

IBM InfoSphere DataStage

dsrpcd tracing



Information Management

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This module provides details regarding how to trace the dsrpcd daemon using DataStage® V7.5, 8.0.1, and 8.1.

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This presentation provides an overview of the dsrpcd trace daemon when using UNIX, Linux or Windows. An example is also provided. The codes mentioned throughout this presentation are displayed on the applicable slide.

Overview

- dsrpcd makes all connections from client to server
- dsrpcd tracing available on UNIX, Linux and Windows
- Use when having problems connecting with DataStage
- Must be root on UNIX and Linux
- Must be Administrator on Windows

The dsrpcd daemon is used to make all client to server connections. The dsrpcd tracing is available on UNIX, Linux and Windows. Use this tracing when you are having problems connecting with the DataStage client. You will need to be root on UNIX or an administrator on Windows to use this tracing technique.

dsrpcd tracing - UNIX and Linux (1 of 3)

- DataStage server machine (UNIX and Linux only)
 - Obtain process ID of dsrpcd
 - `ps -ef|grep dsrpcd`
 - Stop dsrpcd if running
 - Check for connections made to dsrpcd daemon
 - `netstat -a | grep dsrpc`
 - » You should just see the listener
- ```
*.dsrpc *.* 0 0 24576 0 LISTEN
```
- If there are connections, get users out of DataStage and check for running jobs
  - If nothing is connected, end the dsrpc
    - “kill <pid>” where <pid> is the process ID of the dsrpcd daemon

This tracing method is used when using UNIX or Linux and you need to stop just the dsrpcd daemon and not bring all of DataStage down. You must have the process ID for the dsrpcd running. Once you have the process ID and you are ready to stop the dsrpcd process, be sure there are no client connections. To check client connections type `netstat -a|grep dsrpc`. If there are no client connections you will see the dsrpcd connection in a state of “Listen”. If there are any other connections, you will need to stop those connections before proceeding. When there are no client connections, stop the dsrpcd process. To stop the dsrpcd process, type “kill” then space and type the process ID of the dsrpcd daemon.

## dsrpcd tracing - UNIX and Linux (2 of 3)

- Go to DSEngine directory
- Set up DataStage environment
  - Source dsenv file
    - `./dsenv`
- Restart dsrpcd daemon in debug mode
  - `nohup bin/dsrpcd -d9 >rpc.out 2>&1 &`

Once the daemon is killed, go to the DSEngine directory and set up your environment for DataStage. To do this, source the dsenv file by typing `./dsenv`. Once your environment is set up, restart the dsrpcd daemon in debug mode. To do this as root, type `nohup bin/dsrpcd -d9 >rpc.out 2>&1 &`.

## dsrpcd tracing - UNIX and Linux (3 of 3)

- Ensure process is up
  - `ps -ef|grep dsrpc`
- Try client connection
- Errors in `rpc.out`
- Restart daemon
  - Stop and restart DataStage engine

Next type `ps -ef|grep dsrpc` to ensure the dsrpcd process is up. Once it is up and running, try the client connection again. The errors should be written to a file called `rpc.out` in the current directory. You can put a full path to your output file if you do not want it written in the current directory. Once you are finished, restart the daemon so it is no longer in debug mode. The easiest way to do this is to stop and restart the DataStage engine.

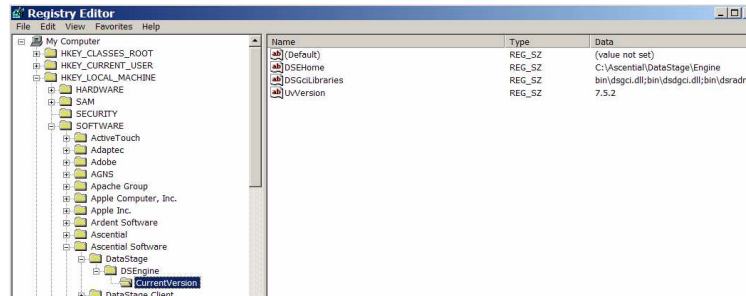
## dsrpcd tracing - Windows (1 of 8)

- Connect as Administrator
  - Permissions to edit Windows registry
- Turn on dsrpc tracing
  - Start Windows registry Editor
    - Click Start => Run
    - Enter "regedit"

For Windows, you need to be connected as an Administrator on the DataStage server machine and you need to have permissions to edit the Windows registry. To turn on the dsrpc tracing, start the Windows registry editor by clicking the Start, Run and type regedit.

## dsrpcd tracing - Windows (2 of 8)

- Registry editor open
- Navigate to key
  - HKEY\_LOCAL\_MACHINE\Software\Ascential
  - Software\DataStage\DSEngine\CurrentVersion



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dsrpcd tracing

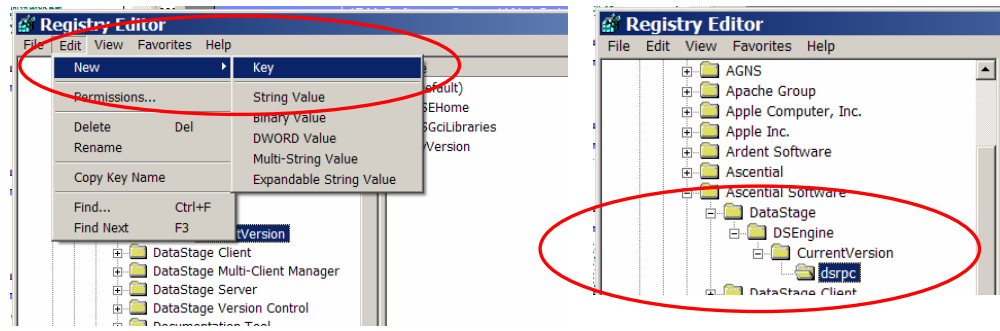
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Once the registry editor is open, go to the key  
HKEY\_LOCAL\_MACHINE\Software\Ascential  
Software\DataStage\DSEngine\CurrentVersion.



## dsrpcd tracing - Windows (3 of 8)

- Create a new Key called 'dsrpc'



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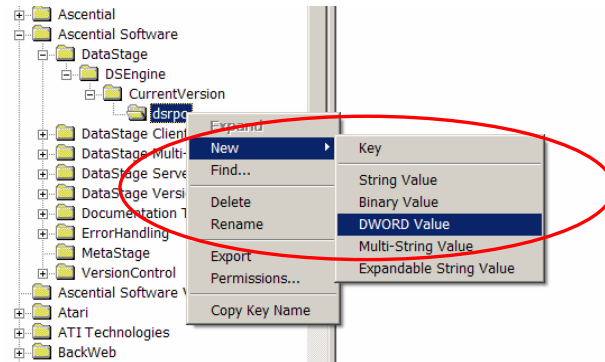
dsrpcd tracing

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Click the CurrentVersion key and click the Edit menu. Click New then click Key. Name this new key dsrpc.

## dsrpcd tracing - Windows (4 of 8)

- Right click dsrpc key
- Right click in right pane
  - New > DWORD Value



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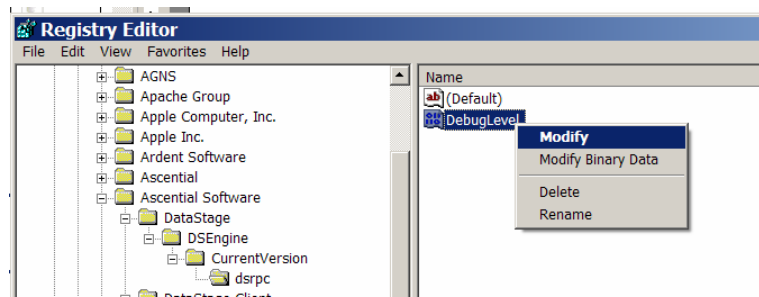
dsrpcd tracing

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Next, right click the dsrpc key that you just created and click New, DWORD Value.

## dsrpcd tracing - Windows (5 of 8)

- Name new key 'DebugLevel'
- Right click new key
- Select 'Modify'



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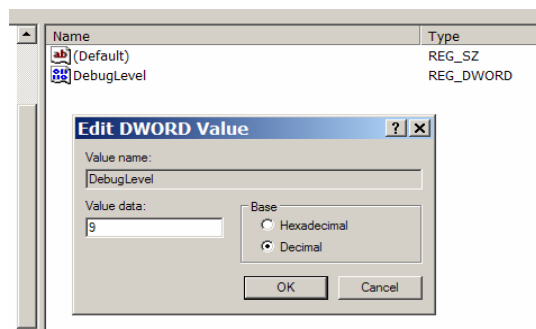
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The name of the new Key must be DebugLevel, all one word. Once the key is created, right click it and select Modify.

## dsrpcd tracing - Windows (6 of 8)

- Set base to Decimal
- Enter value
  - Only numeric value
- Stop and restart dsrpc Service



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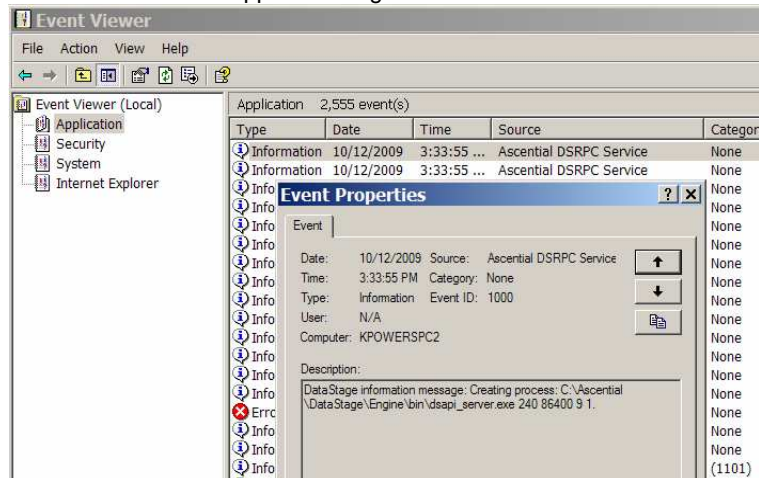
dsrpcd tracing

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When the Edit DWORD Value box comes up, set the base to Decimal and set the value. You can set the trace level value to anything from one to nine just like on UNIX. Once you have saved the change, stop and restart the dsrpc service.

## dsrpcd tracing - Windows (7 of 8)

- Output in Windows Event Viewer Application logs



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The output from the trace can be seen by going into the Microsoft® Event Viewer. The logs are under the Application logs. This slide shows an example of a log entry from a dsrpc trace.

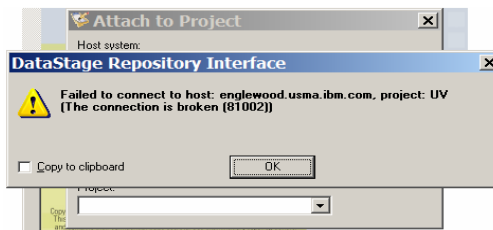
## dsrpcd tracing - Windows (8 of 8)

- Two options to turn off dsrpc tracing
  - Set the DebugLevel value to 0
  - Delete the dsrpc registry key
- Stop and restart service for change to take effect

Once you have completed tracing, turn the tracing off. There are two ways to do this. You can go back into the registry editor and delete the dsrpc key that you created or you can go into the registry editor and modify the DebugLevel for your dsrpc key and change the value to 0. Either method will require you to stop and restart the dsrpc services to turn the debugging off.

## Example – dsrpcd tracing

- Connecting with DataStage client
- Process ID of dsrpcd daemon
- Ensure no live connections
- Stop dsrpcd daemon
- Restart in debug mode



In this example, you are trying to connect with one of the DataStage clients and are receiving the message as seen on this slide. First determine the process ID of the dsrpcd daemon. Next, ensure there are no live connections. Stop the dsrpcd daemon and restart it in debug mode. Once it is restarted, re-create the error with the client and then check the log file.

## Example – dsrpcd tracing

```

START OF ARG ARRAY DATA
Element 0 Length type
 0x 4 0x 2
ARG DATA
RPCPID=7897 - 12:31:49 - In unpack packet
RPCPID=7897 - 12:31:49 - length of arg 0 = 4
RPCPID=7897 - 12:31:49 - type of arg 0 = 2
RPCPID=7897 - 12:31:49 - char arg(0x4000b2a8)=dscs
RPCPID=7897 - 12:31:49 - looking for service dscs
RPCPID=7897 - 12:31:49 - Found service=dscs
RPCPID=7897 - 12:31:49 - Checking host: *
RPCPID=7897 - 12:31:49 - accept: forking and execing /u2/DS751A/Ascential/DataSt
age/DSEngine/bin/dsapi_server
RPCPID=7897 - 12:31:49 - In parent child PID=7900
/usr/lib/dld.sl: Can't open shared library: /export/hpdev01sand0/builds/DSEngine
.src/uvsrclib/UtilWSCClient.sl
/usr/lib/dld.sl: No such file or directory
RPCPID=7897 - 12:31:50 - waited on child 7900

```

This slide displays what the trace for the dsrpcd daemon looks like for the error in the previous example.



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