

Re: 3 Simple Security SQL Statements

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- *From:* Alex Maghen <AlexMaghen@xxxxxxxxxxxxxxxxxxx>
 - *Date:* Sun, 24 Jun 2007 10:08:03 -0700
-

I have, with your help, figured it all out. I appreciate all the assistance.

Thanks!

"Kalen Delaney" wrote:

Hi Alex

In SQL 2005, when you create an object, you specify the schema that the object should be placed in. Every user has a default schema, and if you don't specify a default schema when you add a user, the default schema is the schema called 'dbo'. It is actually recommended that you always be specific about schema when you create new objects, so you would just create each proc as

```
create proc HM.hm_newproc as
....
```

There is no way to create the schema to 'dynamically update itself'. However, you can take a look at DDL triggers. You could have a trigger that was invoked every time a create procedure is run, and have SQL Server check the name of the procedure, and if it starts with hm_, it could move it to the HM schema.

The better choice is just to put the procedure in the correct schema when you create it.

—
HTH
Kalen Delaney, SQL Server MVP
www.INSIDEsqlserver.com
<http://sqlblog.com>

"Alex Maghen" <AlexMaghen@xxxxxxxxxxxxxxxxxxx> wrote in message news:5A409CA9-5B26-47FB-962F-814A9F83E2E3@xxxxxxxxxxxxxxxxxxx

Erland –

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Thanks for these. #s 1 and 2 are perfect, for 3, I'd like to understand something: I've never worked with Schemas before and they look like they're cool. If I create a schema, can it be configured so that even later, when I add a new Stored Procedure, the database automatically adds it to that Schema because, say, it is a Stored Procedure starting with "HM_"? Or do I have to manually add items to the schema each time they are created?

The documentation describing a Schema is pretty light – and pretty confusing too. But if Schemas can be created so that they dynamically update themselves based on those kinds of criteria, and I can simply grant permissions to that Schema for a database role, that seems like the best setup.

Alex

"Erland Sommarskog" wrote:

Alex Maghen (AlexMaghen@xxxxxxxxxxxxxxxxxxxx) writes:

Okay, let's take a deep breath. First of all, sorry if I overreacted. Just really didn't like the tone. Second, SQL Server 2005. Third, oh, my friends, if **only** I were still in school! :) It may **sound** like a class question, but it is, in reality, something I need in order to simply the process of publishing an entire database file from one system to another on a repeated basis during the development cycle. Each time I do, I need to reset a bunch of settings that it is impossible for me to have in place on the development machine, but which are required on the staging server. Until now I have been doing this all manually in the Management

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Studio and it's making me nuts.

And, obliquely or not, he *did*, in fact, tell me to read the manual.
:)

OK, lets look at your questions again, now that we know which version of SQL Server you are working with. This is necessary to know for the first question, and it has an implication for the third as well.

I'm sorry if I took your questions for a class assignment. Maybe you are so fresh out of school, that you keep asking questions that way. :-)

```
1.  
CREATE  
A  
USER  
"WebUser"  
in  
current  
database  
which  
uses  
a  
Windows  
Login,  
"SERVER\IUSR_XYZ"
```

The command is CREATE USER. You need to first to run CREATE LOGIN to create the login.

```
CREATE LOGIN [SERVER\IUSR_XYZ] FROM  
WINDOWS;  
go  
USE yourdb  
go  
CREATE USER WebUser FROM [SERVER\IUSR_XYZ]
```

I types these commands from memory. If there are syntax errors, please check in Books Online. (Yes, I'm referring you to the manual again. But

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either you look in the manual or I do. And you are the one who has the problem.)

```
2.  
Give  
the  
above  
user  
"WebUser"  
ROLE  
membership  
in  
a  
database  
Role  
names  
"WebUsersRole"
```

```
EXEC sp_addrolemember 'WebUsersRole', 'WebUser'
```

If this fails, swap the parameters. (There are two addrole procedures, one for database roles and one for server roles, and they have their two parameters in different order.)

```
3.  
GRANT  
Execute  
permissions  
to  
the  
ROLE  
"WebUsersRole"  
for  
ALL  
Stored  
Procedures  
in  
the  
database  
which  
start  
with  
the  
name  
"HM_"
```

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Had you had a schema HM, it would have been easy.

```
GRANT EXECUTE ON SCHEMA::HM TO WebUserRole
```

Now you need to grant right for every procedure, and if new procedures are added, WebUserRole will not automatically get the right to execute these.

A simple way to do this is:

```
SELECT 'GRANT EXECUTE ON ' + quotename(name) + '
TO WebUserRole'
FROM sys.objects
WHERE type = 'P'
AND schema_name(schema_id) = 'dbo'
```

I've here assumed that all procedures are in the dbo schema, and that you don't have stored procedures written in the CLR. In that case, you need to add one more type, which I think is PA, but you should look it up in Books Online under sys.objects to make sure.

—
Erland Sommarskog, SQL Server MVP,
esquel@xxxxxxxxxxxxx

Books Online for SQL Server 2005 at
<http://www.microsoft.com/technet/prodtechnol/sql/2005/downloads/books.msp>
Books Online for SQL Server 2000 at
<http://www.microsoft.com/sql/prodinfo/previousversions/books.msp>