Tech Note 1047

Using Process Explorer to Solve High SQL Server CPU

Topic#: 002888
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Introduction

This technote describes using Microsoft Process Explorer to troubleshoot high CPU usage by SQL Server. Wonderware products such as Application Server, Historian Server, Corporate Energy Management (CEM), Information Server, etc. reside on the same machine as SQL Server, and high CPU usage can result in performance issues.

Application Versions

- SQL Server 2008 or 2012
- Windows 7, 8.0, 8.1, 2008, and 2012
- System Platform 2012R2 P01
- Wonderware System Platform 2014 and later

Note: This technote assumes that you are familiar with Microsoft SQL Server and Process Explorer. If you have any questions regarding the corresponding Microsoft products, contact Microsoft Technical Support at **www.microsoft.com** for further assistance.

Procedure

1. Use Windows Task Manager to verify if SQL Server process called **sqlservr.exe** is the one using high CPU percentage.
2. If **sqlservr.exe** is in fact using high CPU, download the free **Process Explorer utility** from the following Microsoft link:

   http://technet.microsoft.com/en-us/sysinternals/bb896653.aspx
3. Unzip the file (**ProcessExplorer.zip**) to a folder, then double-click on **ProcExp.exe** to start it up (Figure 1 below).

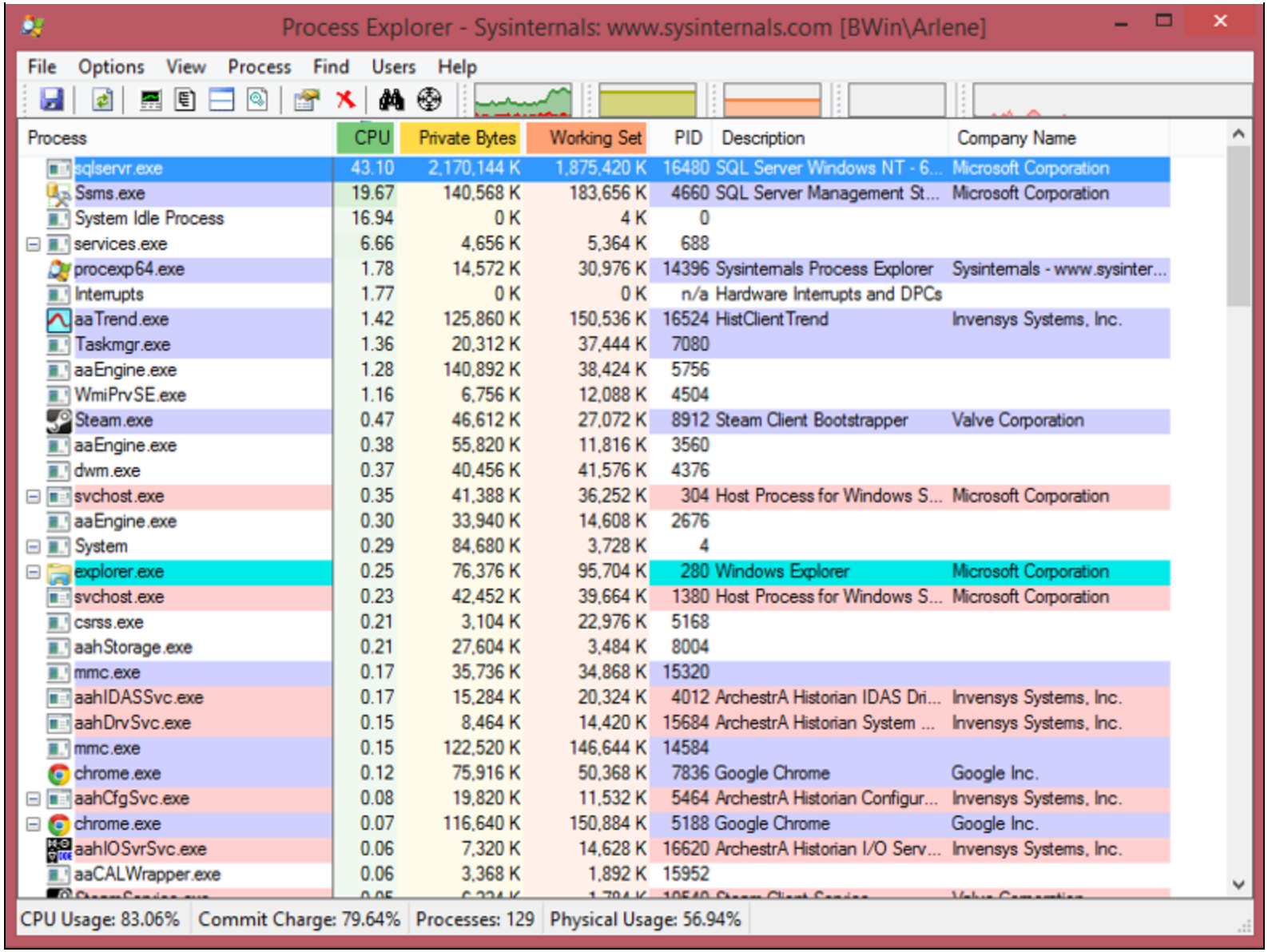

FIGURE 1: PROCESS EXPLORER UTILITY

4. Right-click on the **sqlserver.exe** process and click **Properties**.
5. In the sqlservr.exe **Properties** window, click **Threads**, then click the **CPU** column name to sort from high to low values.

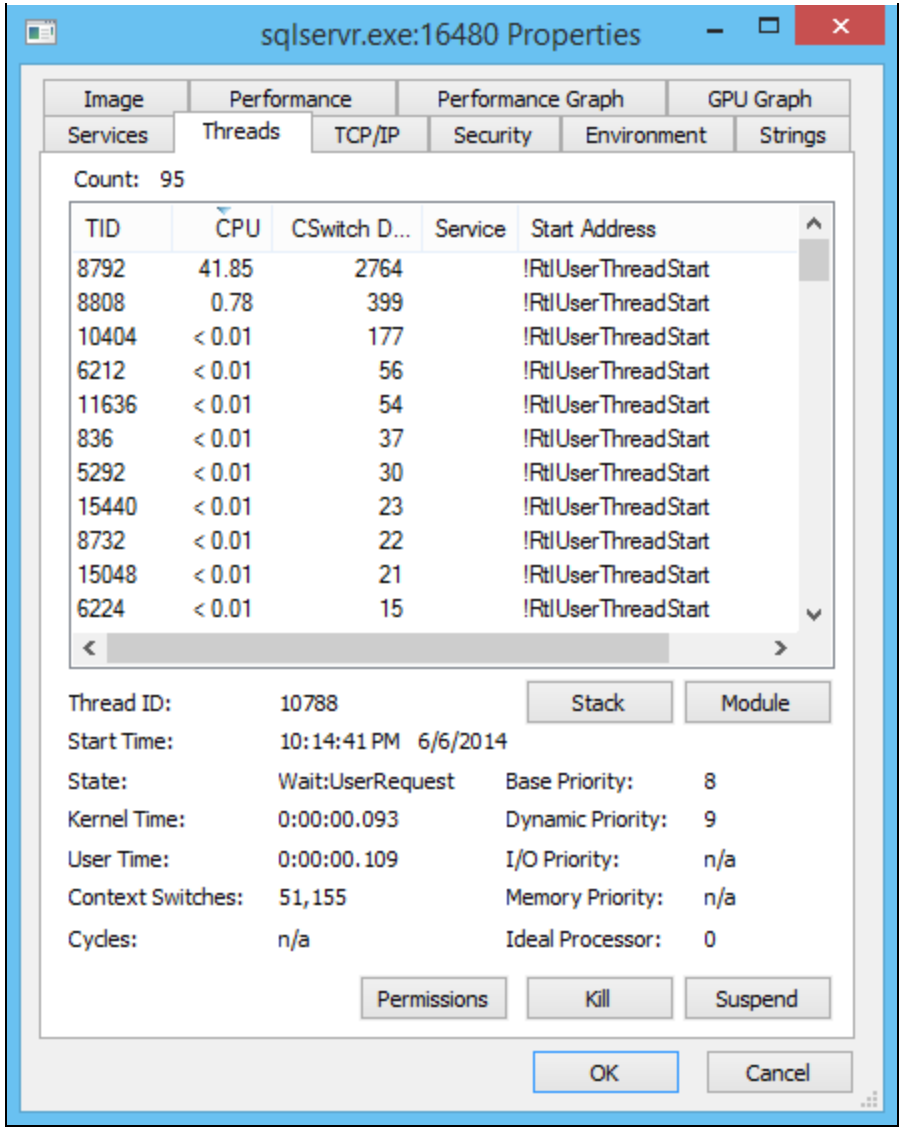

Figure 2: Threads Tab with CPU Values

6. Note the ID number of **TID** (Thread ID) that is consuming a high CPU percentage. In this example, the TID is **8792**.
7. Start SQL Server Management Studio to query for the SQL Server Process ID (SPID.) Execute the following T-SQL query:

```
USE MASTER
GO
Select SPID from sysprocesses where kpid=8792
GO
```

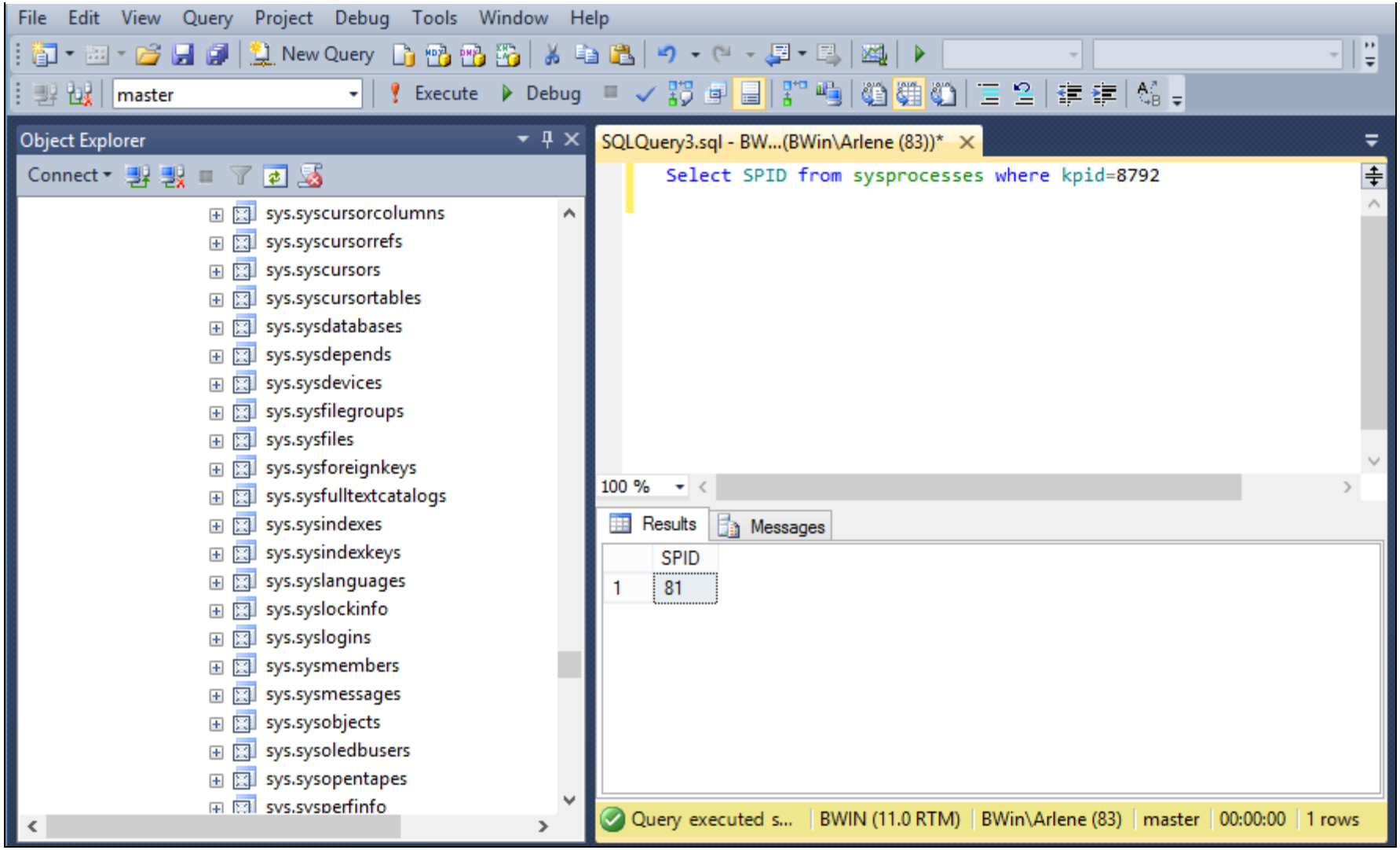

Figure 3: SQL Server Process ID Value

8. Get the SPID details by executing the following query:

```
DBCC INPUTBUFFER (SPID)
```

Where SPID in this case is 81

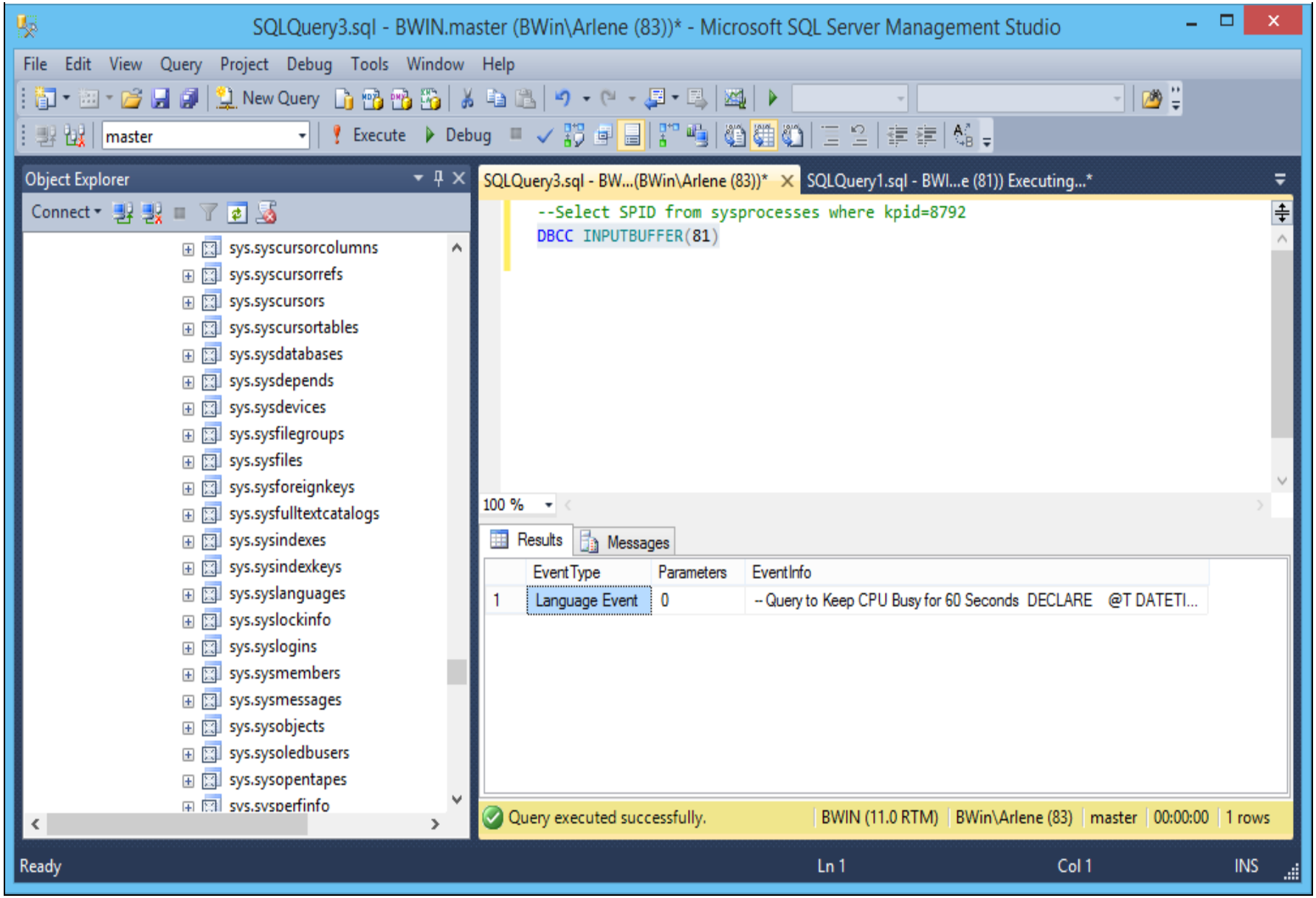

FIGURE 4: SPID DETAILS

The information under the **EventInfo** column shows the query causing issue with the high SQL server CPU.

9. Copy and paste it to the query area to find out why the query uses that much CPU.
10. If it is applicable and not causing any problem, you can execute the query below to end the SPID 81

```
KILL 81
```

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