

Microsoft Forefront TMG – How to use SQL Server 2008 Express Reporting Services

Abstract

In this article I will show you how to configure the Microsoft SQL Server 2008 Reporting service with Forefront TMG.

Let's begin

During a Standard Installation of Microsoft Forefront TMG a version of Microsoft SQL Server 2008 Express with SP1 will be installed on the System. The Forefront TMG Web proxy- and Firewall components will use the installed SQL Server 2008 version to store generated Log files. The built In Reporting and Logging functionalities of Forefront TMG will use some underlying SQL Server and SQL Server Reporting features. For example the built in Reporting function in the Forefront TMG console will use the stored data in the SQL databases to generate one time and recurring reports with SQL Server 2008 Reporting functionality. These generated reports can be saved in a file share on the local or a remote Server for later review or a report summary can be send via e-mail. The SQL Server 2008 Express installation which comes with the Forefront TMG installation media doesn't requires an installed Internet Information Service (IIS) for the SQL Server Reporting services which will reduce the attack surface of your Forefront TMG Server.

Let us start with the configuration of the SQL Server 2008 Express Reporting Service configuration. Start the Reporting Services Configuration Manager on the Forefront TMG Server.

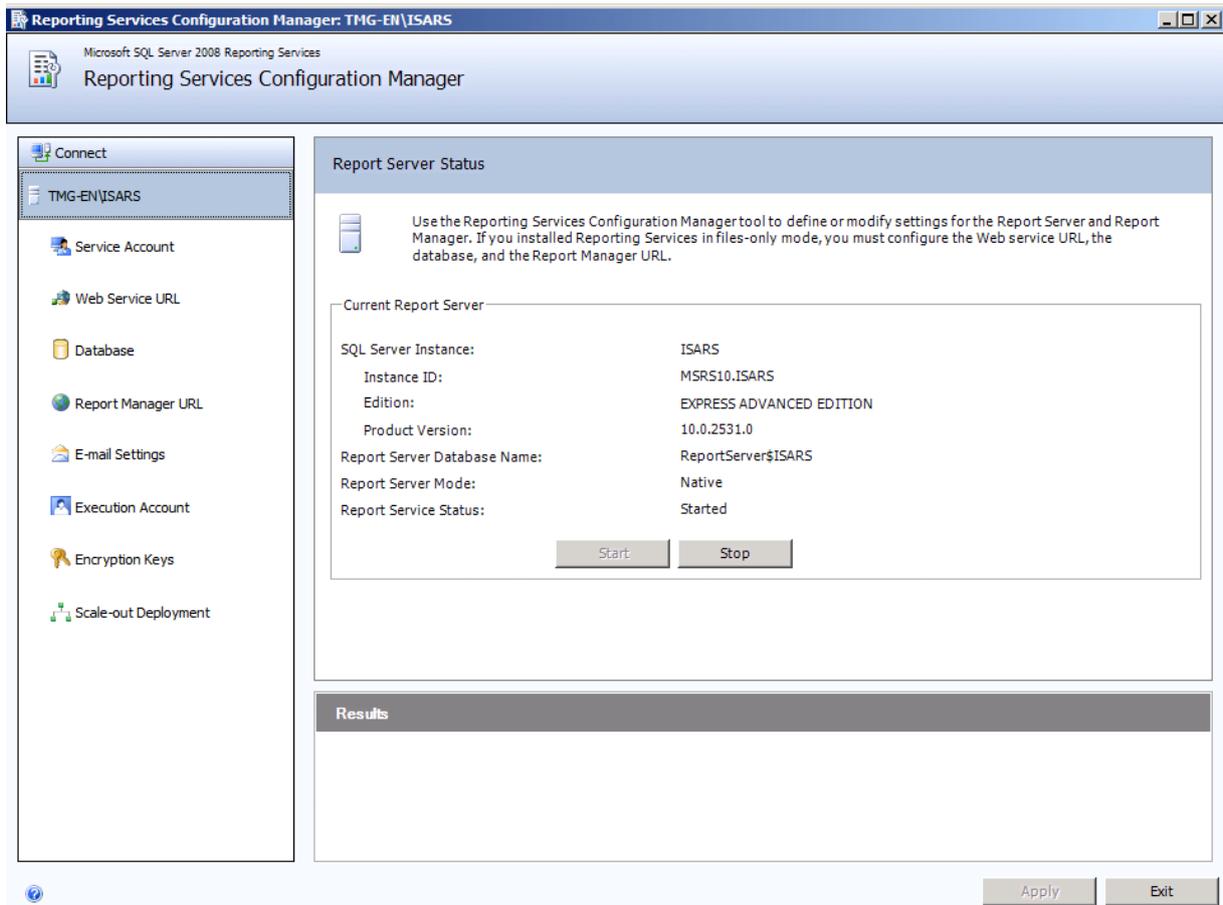


Figure 1: SQL Report Server Status

As you can see in the screenshot above, the SQL Server Reporting data will be stored in a database called ISARS in Report Server Native Mode which is the default mode for Report Server installations.

SQL Server Report Server uses the built in Local System account to run the Report Server Report services. If you want to change the account for administrative or security reasons, you can do this here.

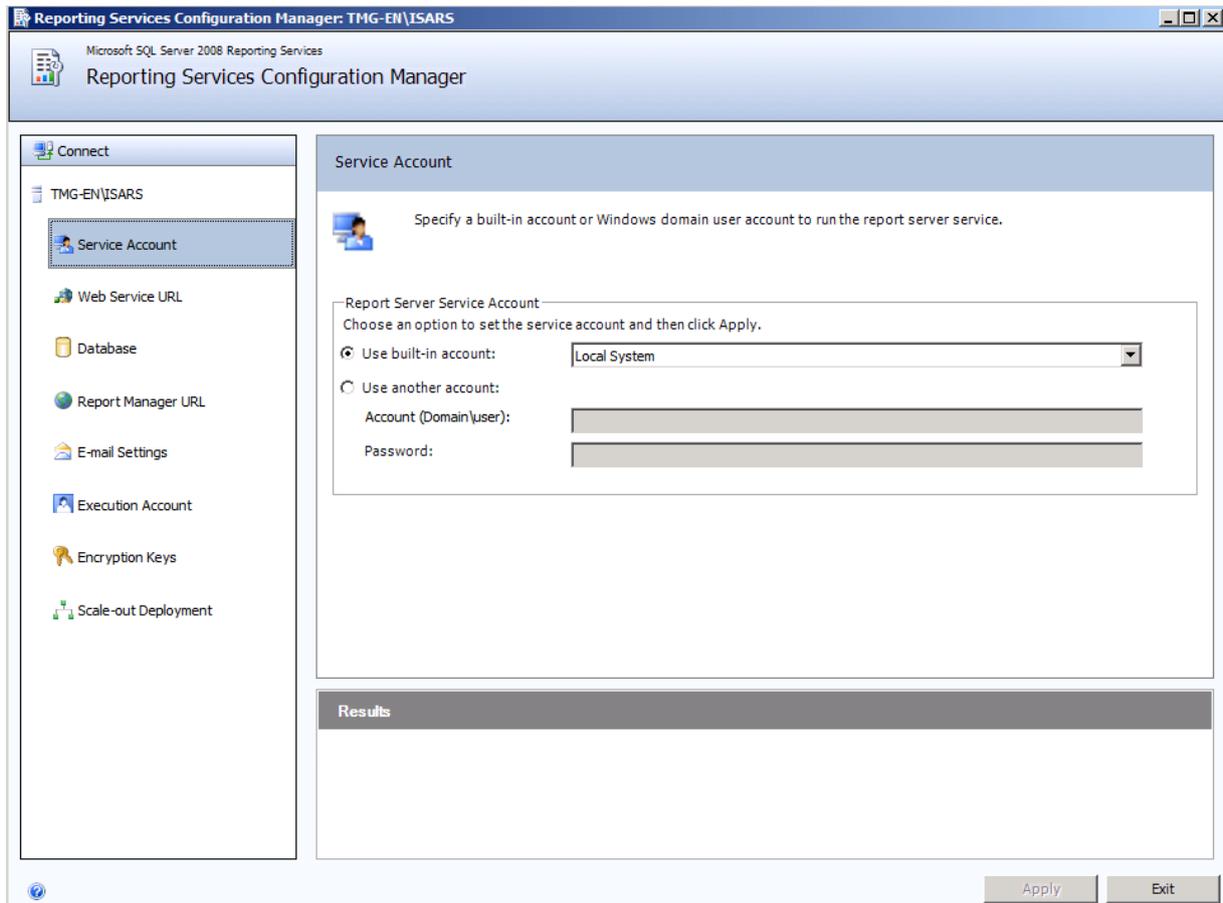


Figure 2: SQL Report Server Status

As a next step it is possible to modify the URL which is used to access the Report Server. It is possible to specify multiple URL to access the Report Server. The Default URL only allows access to the Report Server through the HTTP protocol on Port 8008 which should not be conflict with other services on the Forefront TMG server. If you want to change the Report Server URL to HTTPS you first have to install a correct certificate on the Forefront TMG Server. This certificate will be used to create an SSL Listener for the SQL Report Server. When you use HTTPS to access the Report Server keep ensure that you don't create a Socket which is bound to all IP addresses. The reason for this is if you want to publish additional other services with Forefront TMG which also uses port 443 this will be conflicting with the existing socket for HTTPS on the Forefront TMG Server. You must use unique Sockets else the publishing of secure Webservers with Forefront TMG will fail.

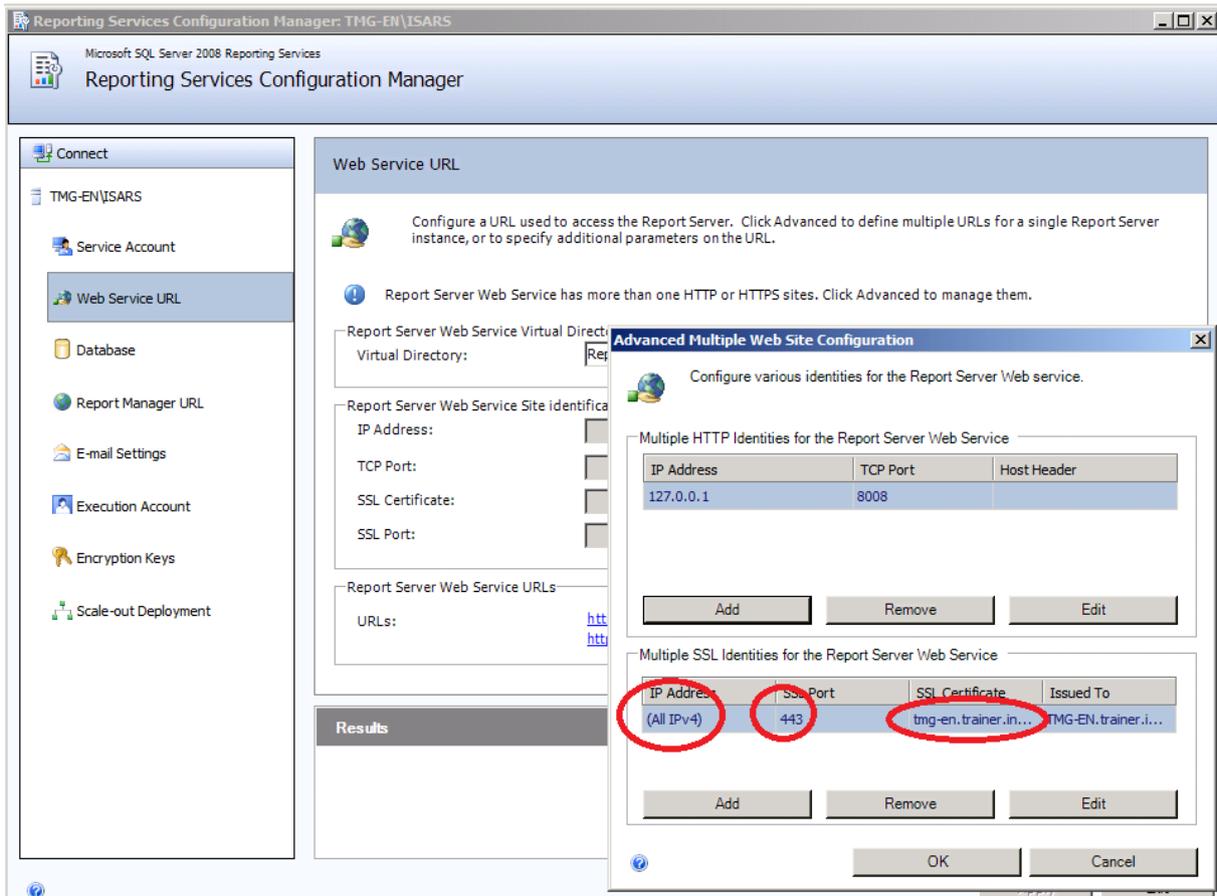


Figure 3: SQL Server Express Web Service URL

The default database for the Microsoft SQL Server 2008 Reporting Services is the database with the name ReportServer\$ISARS which is installed in an SQL Server instance called ISARS.

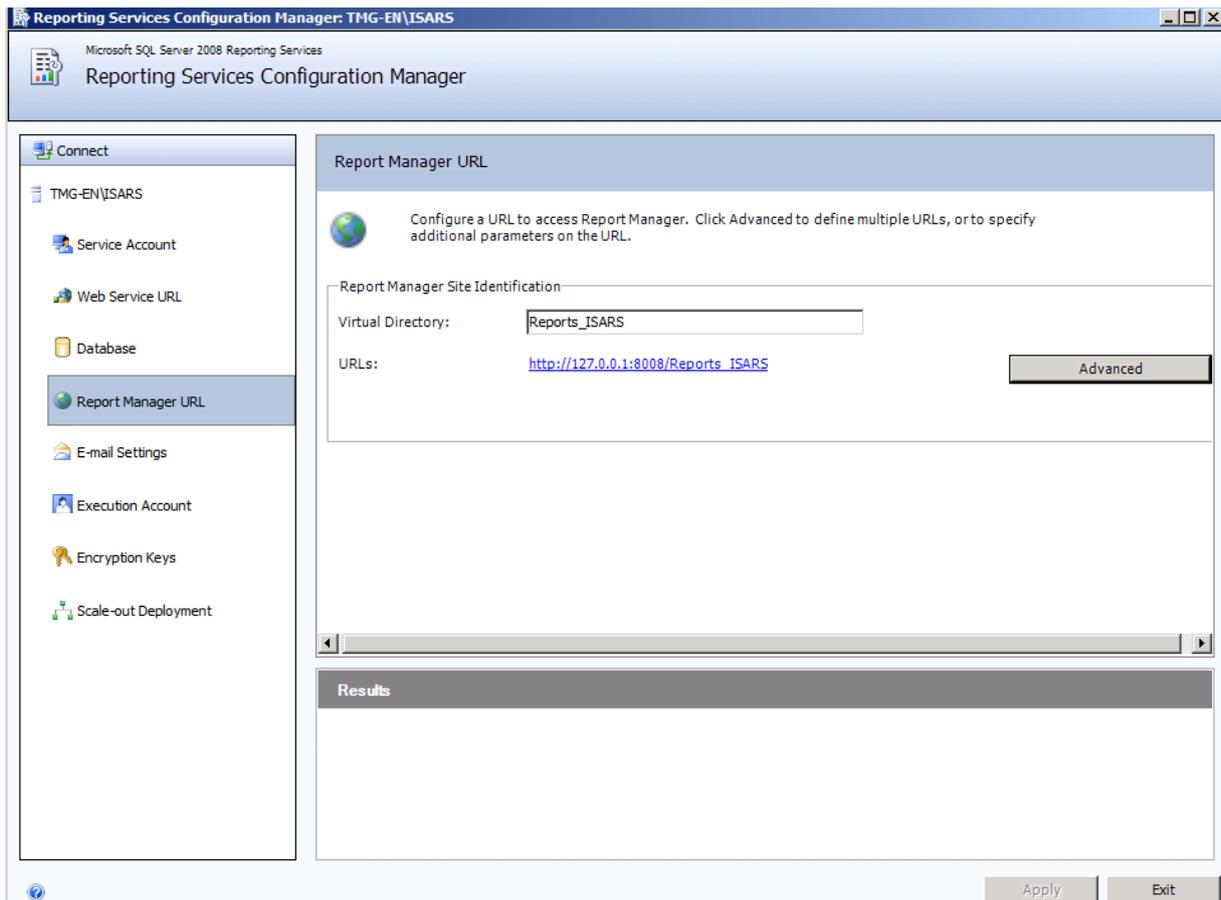


Figure 4: SQL Server Report Manager URL

Click *Advanced* to add a Report Manager SSL Binding. Specify the IP address, port and certificate for the SSL Listener.

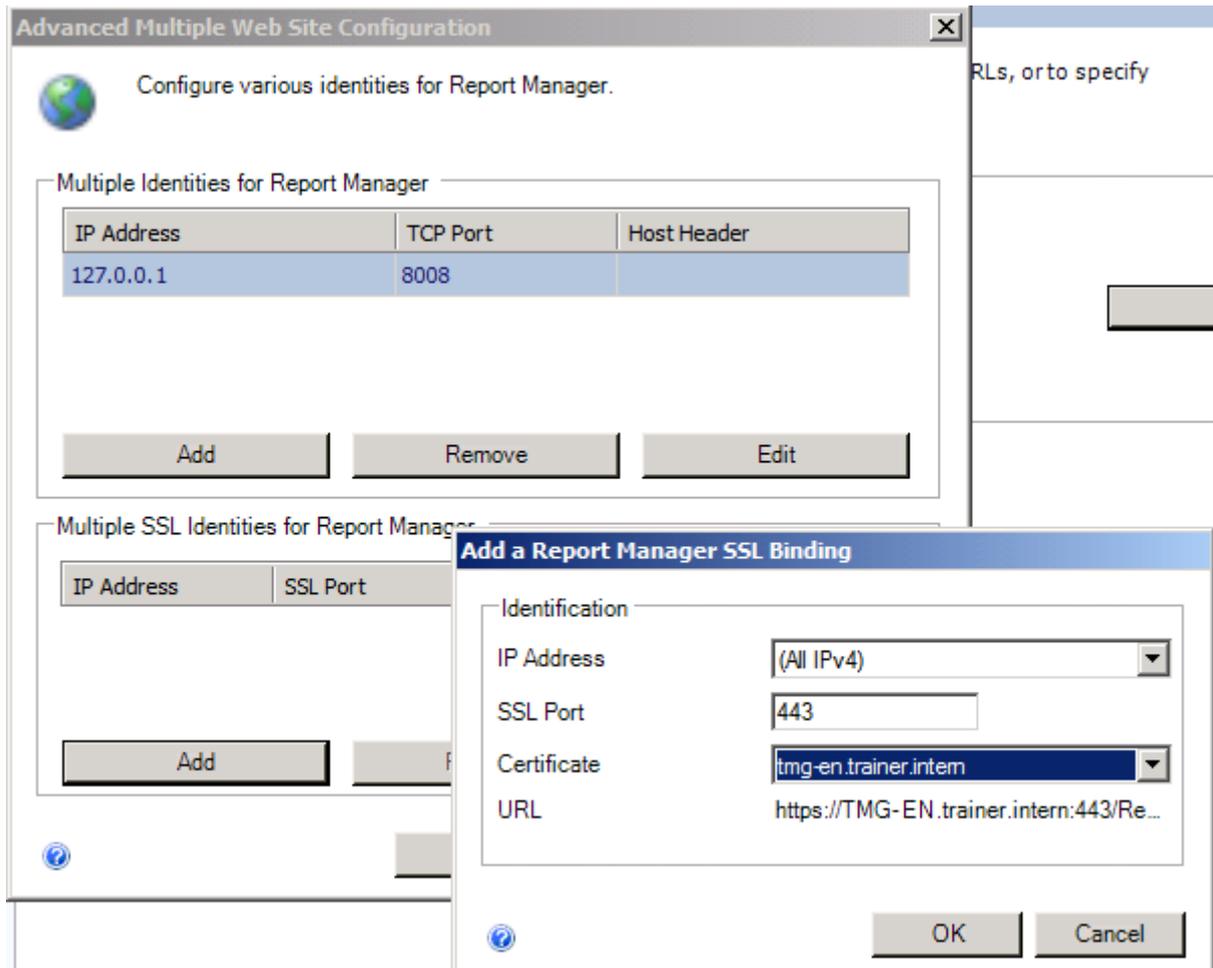


Figure 5: Enable HTTPS for the Report Manager

As a next step verify the successful certificate binding and test the new HTTPS URL to access the Report Manager URL.

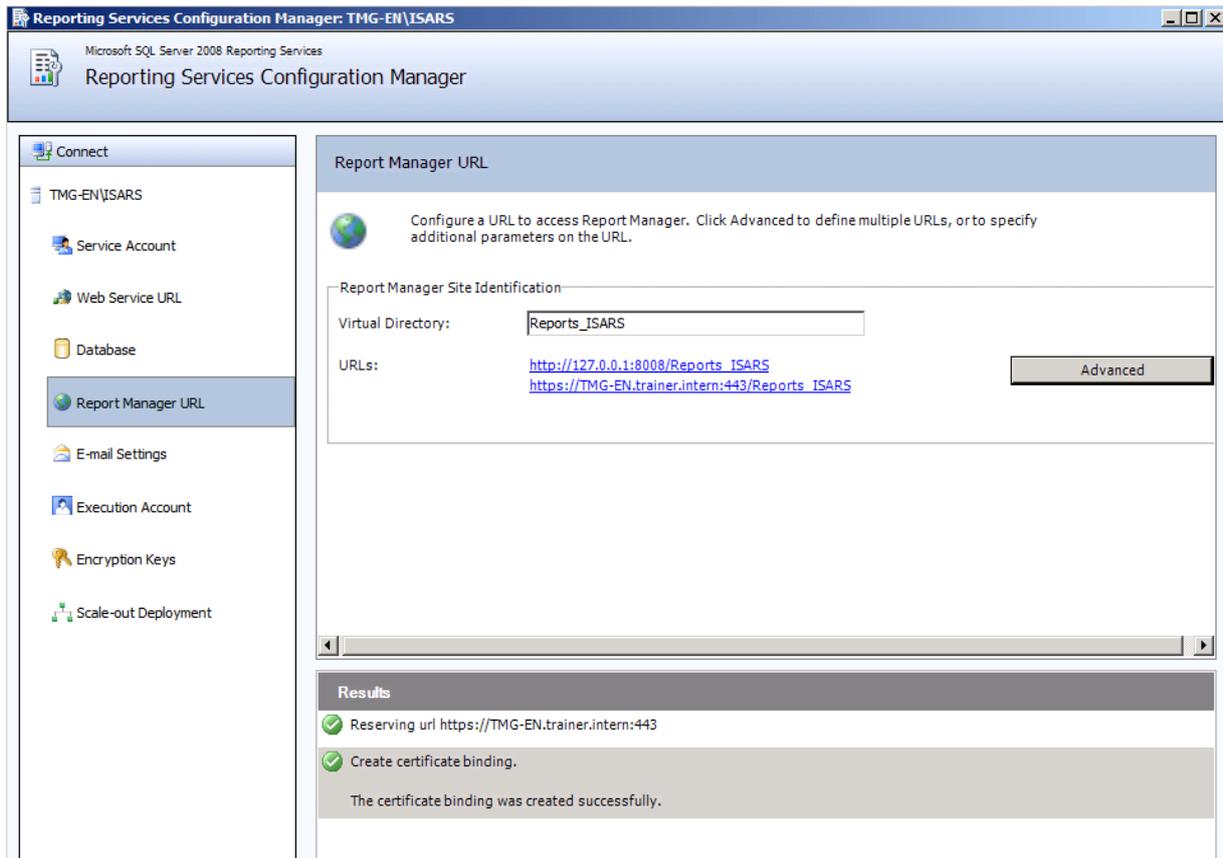


Figure 6: Successful SSL Binding

You will now see the ISA2008 Reports. Yes, you read it right. Microsoft has forgotten to change the name of the ISA Server 2006 successor in the SQL Server Reporting Services configuration 😊

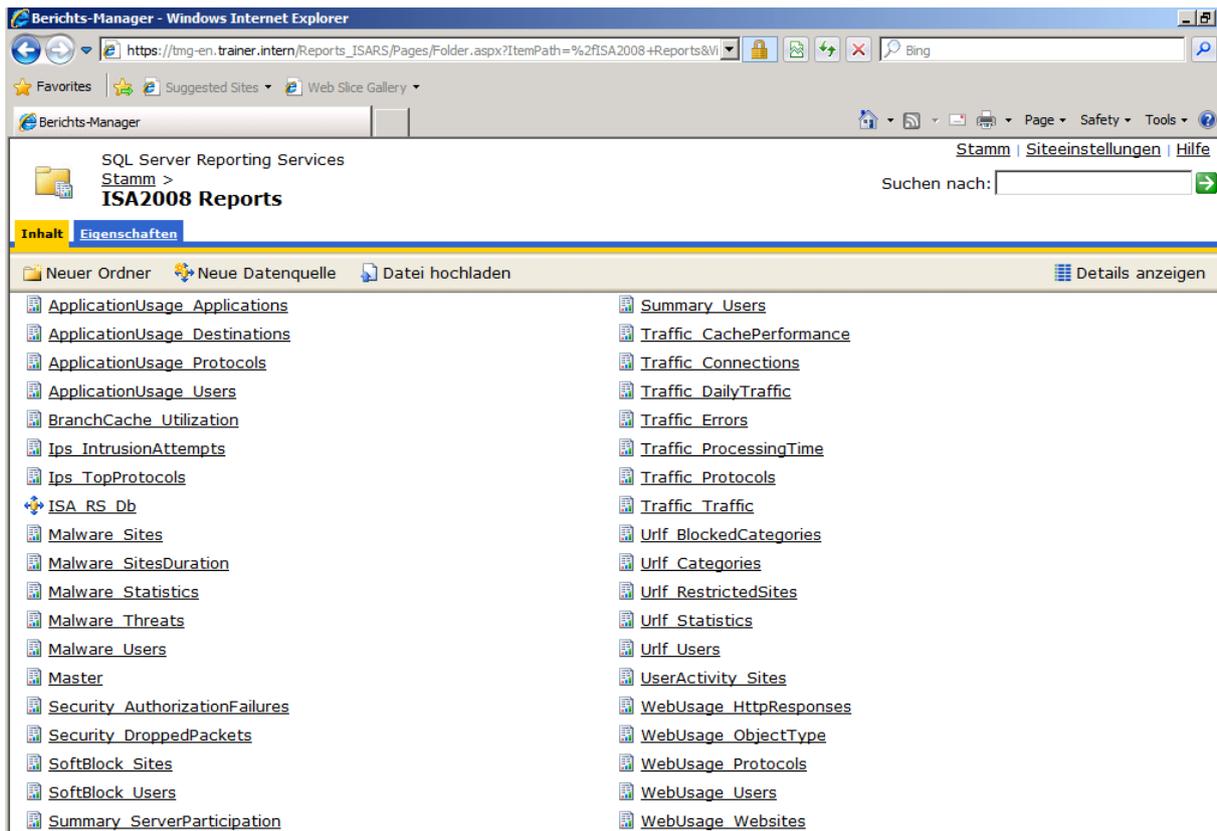


Figure 7: ISA 2008 Reports

Please note: If you see the Report Server settings not in English but in your native language, you can change the language settings in your Internet Explorer advanced settings from your native language to English and after that change, the Report Manager settings should be displayed in English. I tested this with an English Windows Server 2008 R2 Operating system and an English version of Forefront TMG but with German language locale.

If you want to create additional SQL Server Reporting Services Roles to delegate the Administration of the SQL Server Reporting Services, it is possible to assign users or groups one or more roles to administer the SQL Server Reporting Services.

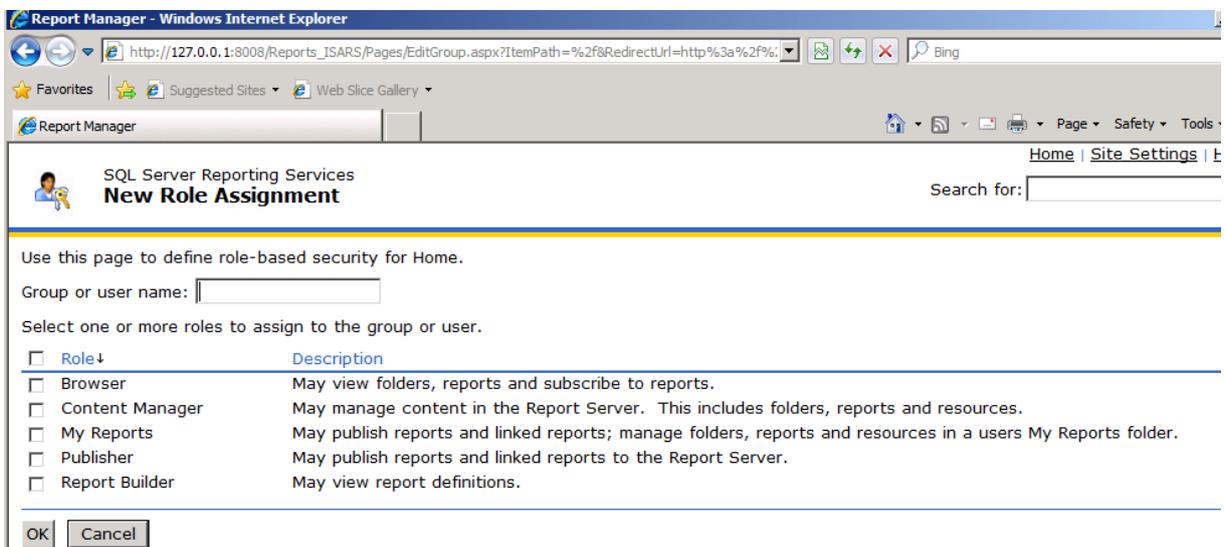


Figure 8: SQL Server Reporting Role assignment

The SQL Server Reporting Services *Site settings* section allows you to configure how many historical Reports should be kept and the timeout for a Report execution can be configured.

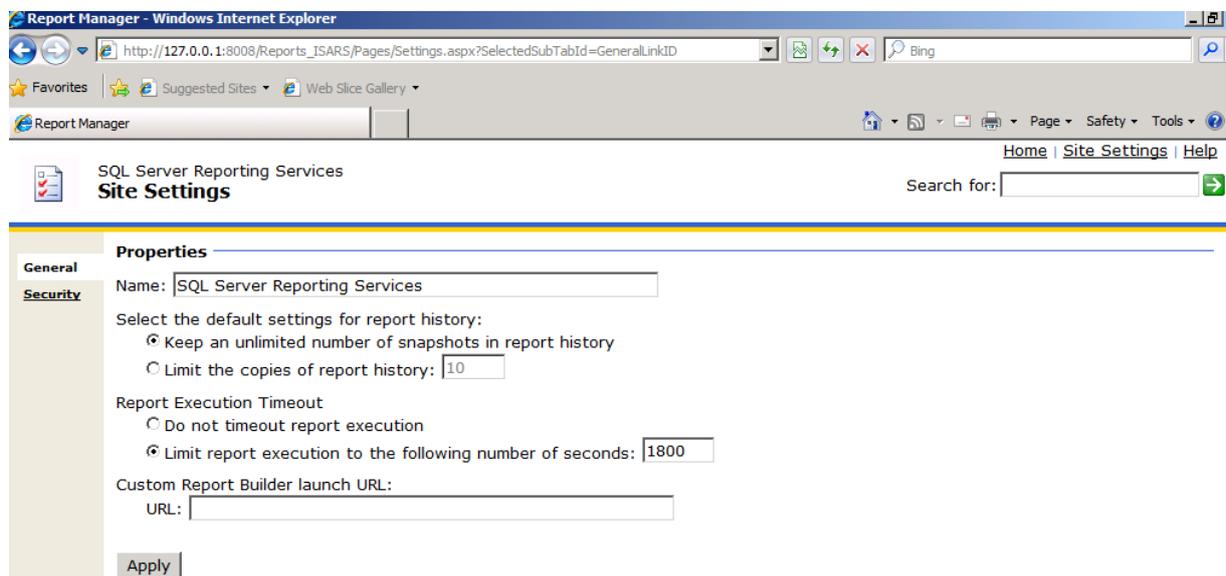


Figure 9: SQL Server Reporting Services Site Settings

Let us switch back to the Reporting Services Configuration Manager wizard. As a next step it is possible to configure some E-mail settings for sending reports via E-Mail. Specify the Sender address and the SMTP Server for sending E-Mails. You cannot specify credentials here for connecting to the SMTP Server, so be sure that the Reporting Server can send E-Mail to the SMTP Server.

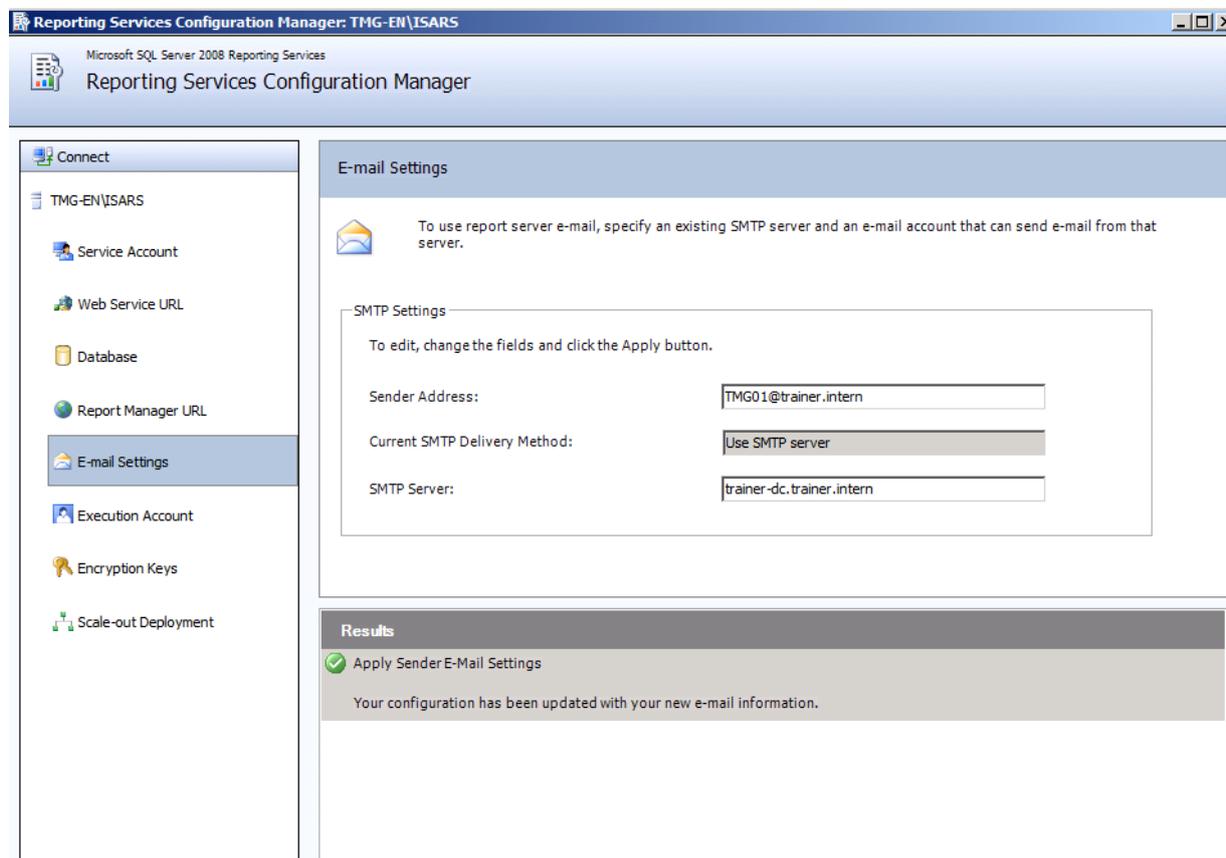


Figure 10: SQL Server Reporting E-mail Settings

For some special configurations it is possible to specify an Execution account in the SQL Reporting Services Configuration Manager. The Execution Account allows SQL Reporting Services to operate under certain circumstances when credentials are not supplied, for example for XML. As a best practice you should specify an account which is different from any of the other SQL service accounts. As a best practice you should create a dedicated service account which has sufficient rights to read the locations holding the data. The account will also need to have network login permissions.

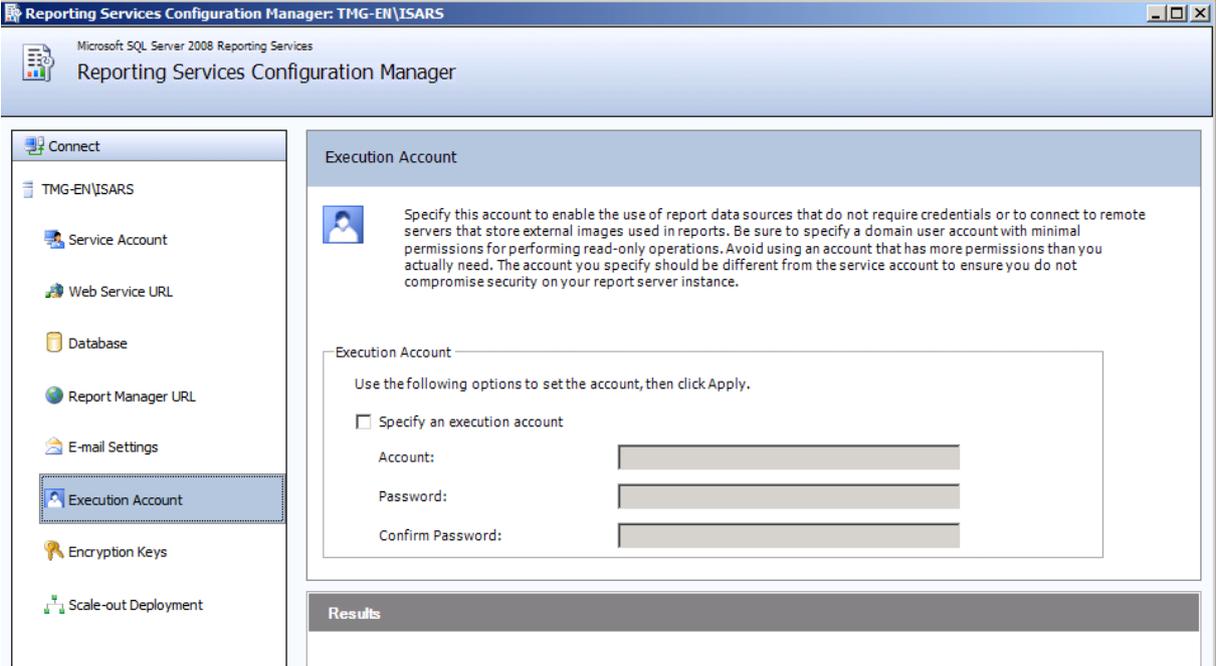


Figure 11: SQL Server Reporting Execution Account

Encryption keys are used in SQL Server Reporting services to encrypt credentials, connection strings and other sensitive data that is stored in the Reporting Services configuration database. It is possible to Backup, Restore and change the encryption key in the Reporting service configuration wizard.

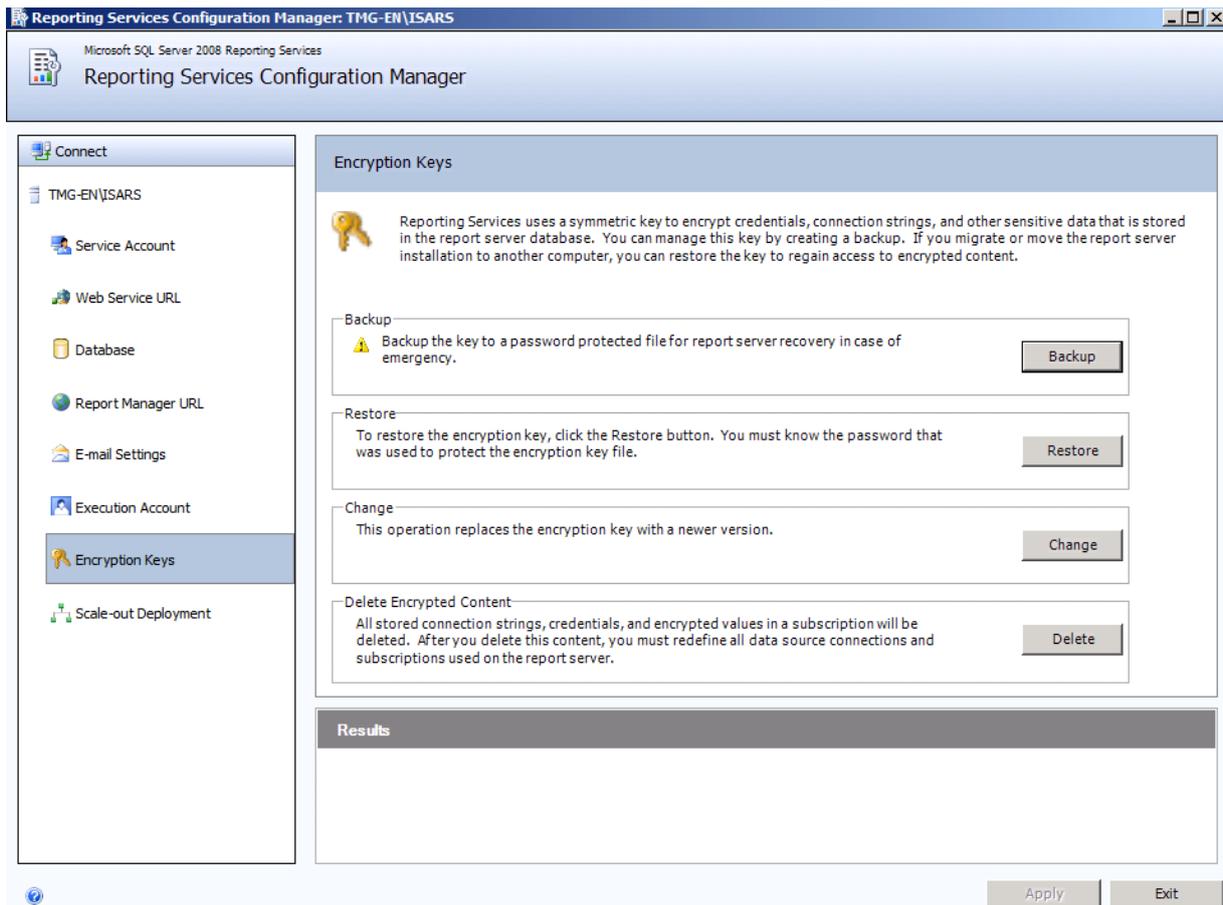


Figure 12: Encryption Key Management

Because scale-out Deployment is not available in SQL Server 2008 Express editions, I would not tell you more about this configuration.

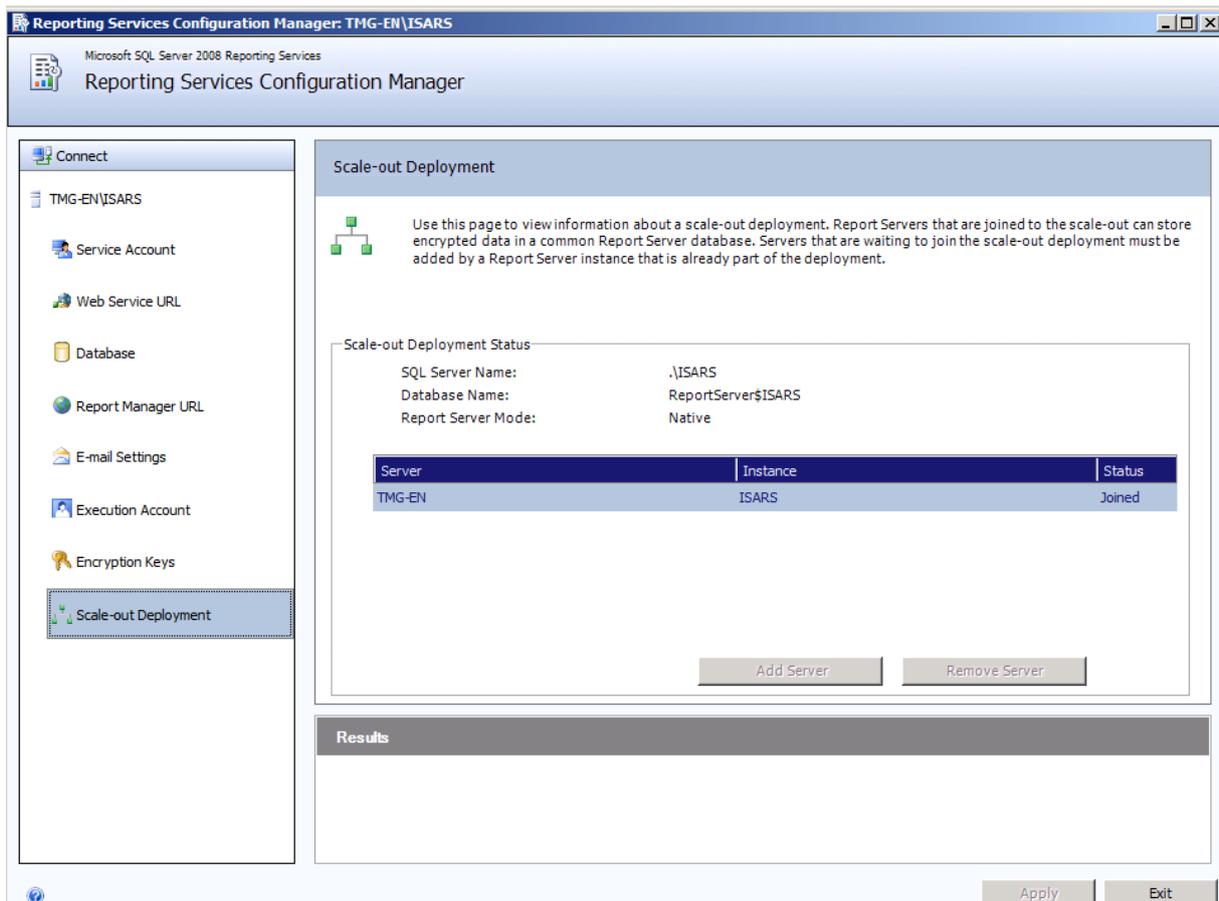


Figure 13: Scale-out Deployment

Conclusion

In this article I gave you some additional information how to configure the SQL Server 2008 Express Reporting Services which will be used from Microsoft Forefront TMG to provide Reporting Services built into Forefront TMG. With this additional information you should now be able to customize some Microsoft SQL Server Reporting aspects.

Related links

Troubleshooting reporting

<http://technet.microsoft.com/en-us/library/ff849731.aspx>

Logging Enhancements in Microsoft Forefront Threat Management Gateway (TMG) 2010

<http://www.isaserver.org/articles/Logging-Enhancement-Microsoft-Forefront-Threat-Management-Gateway-TMG-2010.html>

Configuring Forefront TMG logs

<http://technet.microsoft.com/en-us/library/bb794937.aspx>

Microsoft Forefront TMG – Logging options in Forefront TMG

<http://www.isaserver.org/tutorials/Microsoft-Forefront-TMG-Logging-options-Forefront-TMG.html>

How to View TMG Logs when using SQL Server Express for Logging

<http://blogs.technet.com/b/isablog/archive/2010/03/31/how-to-view-tmg-logs-when-using-sql-server-express-for-logging.aspx>