option before encryption.

Before encrypting a database press "Change Options" and mark "Allow Access without Encryption Password" checkbox. Additionally you can change encryption algorithm to stronger AES-256.



After you have encrypted the database with “allow access” parameter Encrytor GUI does not offer you to configure access because there are no changes in access permissions.



This means you do not need to enter anything to run Kentico CMS and SSMS, but files stay encrypted. To check that, try to make a backup of the database and restore on different server.

That's all, have a nice day!

If you have any questions, do not hesitate to contact support@dbdefence.com.