



ORF
FUSION

ORF EXTERNAL DATABASE GUIDE

for MSDE

For ORF users

Revision 1.3 (for ORF version 5.0)
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WHAT IS THIS GUIDE ABOUT?

This guide provides step-by-step instructions for setting up Microsoft SQL Server Desktop Engine (MSDE) to provide database services for ORF.

Please consider that this guide cannot cover the complex topic of administering a database server. We strongly recommend to consult the documentation of the database product on securing and administering the database product of your choice.

About MSDE

Microsoft SQL Server Desktop Engine (MSDE) is a free database server product from Microsoft. It is basically the same product as Microsoft SQL Server 2000, but with some technical restrictions, for instance:

- Maximum database size of 2 GB per database.
- No GUI (Graphical User Interface), only command line
- A workload governor which reduces its speed once you exceed 8 concurrent operations on the engine.

Shall I be concerned about the MSDE limitations?

Probably not. If your MSDE is dedicated to ORF only, you are unlikely to run into performance issues, unless you run ORF in a very high load environment (800,000 - 1,000,000 emails per day). If you experience low response times from MSDE (SQL timeout errors in the ORF logs), you may want to consider upgrading to the full SQL Server 2000 or 2005 version.

GETTING STARTED

Getting MSDE

You can download MSDE free of charge from the following link:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=413744D1-A0BC-479F-BAFA-E4B278EB9147&displaylang=en>

Installation

1. Make sure that the **Server Service** is running (File- and printer sharing) during the installation, otherwise it will fail (**Administrative Tools / Services**).

2. Run the executable file called **MSDE2000A.exe**. This will extract the installation files to C:\MSDERelA by default.

As MSDE does not offer any configuration choices during the installation, the required settings have to be passed in command line parameters.

3. Enter the directory where the installation files were extracted to and run the following command (in a single line):

```
setup.exe SAPWD="AStrongPassword"  
INSTANCENAME="InstanceName" SECURITYMODE=SQL  
DISABLENETWORKPROTOCOLS=0 DATADIR="data_folder_path"  
TARGETDIR="executable_folder_path"
```

Please find a brief explanation of the parameters below:

Parameter	Description
SAPWD="AStrongPassword"	Specifies a strong password to be assigned to the sa administrator login. If you do not want to specify an sa password, use the BLANKSAPWD=1 parameter instead (not recommended).
INSTANCENAME="InstanceName"	Specifies the name of the instance. If INSTANCENAME is not specified, Setup installs a default instance (MSSQL).
SECURITYMODE=SQL	Specifies that the instance be installed in Mixed Mode, where the instance supports both Windows authentication and SQL authentication logins.
DISABLENETWORKPROTOCOLS= <i>n</i>	Specifies whether the instance will accept network connections from applications running on other computers. By default, or if you specify DISABLENETWORKPROTOCOL=1 , Setup configures the instance to not accept network connections. Specify DISABLENETWORKPROTOCOLS=0 to enable network connections.
DATADIR="data_folder_path"	Specifies the folder where Setup installs the system databases, error logs, and installation scripts. The value specified for <i>data_folder_path</i> must end with a backslash (\). For a default instance, Setup appends MSSQL\ to the value specified. For a named instance, Setup appends MSSQL\$ <i>InstanceName</i> \, where <i>InstanceName</i> is the value specified with the INSTANCENAME parameter. Setup builds three folders at the specified location: a <i>Data</i> folder, a <i>Log</i> folder, and a <i>Script</i> folder.
TARGETDIR="executable_folder_path"	Specifies the folder where Setup installs the MSDE executable files. The value specified for <i>executable_folder_path</i> must end with a backslash (\). For a default instance, Setup appends MSSQL\Binn to the value specified. For a named instance, Setup appends MSSQL\$ <i>InstanceName</i> \Binn, where <i>InstanceName</i> is the value specified with the INSTANCENAME parameter.

Here is an example (the rest of this guide will assume these parameters):

```
setup.exe SAPWD="Password#1" INSTANCENAME="MSDE" SECURITYMODE=SQL
DISABLENETWORKPROTOCOLS=0 DATADIR="c:\MSDE\" TARGETDIR="c:\Program
Files\MSDE\"
```

CREATING THE DATABASE & TABLES

Once MSDE is installed and configured, we can proceed with creating a database for ORF, which will store the **Auto Sender Whitelist**, **Greylisting**, **Honeypot** and **Directory Harvest Attack (DHA)** databases. To ease things, we provide an SQL script shipped with this guide (*sql-orf.sql*), which will create the database (called “ORF”) along with a database owner user (called “*orfuser*”) with a default password (“*ChangeThisPwd#1*”).

(NOTE: if you already have some of the tables created, please run the individual SQL scripts for creating tables for the new features only. Features and scripts:

- Auto Sender Whitelist: *sql-aswl.sql*
- DHA Protection Test: *sql-dha.sql*
- Greylisting: *sql-grey.sql*
- Honeypot Test: *sql-honeypot.sql*

If the database is already set up, you can skip the instructions for creating a user, changing the password, etc.)

1. Start a command prompt
2. Run the script using **osql** as follows:

```
osql -E -S localhost\myinstance -d master -i
<path>\sql-orf.sql
```

For example, if the scripts located in *c:\temp*, the command looks like this:

```
osql -E -S localhost\MSDE -d master -i c:\temp\sql-orf.sql
```

3. You should get something like *“New login created. The dependent aliases were mapped to the new database owner. Database owner changed.”* Now let us test this new login and make sure the databases were created as well. Login using the new SQL account:

```
osql -U orfuser -P ChangeThisPwd#1 -S localhost\myinstance
```

4. Make sure that the tables are created:

```
1> use ORF
2> go
1> select name from sysobjects where type = 'U'
2> go
```

Five tables should be displayed (**ASWL**, **GREY**, **HoneypotBlacklist**, **DhaHistory** and **DhaBlacklist**).

Now, let us change the password to something more secure.

CHANGING THE PASSWORD

5. Login as sa:

```
1> osql -U sa -P Password#1 -S SERVERNAME\MSDE
```

6. Change the password assigned to this username (orfuser) by the script (ChangeThisPwd):

```
1> sp_password 'ChangeThisPwd#1', 'NewPassword', 'orfuser'
2> go
```

7. You should get “Password changed.” Quit from **osql**.

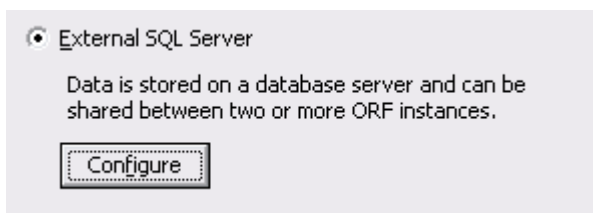
```
1> quit
```

CONNECTING ORF TO THE DATABASE

ORF connects to the database using a *connection string* that specifies the connection parameters for ORF.

Connecting the Auto sender whitelist database

1. Start the ORF Administration Tool.
2. In *Whitelists / Auto Sender Whitelist* click the **Database** button.
3. Select the **External SQL Server** radio button.



4. Click the **Configure** button.
5. Enter the connection string as described below:

```
Provider=SQLOLEDB;  
Data Source=<SERVERIP>,<PORT>;  
Database=<DBNAME>;  
Uid=<USERNAME>;  
Pwd=<PASSWORD>;  
DataTypeCompatibility=80;
```

NOTES: If you are connecting to a local SQL instance (i.e. ORF and SQL run on the same server) or from the same domain, you can use “*Server=<SERVERNAME>\<INSTANCENAME>;*” instead of “*Data Source=<SERVERIP>,<PORT>;*”. For remote connections, the latter will probably work better.

It is also suggested to make sure you have the TCP/IP protocol enabled for your MSDE instance if you are trying to connect remotely, and to check the correct port. To do this, click *Start > Run > svrnetcn.exe*. The *TCP/IP* protocol should be enabled. Select it and click *Properties* to check the correct port.

According to the instance name we used in this example, the connection string looks like this (local connection):

```
Provider=SQLOLEDB;  
Server=ORFSRV\MSDE;  
Database=ORF;  
Uid=orfuser;  
Pwd= NewPassword;  
DataTypeCompatibility=80;
```

6. Finally, test the connection string by clicking the *Test Connection* button. You should get a message: “*Connection test was successful*”.

Connecting the Greylisting database

1. Start the **ORF Administration Tool**.
2. In *Blacklists / Greylisting* click on the **Database** button.

Continue as in the case of the Auto Sender Whitelist setup steps 3-6.

Connecting the DHA database

1. Start the **ORF Administration Tool**.
2. In *Blacklists / DHA Protection Test* click on the **Database** button.

Continue as in the case of the Auto Sender Whitelist setup steps 3-6.

Connecting the Honeypot database

1. Start the **ORF Administration Tool**.
2. In *Blacklists / Honeypot Test* click on the **Database** button.

Continue as in the case of the Auto Sender Whitelist setup steps 3-6.

TROUBLESHOOTING

Q: How can I enable Mixed mode authentication (to enable SQL connections) once MSDE is installed?

A: If you are trying to use an existing MSDE installation which was installed by the default options and does not allow connections with the SQL username and password, you should switch it to “Mixed-mode”:

1. Backup your registry (<http://support.microsoft.com/kb/322756/>)
2. Stop the SQL Service and all related services (e.g. SQL Agent)
3. Start regedit (Start menu > Run > regedit)
4. Locate the following key: **HKLM\Software\Microsoft\Microsoft SQL Server\Instance Name\MSSQLServer\LoginMode**
5. In the right pane, double-click the **LoginMode** subkey.
6. In the **DWORD Editor** dialog box, set the value of this subkey to **2**, verify that the **Hex** option is selected, and then click **OK**.
7. Restart the **MSSQLSERVER** service and the **SQLSERVERAgent** service for this change to take effect

TECHNICAL SUPPORT

Please find our technical support contact options on our website at:

<http://vamssoft.com/r?o-support>