Provisioning the Microsoft Dynamics NAV Server Account

The Microsoft Dynamics NAV Server account is used by Microsoft Dynamics NAV clients to log on to the Microsoft Dynamics NAV Server instance. The Microsoft Dynamics NAV Server then uses the service account to log on to the Microsoft Dynamics NAV database. When you install Microsoft Dynamics NAV Server, you identify an Active Directory account to provide credentials for the server. By default, Setup runs Microsoft Dynamics NAV Server under the Network Service account, a predefined local account used by the service control manager. This account has minimum privileges on the local computer and acts as the computer on the network.

We recommend that you create a domain user account for running Microsoft Dynamics NAV Server. The Network Service account is considered less secure because it is a shared account that can be used by other unrelated network services. Any users who have rights to this account have rights to all services that are running on this account. If you create a domain user account to run Microsoft Dynamics NAV Server, you can use the same account to run SQL Server, whether or not SQL Server is on the same computer.

Note

Because Microsoft Dynamics NAV Setup and the New-NavDatabase cmdlet configure the required permissions for the Microsoft Dynamics NAV Server account, you will typically use the procedures in this topic when you change the Microsoft Dynamics NAV Server account for an existing installation.

To provision a Microsoft Dynamics NAV Server account, complete the following procedures as described in this topic:

- Provisioning a Domain User Account
- Provisioning the Network Service Account

Provisioning a Domain User Account

If you are running the Microsoft Dynamics NAV Server under a domain user account, you must:

- Enable the account to log in as a service
- Enable the account to register an SPN on itself
- Give the account necessary database privileges in SQL Server

Enabling the account to log in as a service

Depending on various factors, the account may or may not already have this ability. For example, if you have already installed SQL Server and configured it to run under the same account, SQL Server will have modified the account to log in as a service.

Instructions for enabling an account to log in as a service are available on TechNet. See Add the Log on as a service Right to an Account. The instructions are for Windows Server 2008. For Windows 7, use this version of the procedure: Add the Log on as a service right to an account.

When this permission is lacking, Microsoft Dynamics NAV Server server instances may not be able to start.

Enabling the account to register an SPN on itself

To enable secure mutual authentication between clients and Microsoft Dynamics NAV Server, you must configure the Microsoft Dynamics NAV Server account to self-register Service Principal Names (SPNs). Mutual authentication is recommended in a production environment but may not be necessary in a testing or staging environment. The following procedure assumes a computer running Windows Server 2008 or Windows Server 2008 R2. On Windows 7 or Windows Vista you would need to install the Remote Server Administration Tools first.

To enable the Microsoft Dynamics NAV Server account to register an SPN on itself

1. Start the Active Directory Users and Computers snap-in in Microsoft Management Console (MMC):
    a. Choose **Run** on the Start menu, type **mmc** on the command line, and the choose **OK**.
    b. When the console opens, select **Add/Remove Snap-In** from the File menu, select **Active Directory Users and Computers**, and choose **Add**.

    If you do not see **Active Directory Users and Computers** in the list of available snap-ins, you may need to use Server Manager to install the **Active Directory Domain Services** role on your server computer.
2. In MMC, select **Active Directory Users and Computers** in the tree view and choose **Advanced Features** from the View menu.
3. Expand the domain node in the tree view and choose **Users**.
4. Right-click the service account, select **Properties**, and then choose to display the **Security** tab.
5. Choose **SELF** in the **Group or user names** list.
6. Under **Permissions for SELF**, in the lower part of the panel, scroll down to **Write public information** and select the Allow column.
7. Choose **OK** to exit the Properties panel, and close **Active Directory Users and Computers**.

Giving the account necessary database privileges in SQL Server

The Microsoft Dynamics NAV Server account must be a member of the db_owner database role on the Microsoft Dynamics NAV database. When you install the Microsoft Dynamics NAV database by using Microsoft Dynamics NAV Setup or the New-NAVDatabase PowerShell cmdlet, you can specify the Microsoft Dynamics NAV Server account. In these cases, the server account that you specify should already have the necessary privileges in SQL Server. If you change the Microsoft Dynamics NAV Server account for an existing installation, then you should verify the account has the required privileges in SQL Server.

To verify database privileges after you create your Microsoft Dynamics NAV database, use SQL Server Management Studio and, if necessary, modify database privileges. If you have installed SQL Server with the guidelines in Installation Considerations for Microsoft SQL Server, then SQL Server Management Studio is already installed on your computer. Otherwise, update your SQL Server installation to include the **Management Tools - Complete option for SQL Server**.

> **Note**
>
> If you installed the Demo option in Microsoft Dynamics NAV Setup, then the Network Service account already has the necessary database privileges.

To assign necessary database privileges for the Microsoft Dynamics NAV Server account

1. Start SQL Server Management Studio and connect to the instance where the Microsoft Dynamics NAV database is installed.
2. Create a login for the Microsoft Dynamics NAV Server account.
    a. Navigate the tree view: **Security**, **Logins**
    b. Right-click **Logins** and choose **New Login**.
    c. Choose **Search**, and use the **Select User or Group** dialog box to identify the Microsoft Dynamics NAV Server account.
    d. Choose **OK** to exit the New Login dialog box.
3. Add the login as a user on the master database.
    a. Navigate the tree view: **Databases**, **System Databases**, **master**, **Security**, **Users**.
    b. Right-click **Users** and choose **New User**.

c. Choose the ellipse button at the far right of the second line in the **Database User – New** dialog box.

d. In the **Select Login** dialog box, enter or browse for the login you created for the Microsoft Dynamics NAV Server account.

e. Enter a name in the **User name** field (the first line in the **Database User - New** dialog box).

f. Choose **OK** to exit the **Database User - New** dialog box.

4. Grant the Microsoft Dynamics NAV Server login permissions on the master database. In the tree view, right-click **master** and choose **Properties**. Then do the following in the **Database Properties – master** dialog box.

a. Under **Select a Page**, choose **Permissions**.

b. Under **Name**, choose the login you created for the Microsoft Dynamics NAV Server account name.

c. Under **Permissions for <username>**, on the **Explicit** tab, scroll down to down to the **Select** line, and select the check box in the **Grant** column.

d. Choose **OK** to exit the **Database Properties – master** dialog box.

e. Navigate the tree view: **Databases**, **System Databases**, **master**, **Tables**, **System Tables**.

f. Right-click the **dbo.ndosrvproperty** table and choose **Properties**.

g. Under **Select a Page**, choose **Permissions**.

h. Choose **Search**, and use the **Select User or Group** dialog box to identify the login for the Microsoft Dynamics NAV Server account.

i. Under **Permissions for <username>**, on the **Explicit** tab, scroll down to down to the **Select** line, and select the check box in the **Grant** column.

j. Choose **OK** to exit the **Table Properties – dbo.ndosrvproperty** dialog box.

5. Grant the login the necessary database roles on the Microsoft Dynamics NAV database.

a. Navigate the tree view: **Databases**, **<your Microsoft Dynamics NAV database>**, **Security**, **Users**.

b. Right-click **Users** and choose **New User**.

c. In the **Database User – New** dialog box, choose the ellipse button at the far right of the second line.

d. Select the login you created for the Microsoft Dynamics NAV Server account name and choose **OK**.

e. Under **Database role membership**, select the **db_owner** check boxe.

f. Choose **OK** to exit the **Database User – New** dialog box.

g. Right-click your Microsoft Dynamics NAV database and choose **Properties**.

h. Under **Select a Page**, choose **Permissions**.

i. Choose **Search**, and use the **Select User or Group** dialog box to identify login you created for the Microsoft Dynamics NAV Server account.

j. Under **Permissions for <username>**, on the **Explicit** tab, scroll down to down to the **View database state** line, and select the check box in the **Grant** column.

k. Choose **OK** to exit the Database Properties dialog box for your Microsoft Dynamics NAV database.

It is also possible to script these steps in SQL Server Management Studio:

```
USE [master]
GO
CREATE LOGIN [domain\accountname] FROM WINDOWS
CREATE USER [domain\accountname] FOR LOGIN [domain\accountname]
GRANT SELECT ON [master].[dbo].[$ndo$srvproperty] TO [domain\accountname]
GO
USE [Microsoft Dynamics NAV Database]
GO
CREATE USER [domain\accountname] FOR LOGIN [domain\accountname]
ALTER ROLE [db_owner] ADD MEMBER [domain\accountname]
GRANT VIEW DATABASE STATE TO [domain\accountname]
```

Provisioning the Network Service Account

The only circumstance where it is necessary to take any action with regard to the Network Service account is when change the Microsoft Dynamics NAV Server account on an existing installation from a domain account to the Network Service. In this situation you must verify that the account has the necessary database privileges in SQL Server, as per Giving the account necessary database privileges in SQL Server, above.