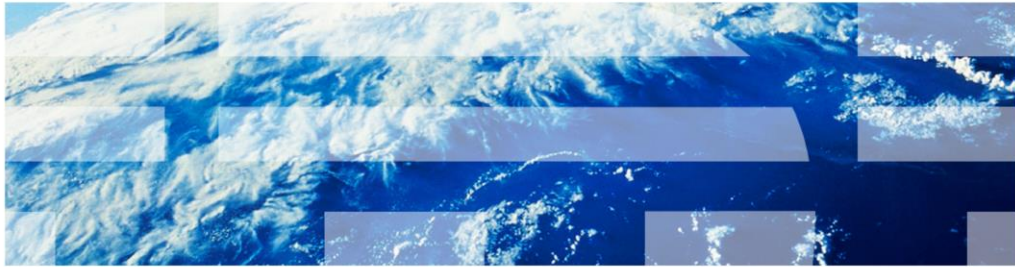


Tivoli Netcool Service Quality Manager V4.1.4

Enabling garbage collection trace for Tivoli Netcool Service Quality Manager processes



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Tivoli® Netcool® Service Quality Manager V4.1.4, enabling garbage collection trace for Tivoli Netcool Service Quality Manager processes.

Objectives

When you complete this module, you can perform these tasks:

- Configure Tivoli Netcool Service Quality Manager processes to write garbage collection traces to files
- Disable the garbage collection traces when they are no longer needed
- Gather garbage collection trace for submission to IBM support for analysis

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- Configure Tivoli Netcool Service Quality Manager processes to write garbage collection traces to files
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- Gather garbage collection trace for submission to IBM support for analysis

Introduction

- Garbage collection trace:
 - Analyze process memory consumption
 - Understand memory utilization pattern over time
- Before you start:
 - Ample disk space for logging the trace messages
 - Requires restart of processes

Garbage collection traces are used to analyze process memory utilization and patterns. The traces are especially useful in troubleshooting and planning the memory resource capacity of a system in coping with the resource demands from processes.

Before attempting to enable a garbage collection trace for Tivoli Netcool Service Quality Manager processes, ensure that you have ample disk space for logging of additional trace messages in the logs disk partition. In addition, note that enabling garbage collection tracing requires a restart of one or more processes.

Editing the run script

```
$WMCROOT/bin/run
```

- Add these lines into the script:

```
# Enable Garbage Collection trace output
properties="-verbose:gc -XX:+PrintGCDetails -XX:+PrintGCTimeStamps
$properties"
```

- Save the file

The first step in enabling garbage collection traces for Tivoli Netcool Service Quality Manager processes is to add garbage collection tracing properties to the run script. Before modifying the file, you should create a backup copy of it. The additional properties shown here are used as arguments when a process is invoked by the script. After the modification, remember to save the changes.

Starting and restarting the process

- Start the process if it is not already started
sap start <process name>
Example: sap start combiner
- Restart the process if it is already running
sap stop <process name>
sap start <process name>
*Example: sap stop combiner
sap start combiner*
- Start or restart all processes or process groups
sap start
sap start <process group name>
Example: sap start domain

For the changes in the run script to take effect, the specified process must be started or restarted. When a process starts, the run script is started during the start process. This, in turn, applies the garbage collection trace to the process.

The run script applies to any Tivoli Netcool Service Quality Manager process that is started. You can apply the additional tracing to more than one process by starting a process group or all the processes in a single **sap start** command.

Verifying the output

- Written to the process .err file

`$WMCROOT/logs/<process name>/<process name>-server.err`

Example: `$WMCROOT/logs/combiner/combiner-server.err`

- The .err file contains information related to memory utilization and garbage collection activities

To verify that the garbage collection traces are turned on successfully, you can examine the process .err file. The file is normally located in `$WMCROOT/logs` directory with other process logs. The .err file normally stores information about process startup and termination. When garbage collection trace is enabled, you see messages related to memory use.

Disabling trace

1. Revert changes made to \$WMCROOT/bin/run script
 - Comment out the additional garbage collection properties
 - Remove the lines totally
 - Overwrite the file with the backup copy
2. Start or restart the process

To disable garbage collection trace, you remove the additional lines added to the run script. The most common way to remove lines is to comment out the lines, in case it needs to be enabled later. However, you can delete the lines from the script or replace the file with the backup copy.

After saving the edited run script, restart the process so that it starts using the newly modified run script, with garbage collection tracing disabled.

Summary

Now that you completed this module, you can perform these tasks:

- Configure Tivoli Netcool Service Quality Manager processes to write garbage collection traces to files
- Disable the garbage collection traces when they are no longer needed
- Gather garbage collection trace for submission to IBM support for analysis

Now that you completed this module, you can use the garbage collection tracing feature on Tivoli Netcool Service Quality Manager processes.

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