

How to complete a semantic database analysis for the Active Directory database by using Ntdsutil.exe

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SUMMARY

This step-by-step article describes how to run the semantic checker on the Active Directory database. Unlike the file management commands, which test the integrity of the database with respect to the ESENT database semantics, the semantic analysis analyzes the data with respect to Active Directory semantics. You can use this process to generate reports on the number of records present, including deleted and phantom records.

The Windows 2000 Directory service opens its files in Exclusive mode. This means that the files cannot be managed while the computer is operating as a domain controller. The first procedure is to boot your server into Directory Services Restore mode.

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Boot Into Directory Services Restore Mode

1. Reboot the server.
2. After the BIOS information appears, press F8.
3. Select **Directory Services Restore Mode (Windows 2000 domain controllers only)**, and then press ENTER.
4. Select your server, and then press ENTER.
5. Log on by using your Restore Administrative account that was made when this domain controller was promoted.

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Starting Ntdsutil.exe

1. Click **Start**, and then click **Run**.
2. In the **Open** box, type **ntdsutil**, and then press ENTER. Note that you can view Ntdsutil.exe Help by typing **?** at the command prompt, and then pressing ENTER.

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Complete a Database Analysis

This procedure starts the semantic analysis of the Ntds.dit file. A report is generated and written to a file that is named Dsdit.dmp.*n*, in the current folder, where *n* is an integer that is incremented each time that you run the command.

1. At the Ntdsutil.exe command prompt, type **Semantic database analysis**, and then press ENTER.
2. At the Semantic Checker command prompt, type **Go**, and then press ENTER.
3. Verification is displayed. To exit, type **q**, press ENTER, type **q**, and then press ENTER.

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Retrieve a Specific Record

This procedure retrieves a specific record number from the Ntds.dit file by using the DNT record number

variable. One of the functions of the database layer is to translate each distinguished name into an integer structure that is called the distinguished name tag, which is used for all internal accesses. The database layer guarantees the uniqueness of the distinguished name tag for each database record. To display indices and their associated DNT, use the **integrity** command in the **Files** menu of Ntdsutil.exe.

1. At the Ntdsutil.exe command prompt, type **Semantic database analysis**, and then press ENTER.
2. At the Semantic Checker command prompt, type **Go**, and then press ENTER.
3. At the Semantic Checker command prompt, type **Get DNT record number**, and then press ENTER.
4. Verification is displayed. To exit, type **q**, press **ENTER**, type **q**, and then press ENTER.

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REFERENCES

For more information about how to troubleshoot the Active Directory database, please see the following "Active Directory Diagnostics, Troubleshooting, and Recovery" Microsoft Web site:

http://www.microsoft.com/windows2000/techinfo/reskit/samplechapters/dsbi/dsbi_add_qouy.asp

For additional information about how to automate Ntdsutil.exe by using a script, click the following article number to view the article in the Microsoft Knowledge Base:

[243267](#) How to automate Ntdsutil.exe by using a script

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APPLIES TO

- Microsoft Windows 2000 Server
- Microsoft Windows 2000 Advanced Server

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