

Exchange 2003 – Exchange Troubleshooting Assistant

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Abstract

In this article I will show you how to use the Exchange Server Troubleshooting Assistant version 1.0. With the help of this tool it is possible to diagnose a wide range of Exchange Server related problems, for example problems with Exchange Mailflow, Database mount problems and performance problems for users using Outlook. Some parts of this tool are already Exchange Server 2007 aware so you could begin collecting information for Exchange Server 2007 troubleshooting which currently has Beta 2 status.

Let's begin

The Exchange Troubleshooting Assistant programmatically executes a set of troubleshooting steps to identify the root cause of performance, mail flow, and database mounting issues. EXTRA automatically determines what set of data is required to troubleshoot the identified symptoms and collects configuration data, performance counters, event logs and live tracing information from an Exchange server and other appropriate sources. The Exchange Troubleshooting Assistant then analyzes each subsystem like the Disc- and –RAM subsystem to determine performance bottlenecks and component failures. The results of EXTA will be aggregated and the results are displayed to the Administrator who can use this information for extended troubleshooting.

System requirements

The System requirements for the Exchange Troubleshooting Assistant are:

Component	Requirement
Operating system	Microsoft Windows 2000 Professional, Windows XP, Windows 2000 Server family, or Windows Server 2003 family required; Windows XP recommended
Computer and processor	Personal computer that has 133-megahertz (MHz) or more processor; 1.0-gigahertz (GHz) or larger processor recommended. Dual processors for topologies with more than 100 Exchange servers are recommended.
Memory	256 megabytes (MB) of RAM required; 256 megabytes (MB) for every 50 Exchange servers in the topology recommended.
Hard disk	10 MB of available hard disk space for tool installation; 2 MB of free space per server, per scan required for the data output.
Messaging system	Mixed-mode or native-mode Exchange Server 2003, Exchange 2000 Server, and Exchange Server 5.5

	system; Exchange Server 2003 recommended. Note: Pure Exchange Server 5.5 topologies are not supported.
Dependencies	Microsoft .NET Framework 1.1 IIS Common Files

Installation

You can download the Microsoft Exchange Troubleshooting Assistant from the following [website](#). The current version as I wrote this article is 1.0. You should come back to the download website in regularly intervals to look for a new or updated version or you should use the update function of the tool.

After downloading the tool, follow the installation instructions.

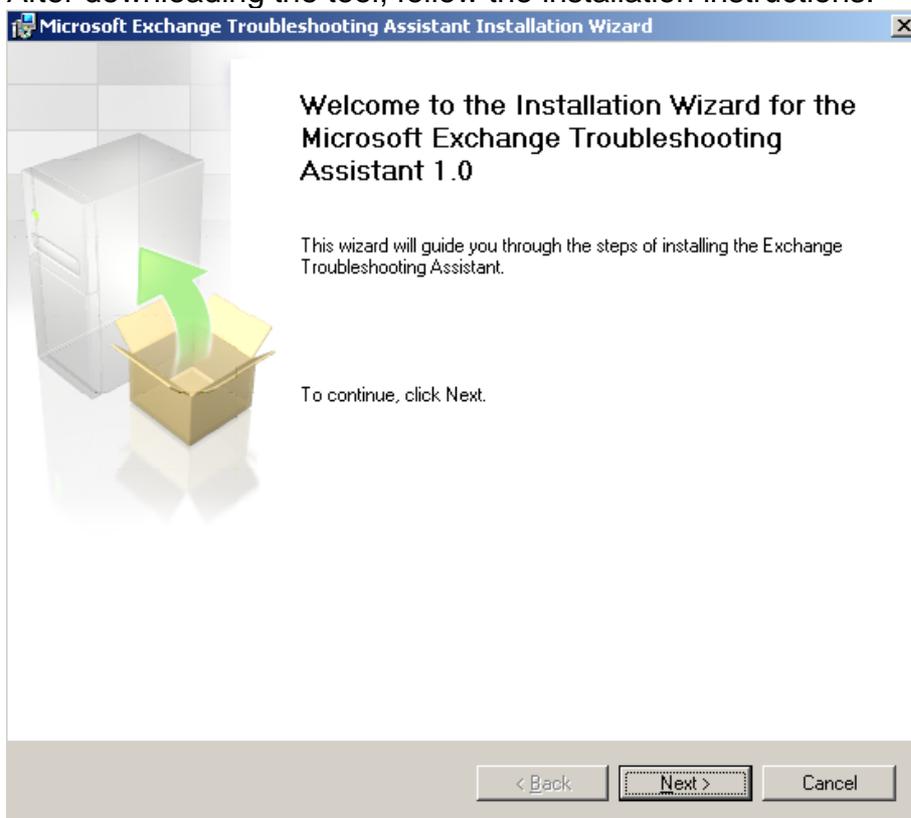


Figure 1: Installation of the Microsoft Exchange Troubleshooting Assistant v1.0

When you open the Exchange Troubleshooting Agent, it first contacts the Microsoft website for updates for the tool and for of the configuration file. You could cancel the check but I recommend always using the update check for this tool.

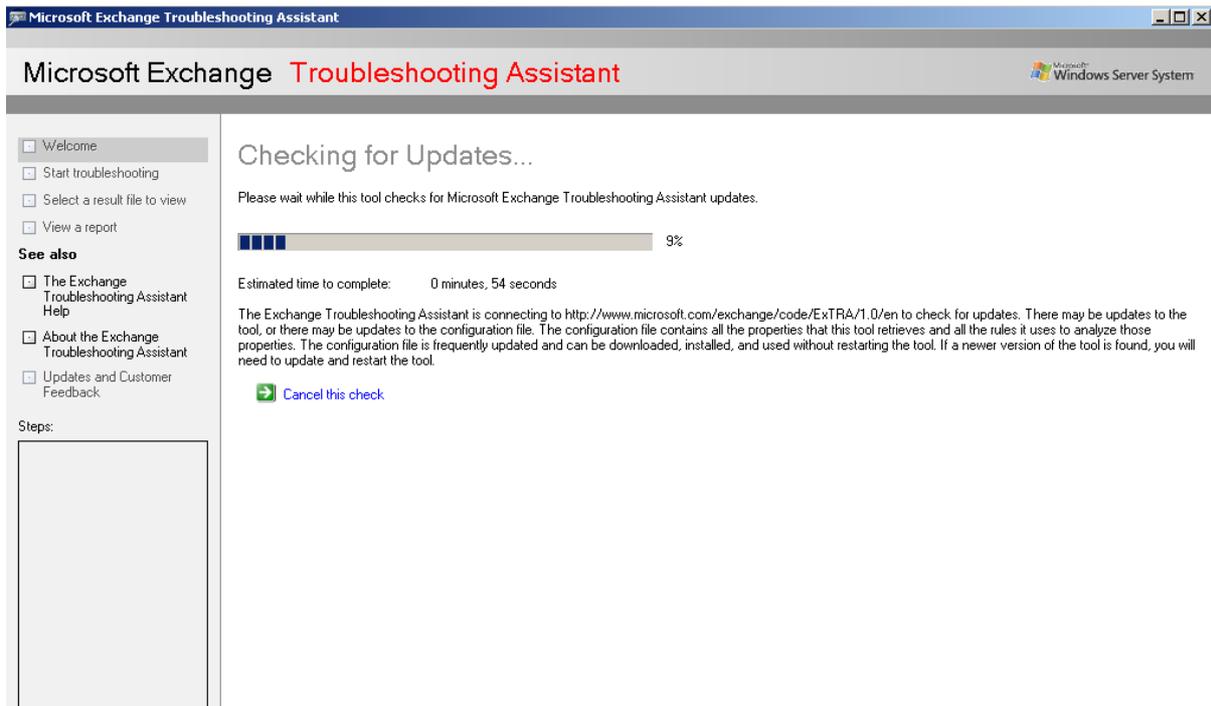


Figure 2: Check for Updates

After update checks you can start the Troubleshooting process.

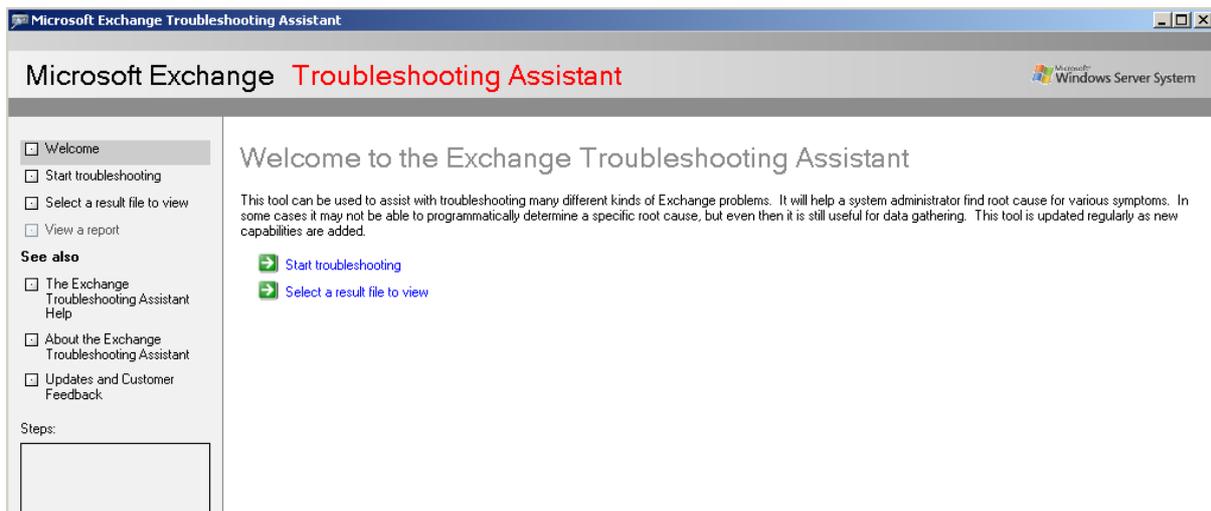


Figure 3: Begin Troubleshooting

Troubleshooting Task

You can select between three Troubleshooting Tasks

- Performance Troubleshooter
- Mail Flow Troubleshooter
- Database Recovery Management

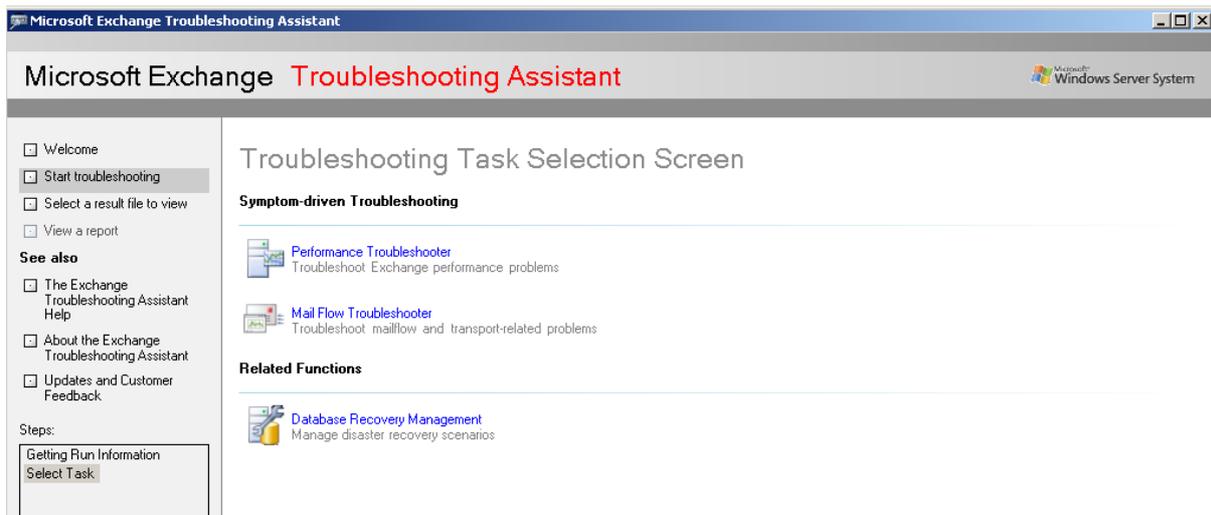


Figure 4: Troubleshooting Task

Exchange Performance Troubleshooter

The Exchange Performance Troubleshooter has the same functions like the Stand Alone Version of the tool. With this version there is one symptom more you can analyze.

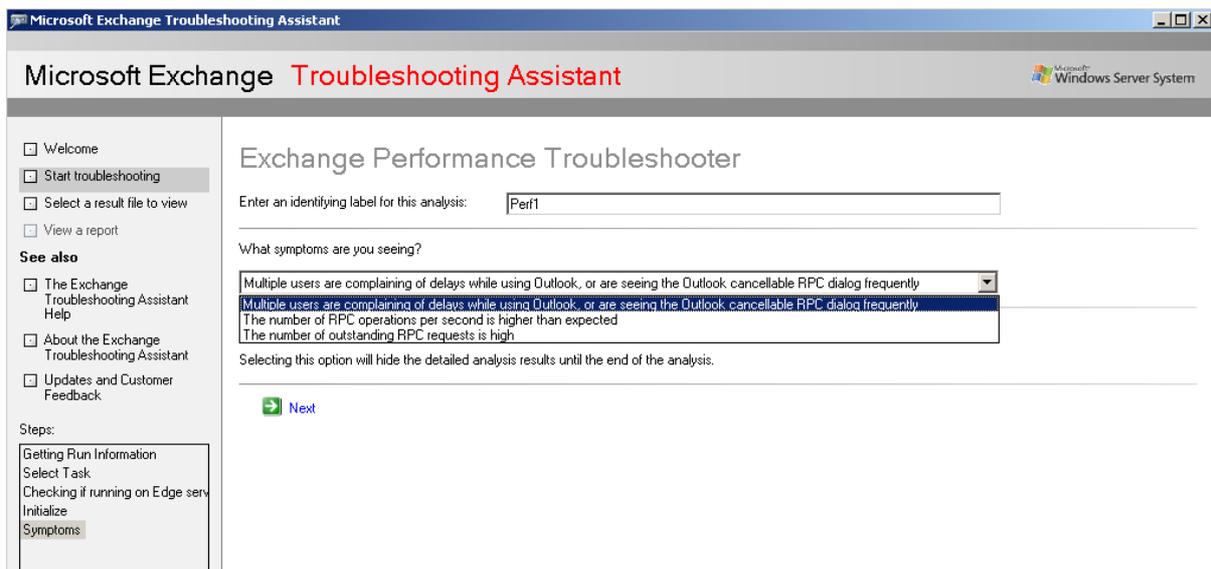


Figure 5: Select Symptoms

Next you must specify the Servername and the tool checks the connectivity. The tool only found that I'm running the Server in a Virtual Machine.

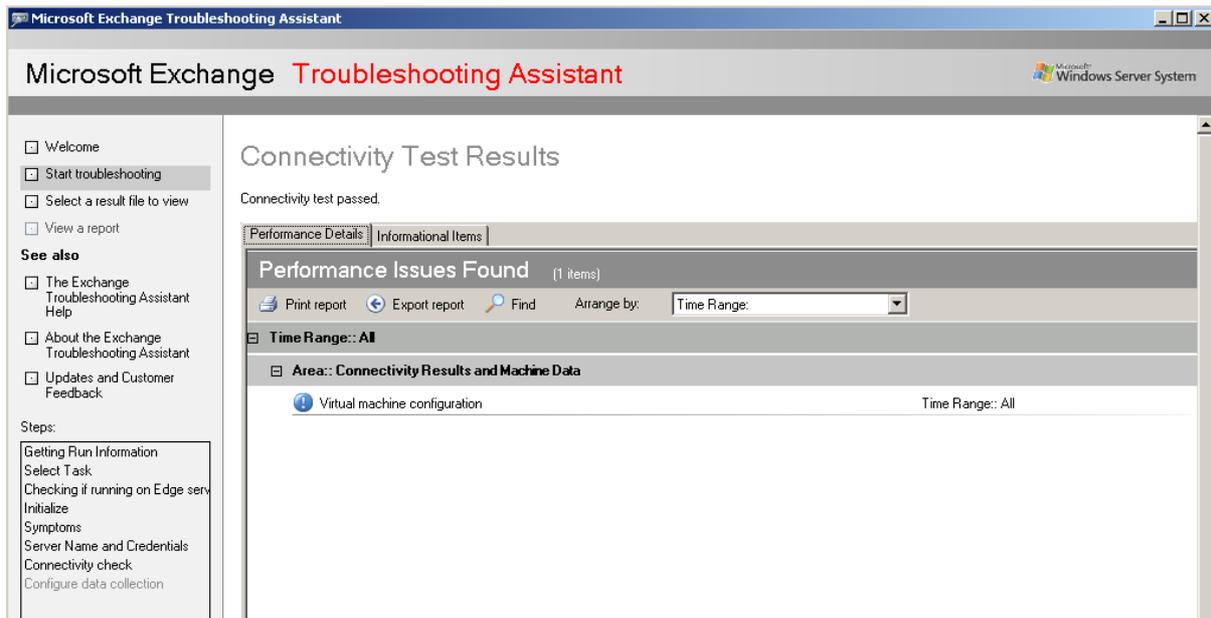


Figure 6: Connectivity results

You can use the Exchange Troubleshooting Assistant to collect the required Performance Log Data. Per Default the tool collects Performance data for 5 Minutes. In real environments you should expand the interval to several hours. If you had already collected some data you can open an existing logfile.

Please note that it is also possible to manually collect the required information by using [Exmon](#) or the Windows Performance Monitor.

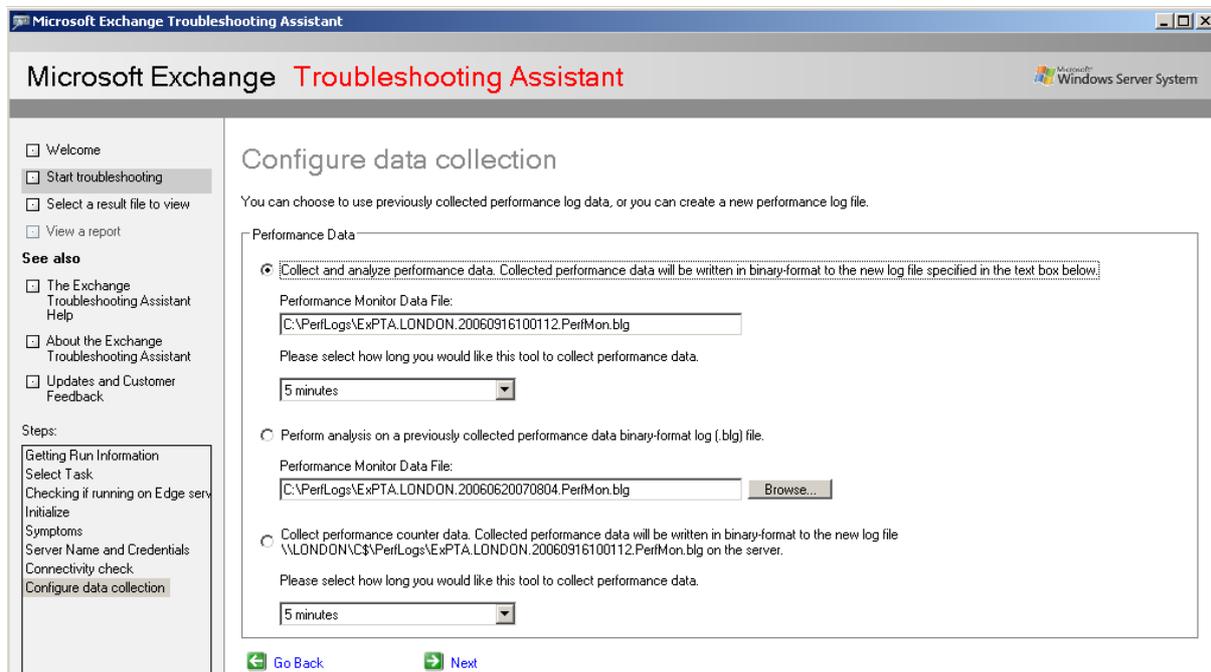


Figure 7: Configure Data collection

The Report shows no RPC problems. Everything is fine. If you want to see some more traffic in a test environment I recommend using tools like Exchange Server 2003 Loadsim to get more loads on your test machines to see EXTRA working.

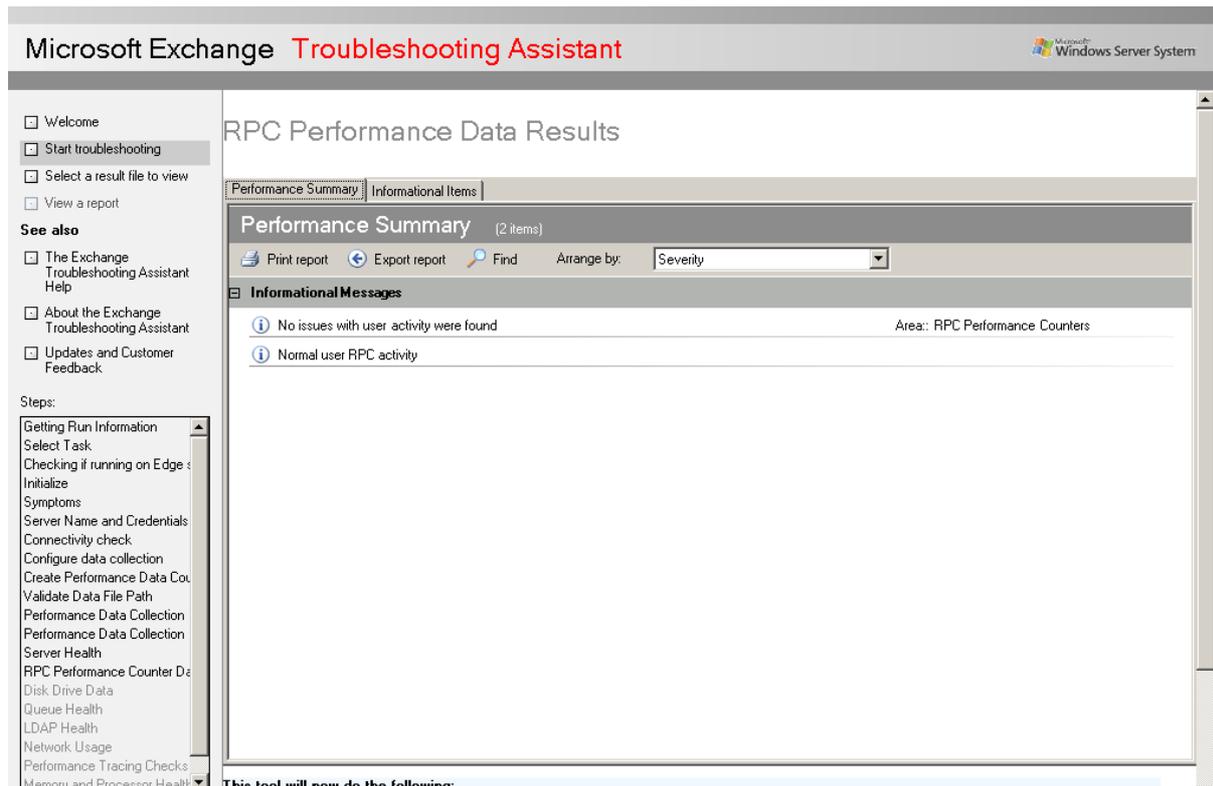


Figure 8: Configure Data collection

Gathering Disk Data

The Microsoft Exchange Troubleshooting Assistant is now gathering more information from the disc subsystem, the message queue, LDAP health and some more. You can see the steps in the EXTRA window.

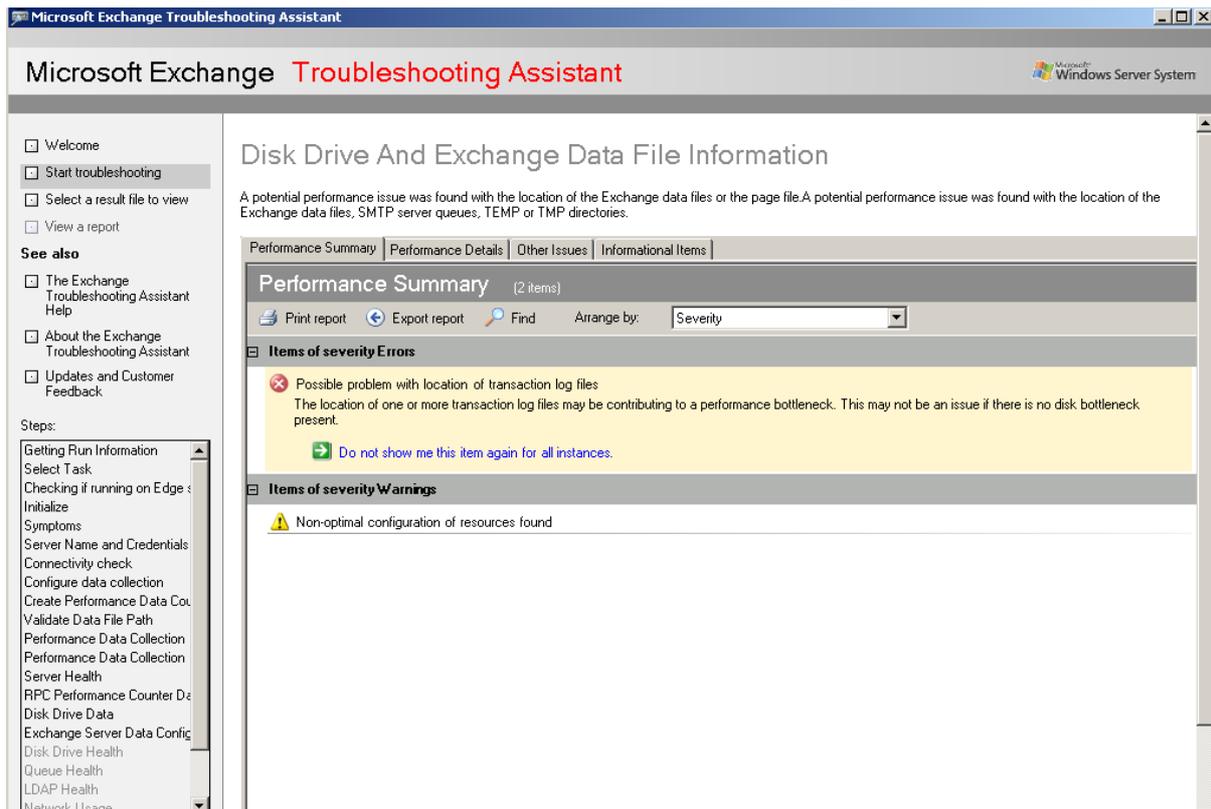


Figure 9: EXTRA found some performance bottlenecks

EXTRA found some disk bottlenecks in my test system. If you click the associated button you will see more information about this bottleneck.

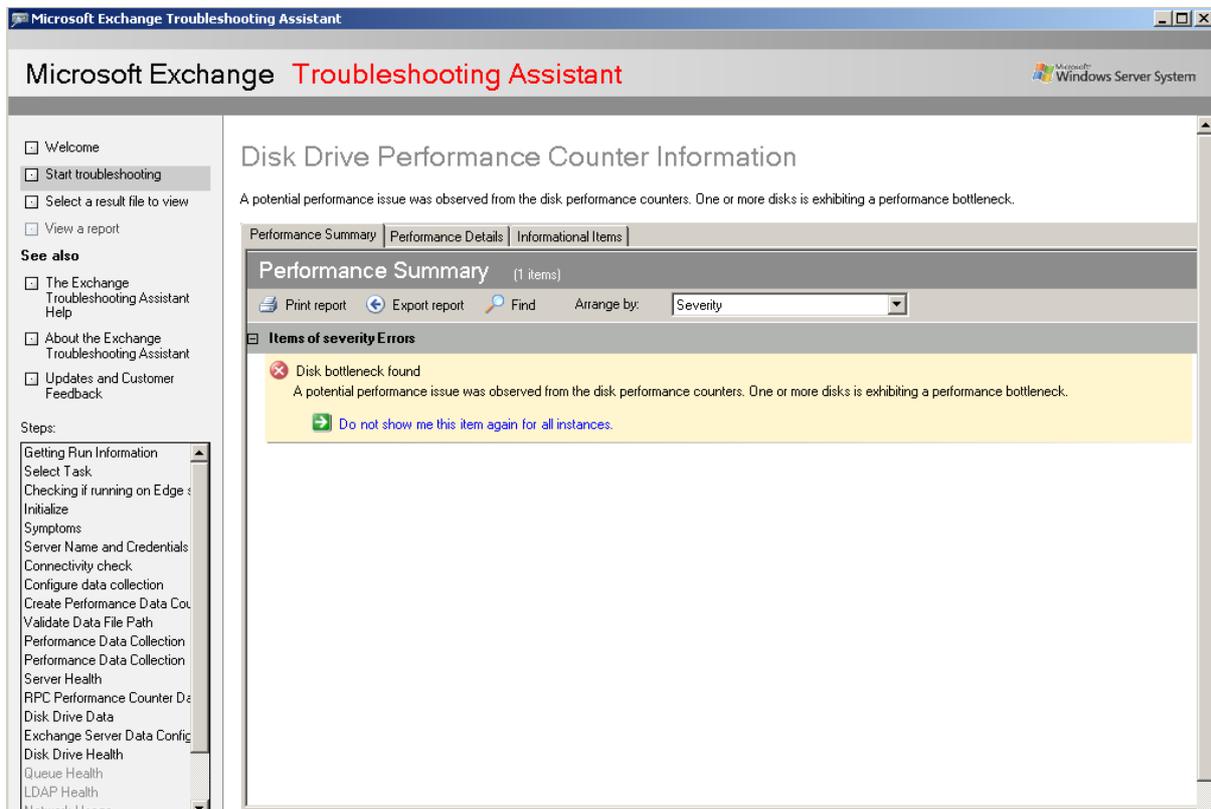


Figure 10: Click the green button for more information

Finally EXTRA shows all collected information in a extra window where you can see all information and bottlenecks of your system.

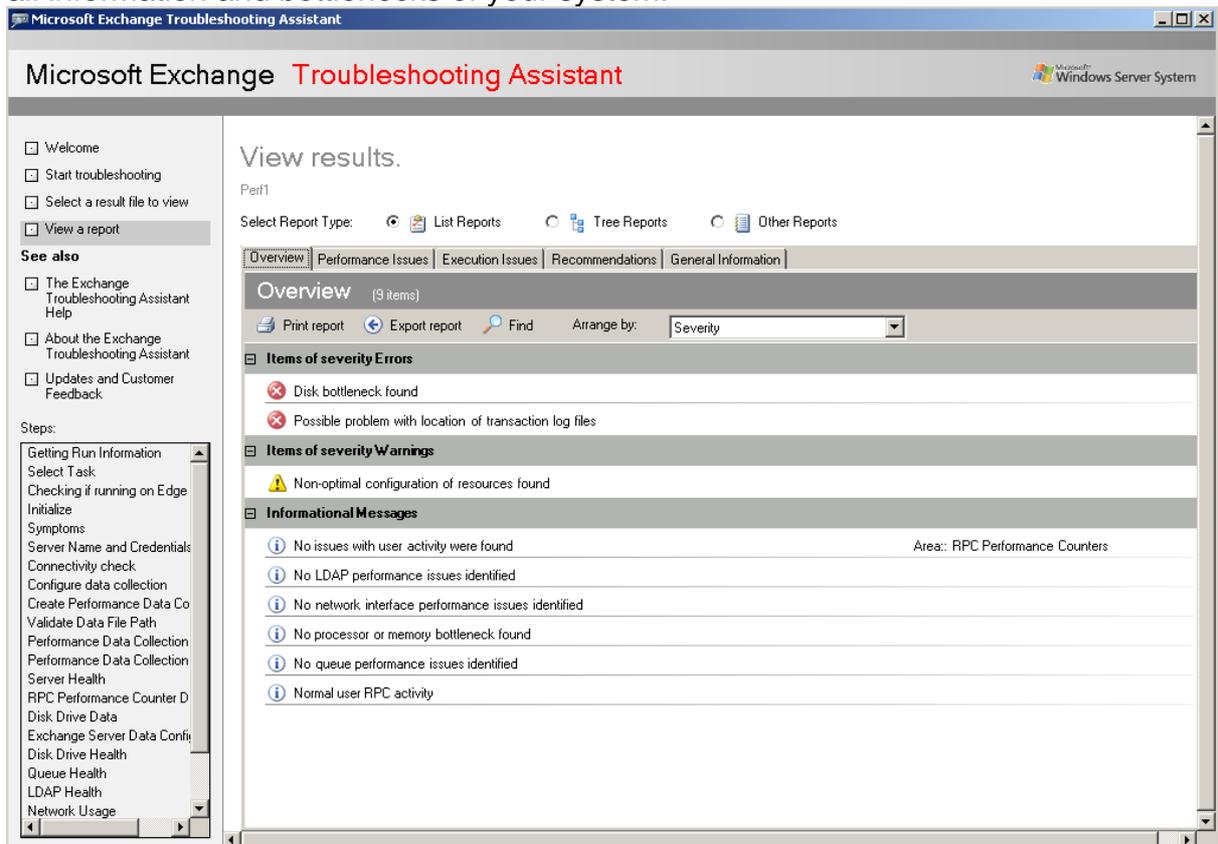


Figure 11: View results

Exchange Mailflow Troubleshooter

The Exchange Mailflow Troubleshooter is a really new component from the Exchange Troubleshooting assistant. You can use the Exchange Mailflow Troubleshooter to find the reason for broken mailflow, Non delivery reports or lost Messages if you are using Exchange Server 2007.

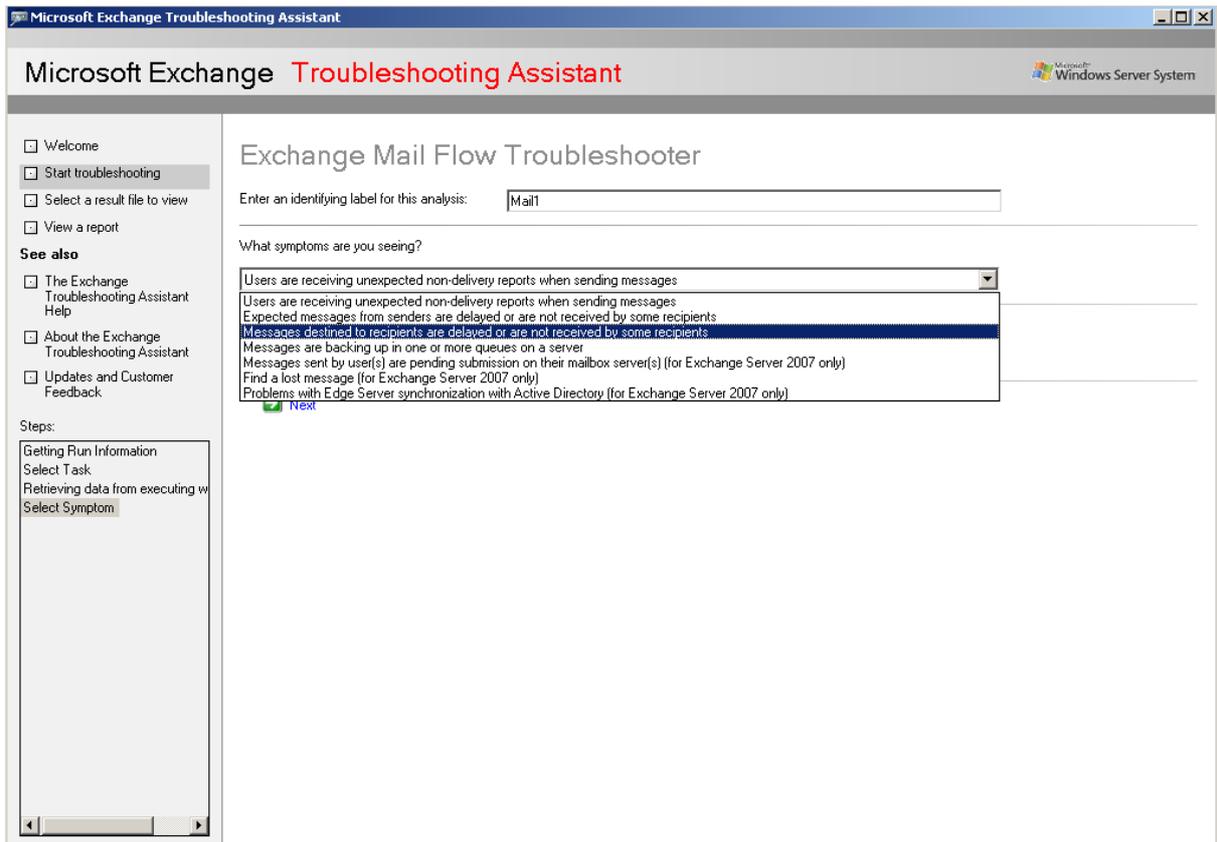


Figure 11: Select symptoms for Mailflow Troubleshooting

The Exchange Mailflow Troubleshooter found that the FQDN on the SMTP Server instance does not match the server name which could be the reason for several errors.

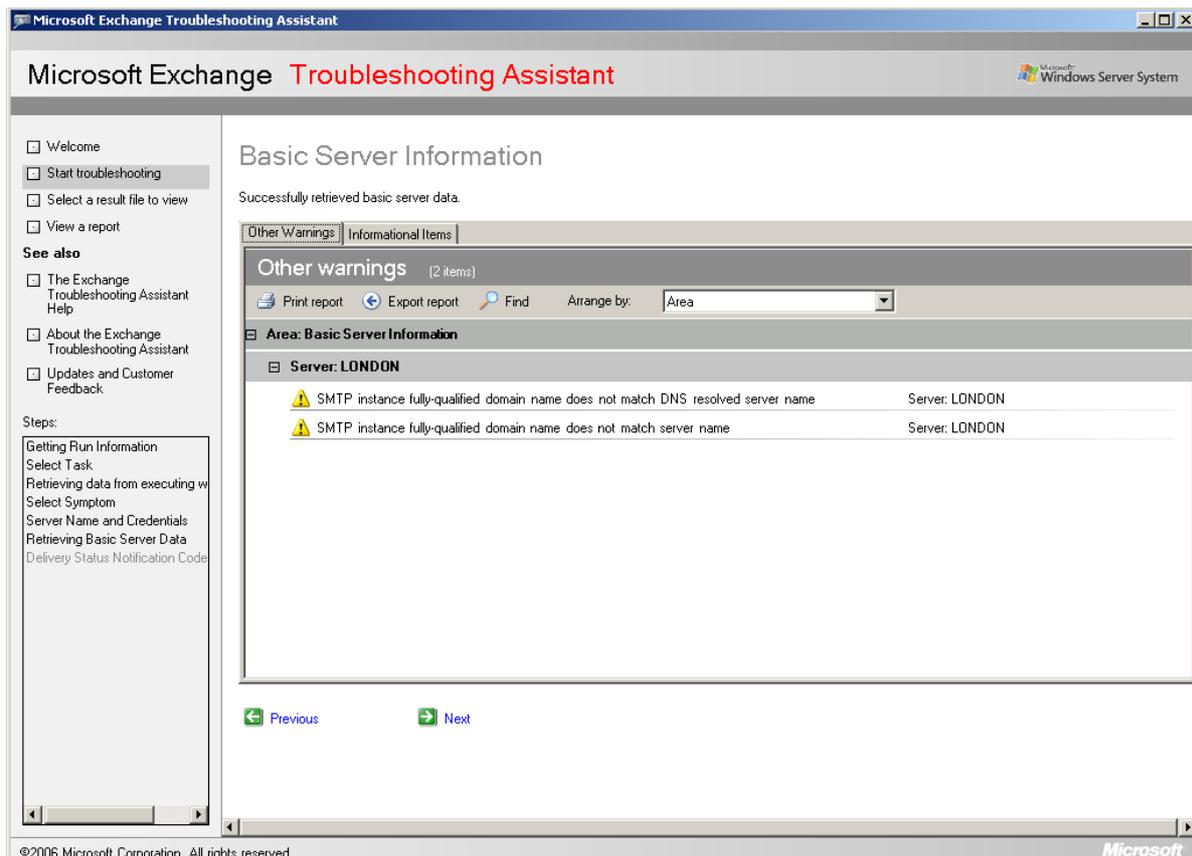


Figure 12: SMTP FQDN warning

Next you must specify the Delivery Status Notification (DSN) code. You can find the Delivery Status Notification code in the NDR (Non Delivery Report) that your users get from the mailsystem.

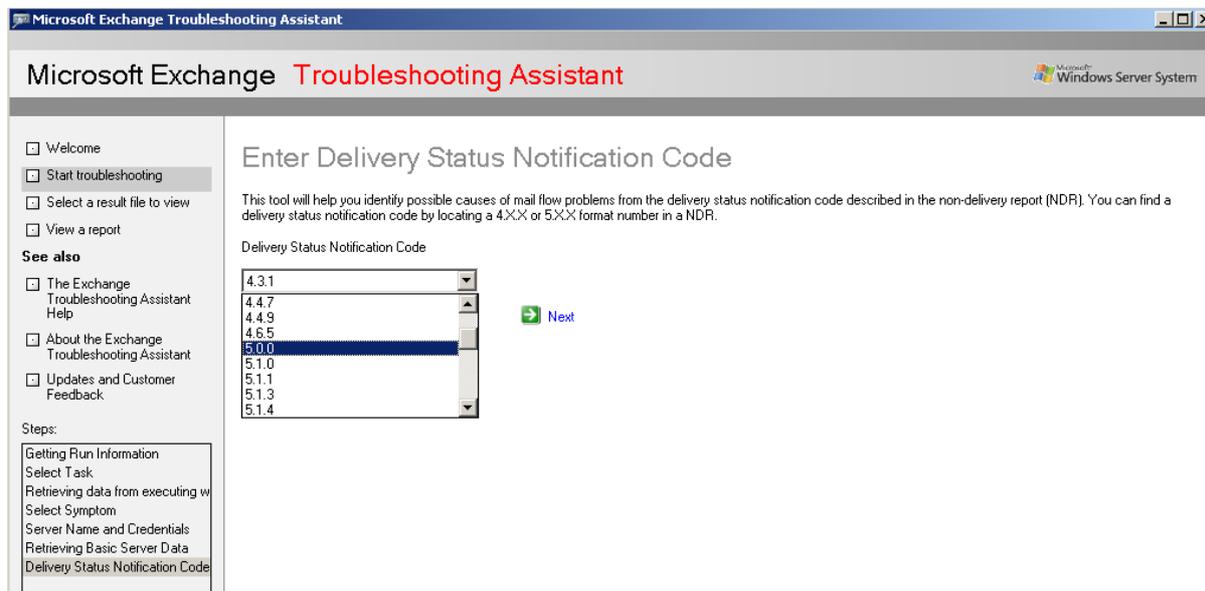


Figure 13: Specify DSN

The Exchange Mailflow Troubleshooter lists the explanation of the DSN status Code so that it is possible to analyze the reason for the NDR.

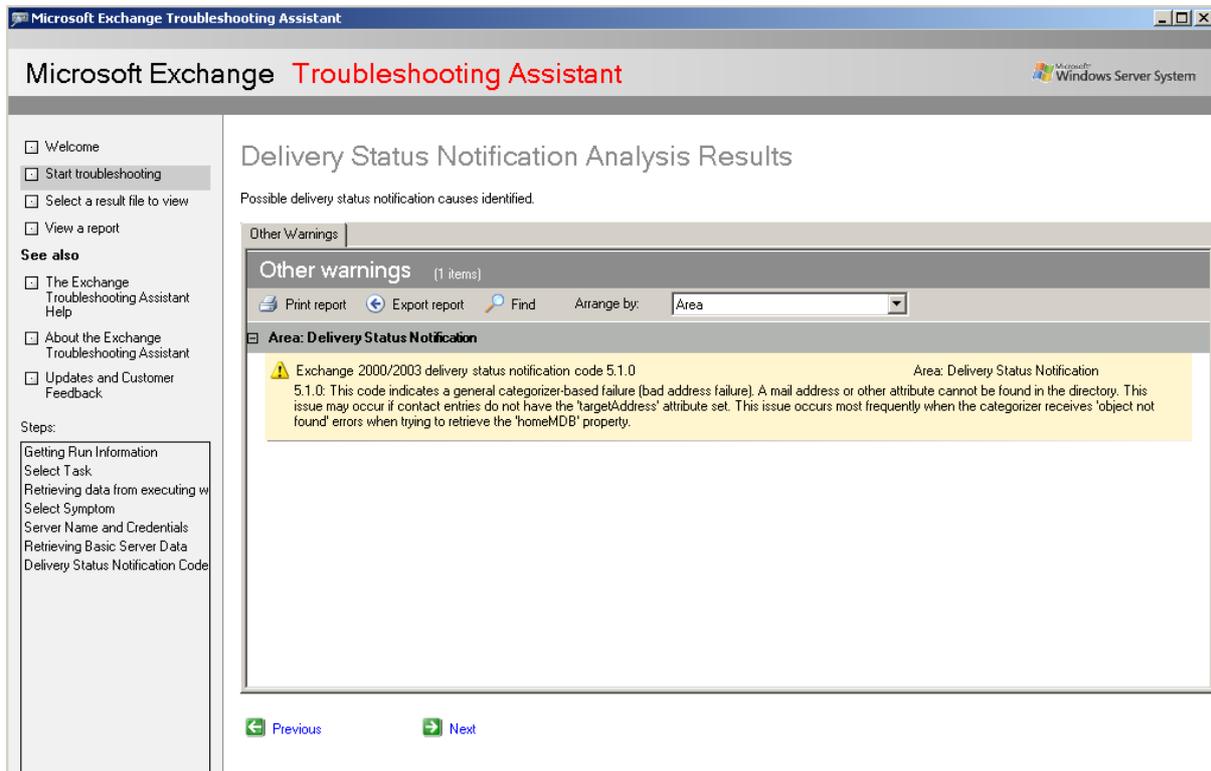


Figure 14: Detailed DSN information

Database Recovery Management

The Database Recovery Management collects configuration data and header information from your Exchange databases and transaction log files. EXTRA analyzes all database headers and creates a list of problems with your database and how to resolve problems with your Exchange databases.

EXTRA scans your dismounted Exchange databases and transaction log files for shutdown reason and other problems. With the help of EXTRA it is possible to some more:

- Analyze Log Drive Space
- Reset Log Generation Number
- Show Database Related Event Logs

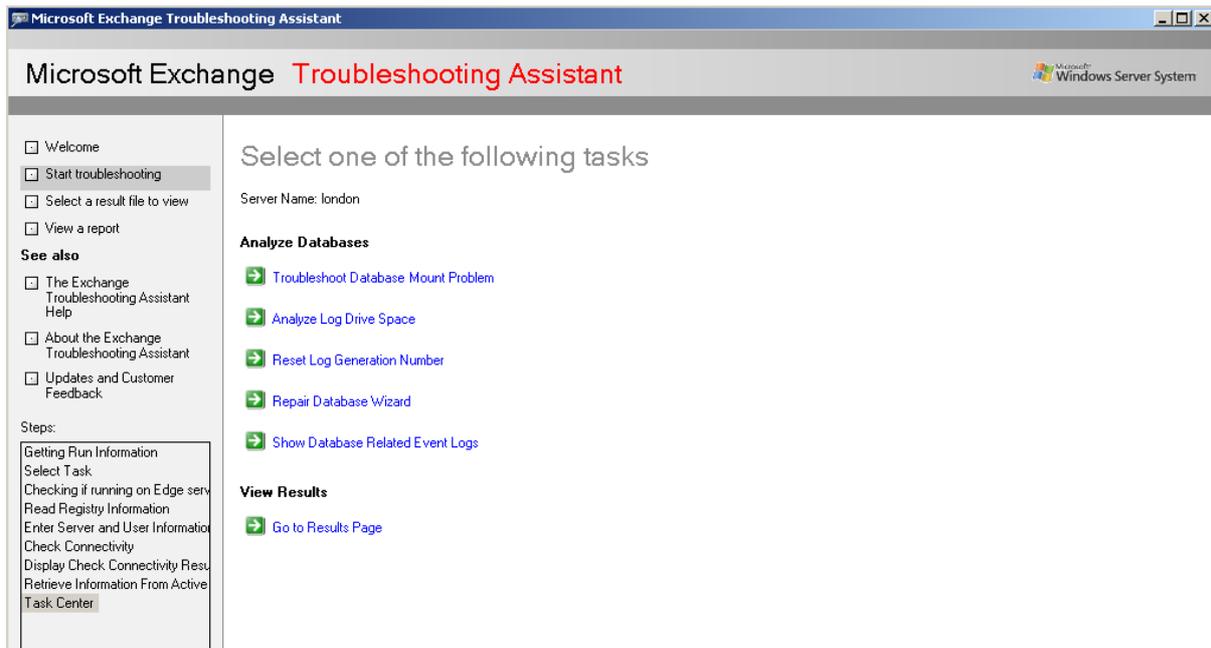


Figure 15: Exchange Troubleshooting Assistant options

Repair Database Wizard

For this article I selected the Repair Database Wizard. You must dismount the Exchange Database that you want to repair before using the repair database wizard.

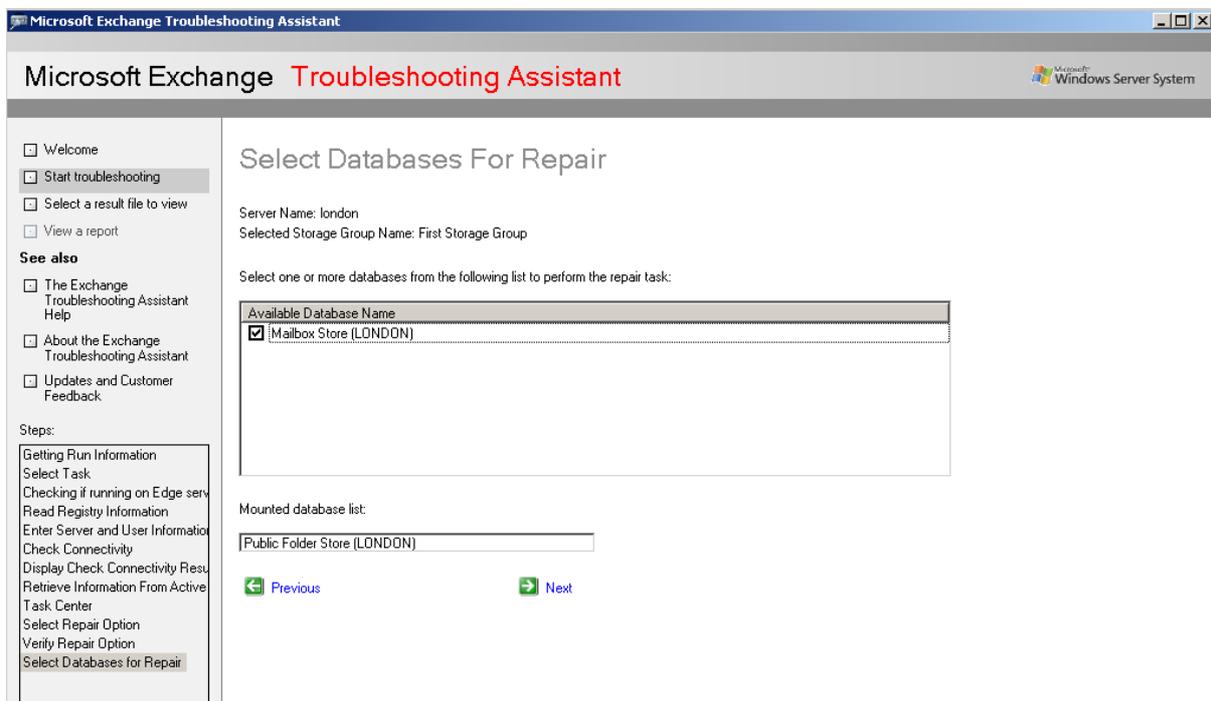


Figure 16: Select Database for Repair

Because I only dismounted a database with the Exchange System Manager, the Database is in clean shutdown, so the Repair Database Wizard has nothing to do. As you can see in the following Figure, the Exchange Database Repair Wizard executes the well known ISINTEG tool and defrags the Exchange Database.

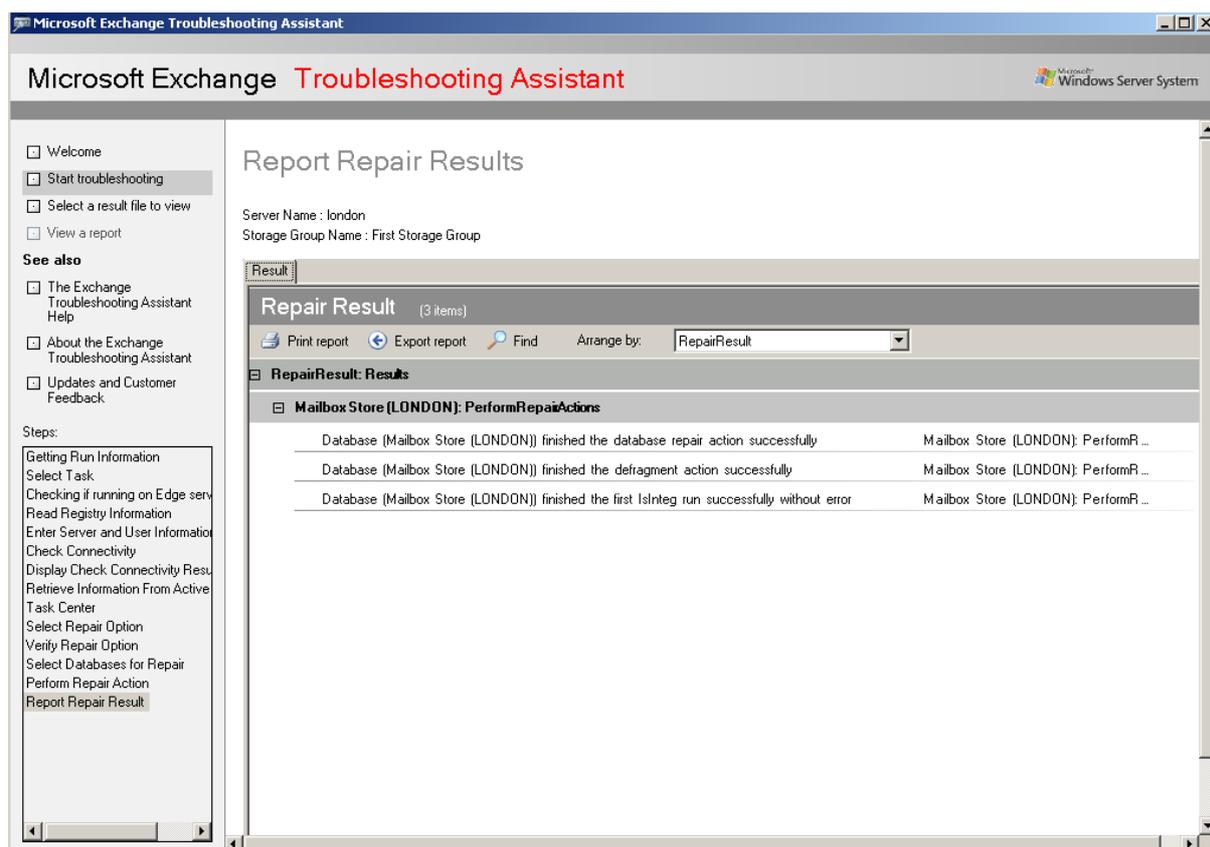


Figure 17: Report Repair Results

Conclusion

The Microsoft Exchange Server Troubleshooting Assistant is a very interesting tool for Exchange Administrators to analyze and find potential problems with Exchange databases and Logfiles and Exchange performance. The Microsoft Exchange Server Troubleshooting Assistant is also a great help to recovery and repair corrupted Exchange Databases. With the help of EXTRA you can also diagnose Message delivery problems of your Exchange users. You should spend some time playing with this tool. Some parts of this tool are also part of the other Exchange tools like Exchange Server Disaster Recovery Agent, and Exchange Server Performance Troubleshooting Agent. You can read more about these tools on www.msexchange.org.

Related Links

Microsoft Exchange Troubleshooting Assistant v1.0

<http://www.microsoft.com/downloads/details.aspx?FamilyID=4bdc1d6b-de34-4f1c-aeba-fed1256caf9a&DisplayLang=en>

Mail Flow Troubleshooter in Exchange Troubleshooting Assistant (EXTRA) - A closer look

<http://msexchangeteam.com/archive/2006/08/07/428616.aspx>

Exchange 2003 – Performance Troubleshooting Analyzer Tool v1.0 (ExPTA)

<http://www.msexchange.org/tutorials/Exchange-2003-Performance-Troubleshooting-Analyzer-Tool-v10-ExPTA.html>

Exchange 2003 - Disaster Recovery Analyzer Tool (ExDRA 1.0)

<http://www.msexchange.org/tutorials/Exchange-2003-Disaster-Recovery-Analyzer-Tool-ExDRA-10.html>