

Using Novell Remote Manager to secure a stack trace after an abend

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Background

The stack trace recorded in the abend log is incomplete. Its length has varied from NetWare version to NetWare version and in NetWare 6.5 with recent support packs it is back to being really short. The absolute best way to diagnose a problem is by looking at a core dump of the server's memory at the time of the abend. We do recognize that for various reasons it may not be practical to retrieve a core dump from a given server.

This document describes how to secure important and highly relevant information using Novell's Remote Manager (NRM). Part of this information is the same as that recorded in the abend log, but using NRM allows more information to be retrieved, information that may be vital to diagnosing the cause of an abend.

Prerequisites

- ✓ Novell Remote Manager must be installed, this is default in versions of NetWare starting with version 6.0. NetWare 5.1 has its fore runner, NetWare Management Portal. The operator needs basic knowledge about NRM, such as how to access it, login etc. Most of the screen shots displayed here are from a NetWare 6.5 sp8 (OSE2), the NetWare 6.0 screens have different styling and NetWare 5.1's initial screen is slightly different. The described procedure is identical for all three versions.
- ✓ Abend recovery must be used to encapsulate the abended thread and ensure that NRM is operational. If the server freezes, NRM is frozen too and we cannot get to the information we want.
- ✓ Server management systems like HP's Insight Manager must not be set up to restart the server automatically as the information we want to secure is lost when the server reboots.

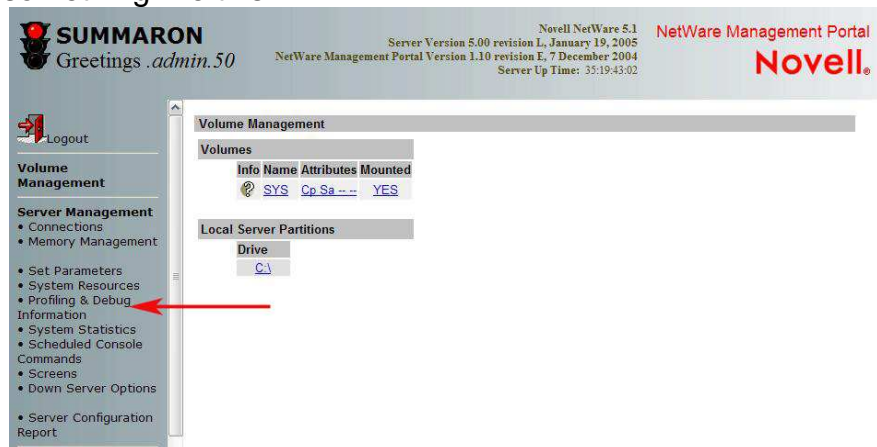
What to do

Open NRM on the abended server in your favourite browser.

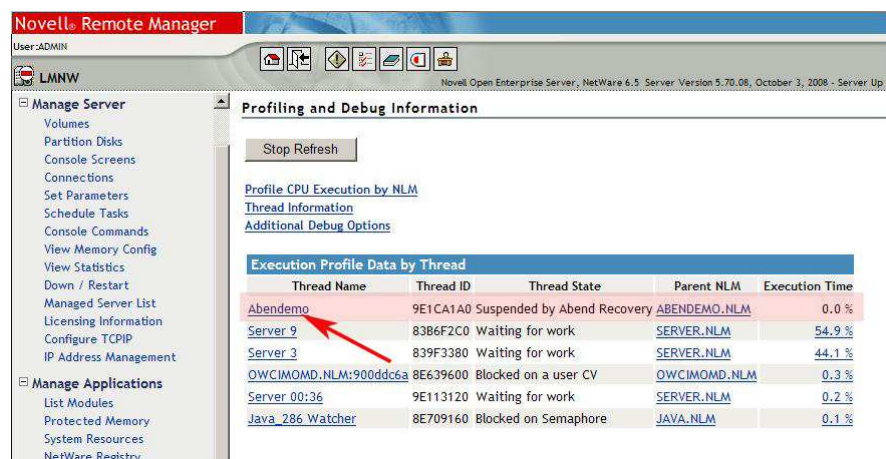


In the left hand menu, open “Diagnose Server” and click “Profile/Debug”.

If you are on NetWare 5.1 the opening screen will look something like this:

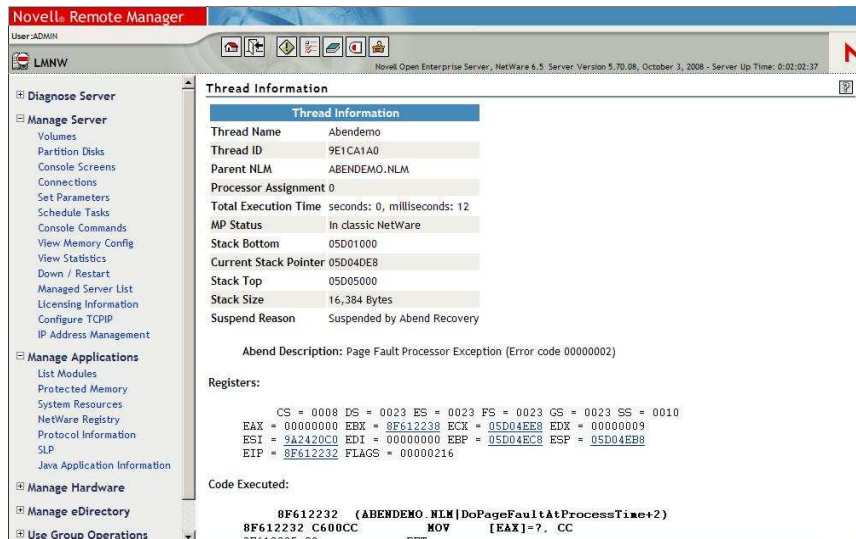


Under “Server Management”, click “Profiling & Debug Information”.



Find the name of the abended thread in the list and click the thread name.

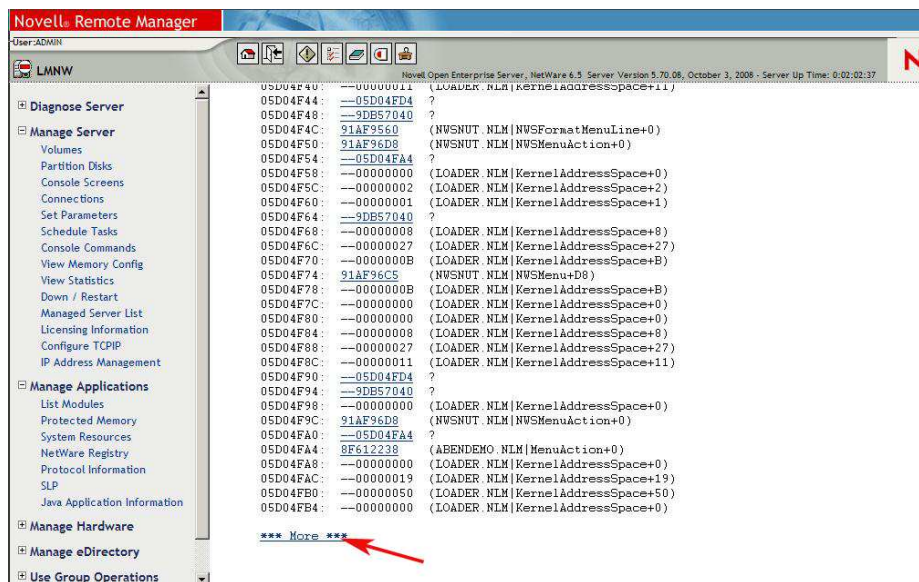
This opens up the “Thread information” screen; it will look something like this:



We can now start saving data. The easiest way to do this is by scraping the text and pasting it into a text editor. Notepad is perfect for this use.

Click in the frame with the information and press [Ctrl][A] to mark all the text in the frame, then press [Ctrl][C] to copy it to the clipboard. Switch focus to Notepad and paste the text into the editor window using [Ctrl][V].

Switch back to the browser screen, click in the text frame again and press the [End] key. This will take you to the end of the text in the frame.



Click the “*** More ***” link. This reveals more of the stack. Select this text, copy it and append it to the text in Notepad. Switch back to the browser and repeat the procedure. How many times should you repeat this? It is not possible to say exactly. Ideally you should keep at it until you see an “End of stack” message, but as stack sizes vary this might be too

much. An educated guess is that 10-15 times should be sufficient.

When you are all done, save the file from Notepad and send it to us via the usual channels.

Make a dry run before you have to do this live

If you want to look at how this is done without having to abend your server, Follow the same instructions as I have described above. In the "Profile/Debug" screen select any thread name and you will see that thread's stack. This can then be copied. If you have a test environment and would like to do a test closer to real life you can [download an abend demo NLM from Novell Cools Solutions](#) .

Be careful with this utility. It will abend your server.

Copy the abendemo.nlm to your test server and load it.



From the menu select "Generate a Page Fault at Process time", Press [Enter] to abend your server.

You can now follow the procedure as described to secure a stack trace.