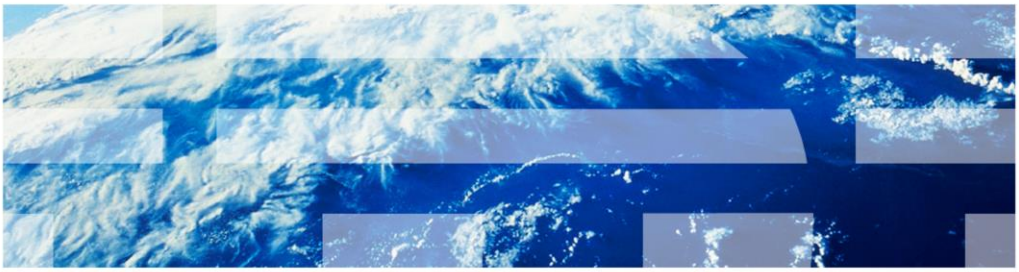
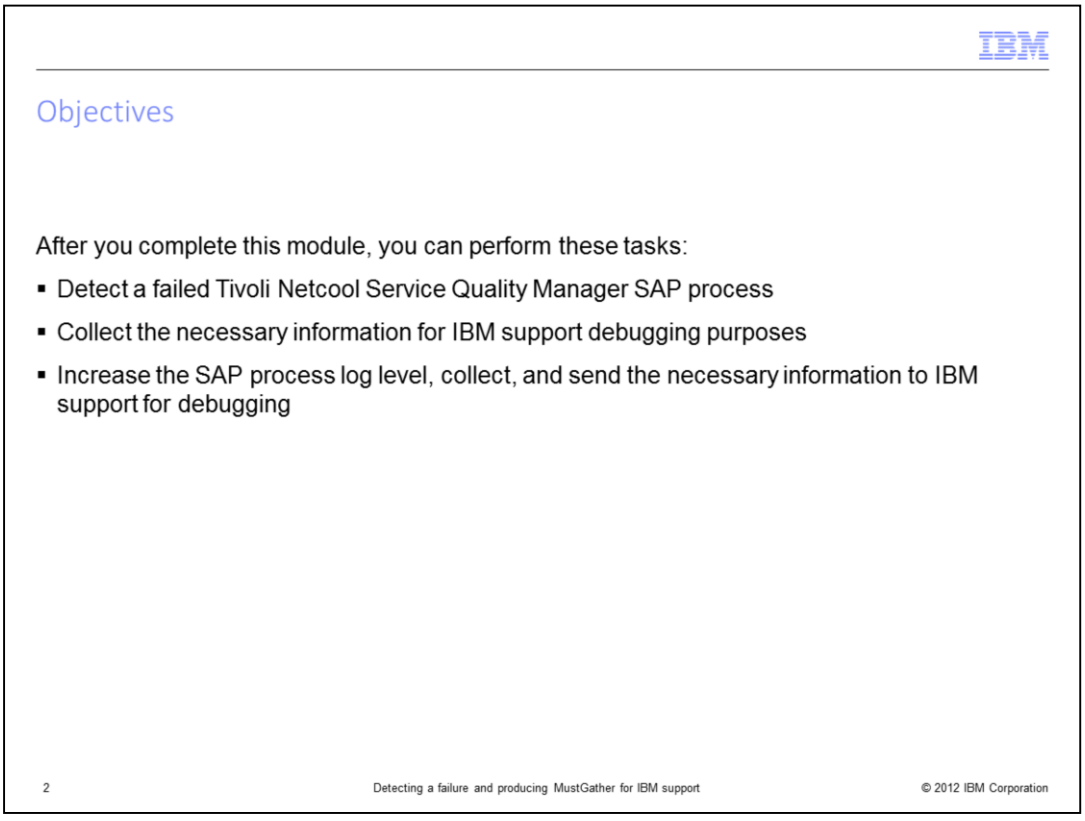
Tivoli Netcool Service Quality Manager V4.1.4

Detecting a failure and producing MustGather for IBM support



Tivoli® Netcool® Service Quality Manager V4.1.4, Detecting a failure in Tivoli Netcool Service Quality Manager SAP processes and producing MustGather for IBM support.

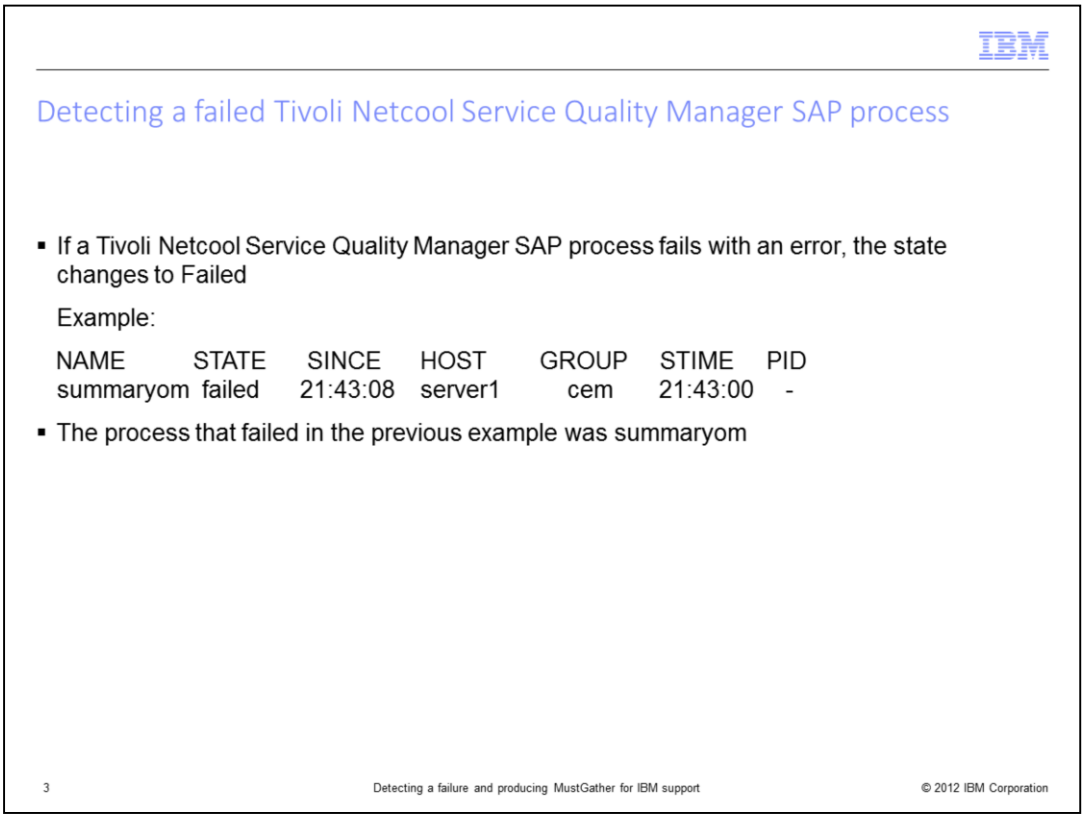


After you complete this module, you can perform these tasks:

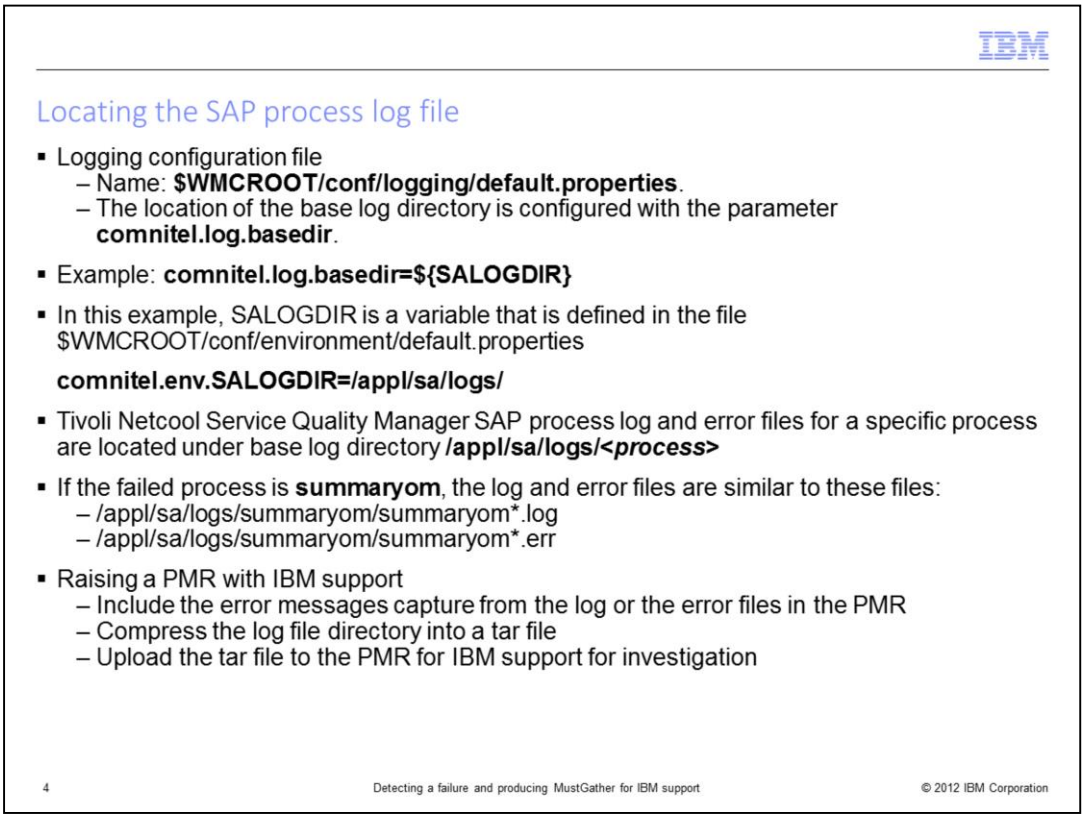
- Detect a failed Tivoli Netcool Service Quality Manager SAP process

- Collect the necessary information for IBM support debugging purposes

- Increase the SAP process log level, collect, and send the necessary information to IBM support for debugging



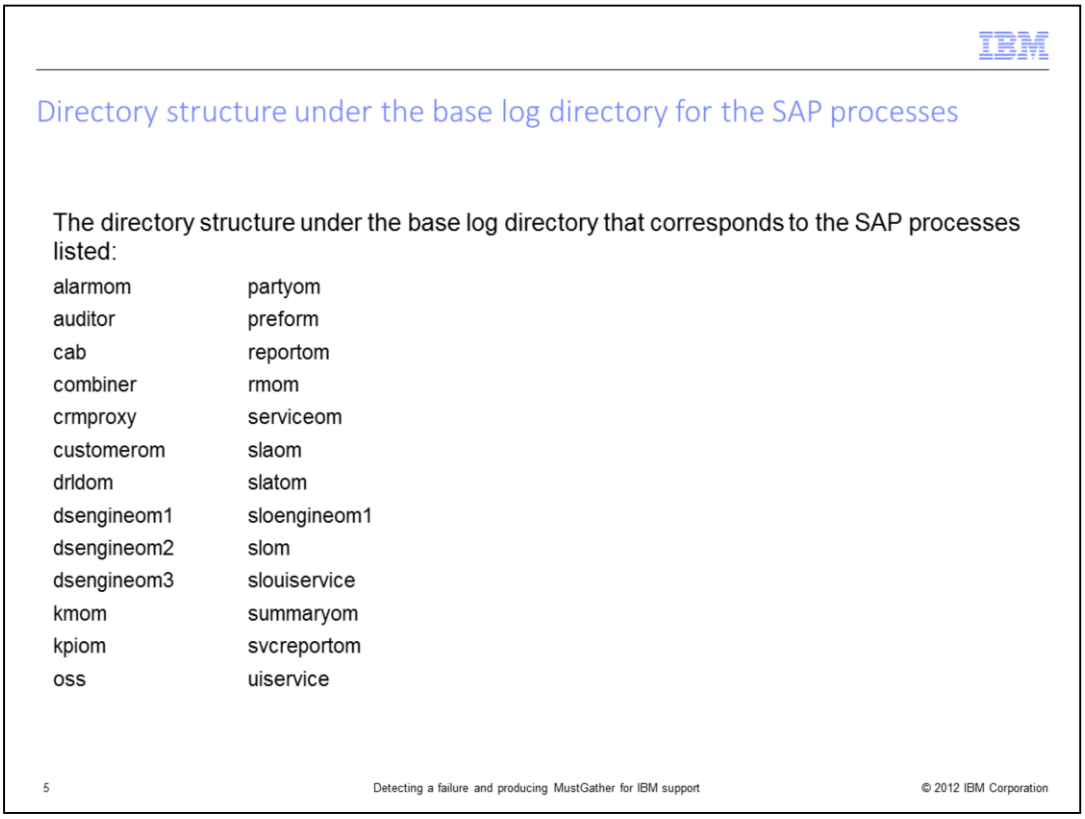
If a Tivoli Netcool Service Quality Manager SAP process fails with error, the state changes to Failed. An example is shown where the **summaryom** process failed. Next, you learn the information that you must include in the PMR that you send to IBM support.



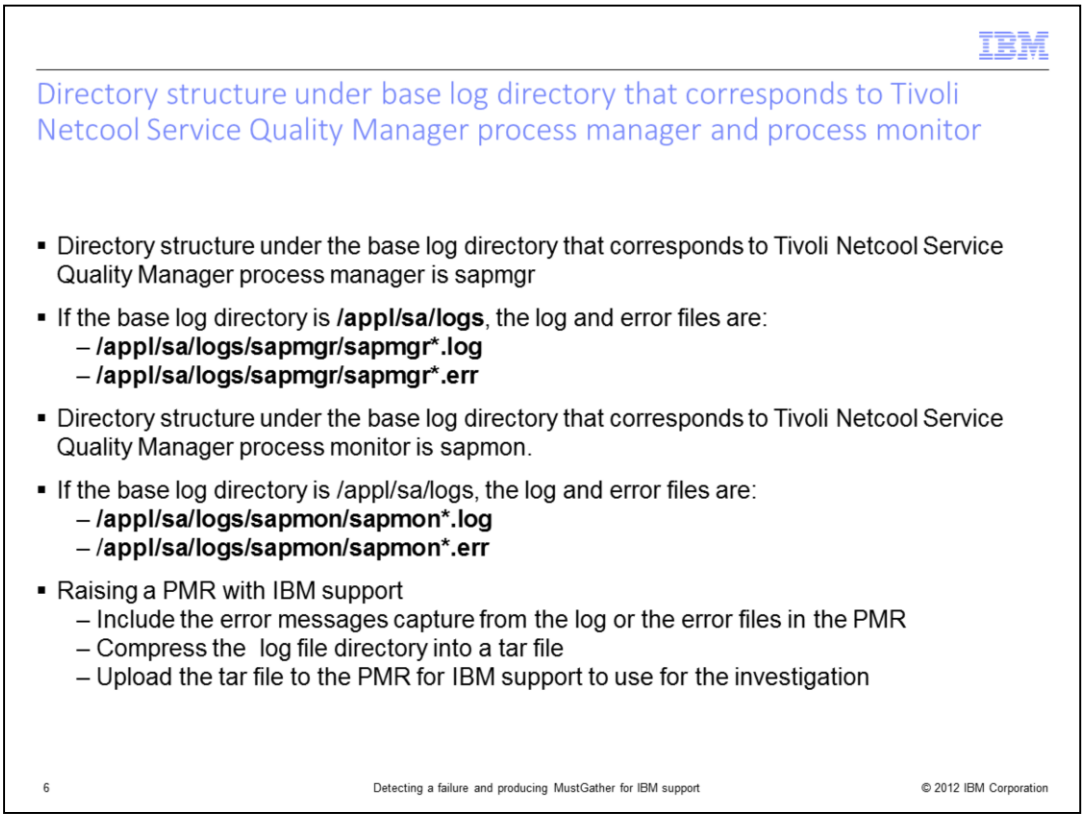
To locate the log and error file for a specific SAP process, identify the location of the base log directory. The logging configuration file is **$WMCROOT/conf/logging/default.properties**. The location of the base log directory is configured in this file with the parameter **comnitel.log.basedir**. An example is: **comnitel.log.basedir=${SALOGDIR}**. In this example, **SALOGDIR** is a variable. This variable is defined in the **$WMCROOT/conf/environment/default.properties** file as **comnitel.env.SALOGDIR=/appl/sa/logs/**.

Hence, the Tivoli Netcool Service Quality Manager SAP process log and error files for a specific process are located under base log directory as **/appl/sa/logs/<*process*>**, where **<*process*>** is the SAP process name. If the process that failed is **summaryom**, then the log and error files are similar to the **/appl/sa/logs/summaryom/summaryom*.log** and **/appl/sa/logs/summaryom/summaryom*.err**.

When you open a PMR with IBM support for assistance, include the error messages capture from the log or the error files in the PMR. Compress the log file directory into a tar file and upload it to the PMR. IBM support can use the information for investigation.



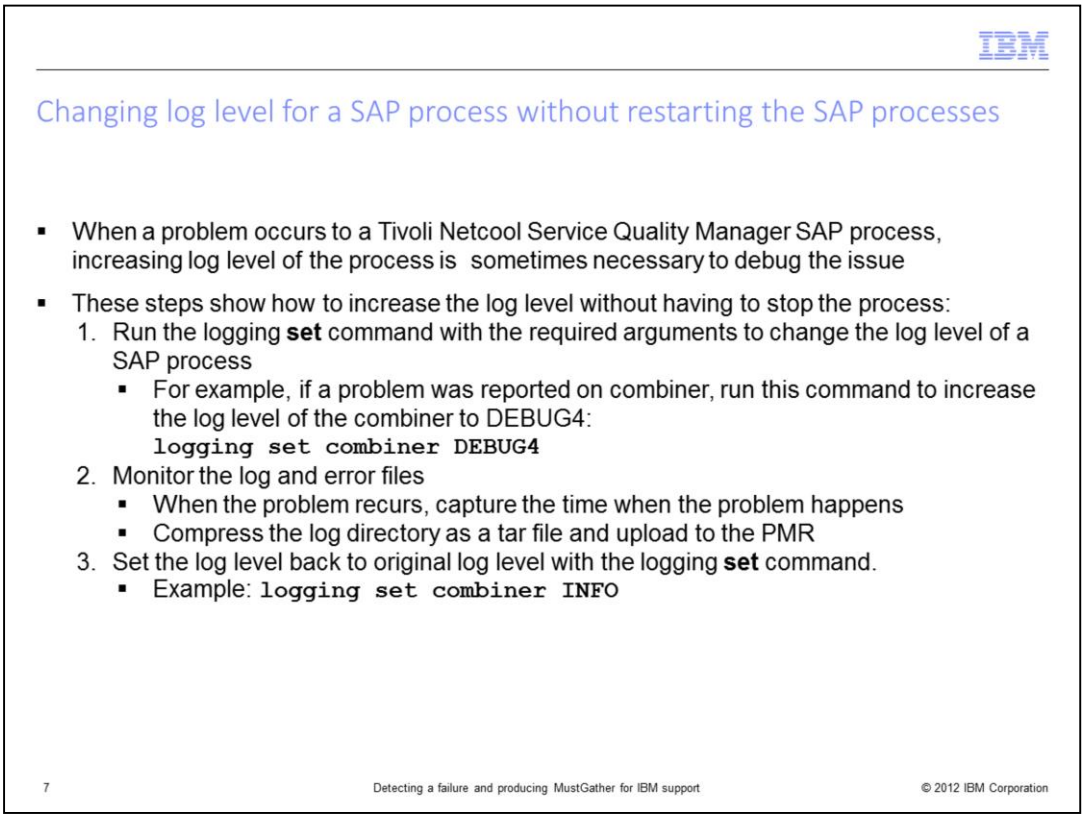
The directory structure under the base log directory that corresponds to SAP processes are listed.



The directory structure under the base log directory that corresponds to Tivoli Netcool Service Quality Manager process manager is **sapmgr**. If the base log directory is **/appl/sa/logs**, the log and error files are **/appl/sa/logs/sapmgr/sapmgr*.err** and **/appl/sa/logs/sapmgr/sapmgr*.log**.

The directory structure under the base log directory that corresponds to Tivoli Netcool Service Quality Manager process monitor is **sapmon**. If the base log directory is **/appl/sa/logs**, the log and error files are **/appl/sa/logs/sapmon/sapmon*.err** and **/appl/sa/logs/sapmon/sapmon*.log**.

When you open a PMR for IBM support assistance, include the error messages capture from the log or the error files in the PMR. Compress the log file directory in to a tar file and upload it to the PMR. IBM support can use the data for the investigation.



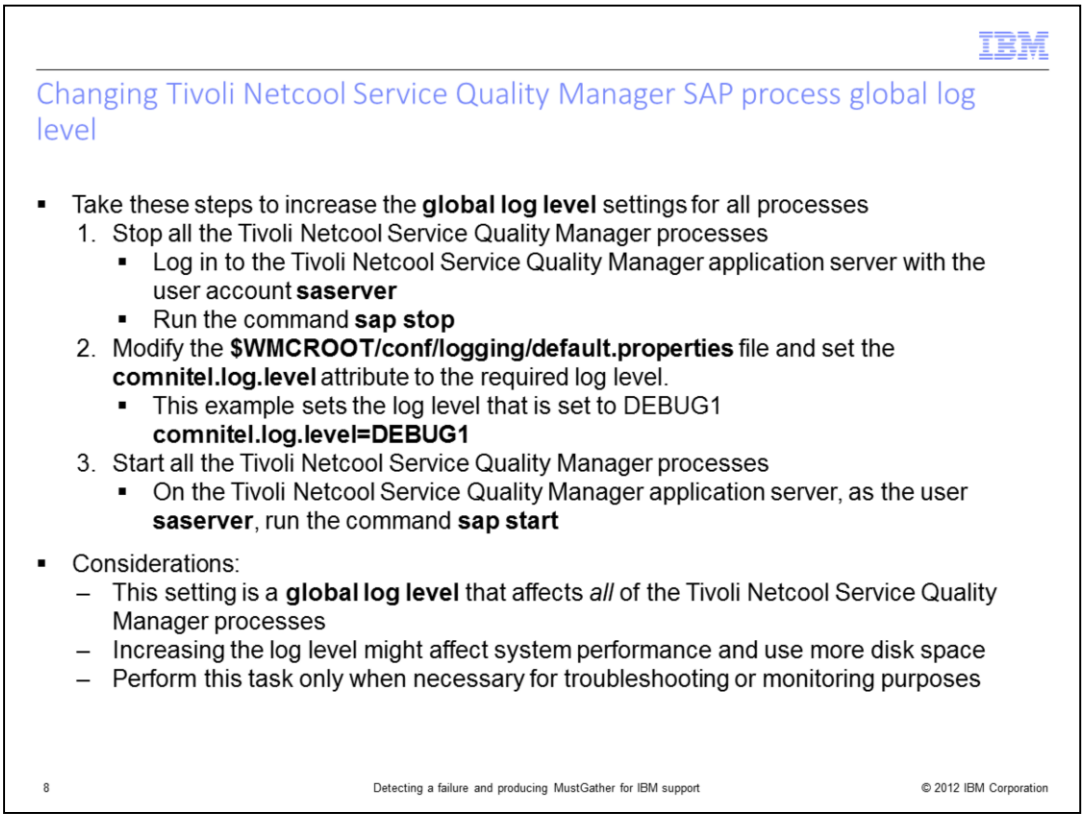
When the Tivoli Netcool Service Quality Manager SAP processes fail, and the existing log information is insufficient to identify the root cause of the issue, IBM support can request for you to increase the log level. An increased log level collects more information to analyze.

These three steps explain how to set the log level without having to stop the process and what to do with the data you collect:

Step 1. Run the logging **set** command with the required arguments to change the log level of a SAP process. For example, if the problem was reported on combiner, to increase the log level of the combiner to DEBUG4, run the command **logging set combiner DEBUG4**.

Step 2. Monitor the log and error files, and when the problem recurs, capture the time that the problem occurs. Compress the log directory in to a tar file. Upload it to the PMR.

Step 3. Set the log level back to the original log level value with the logging set command, for example, **logging set combiner INFO**.



These steps increase the global log level settings for all processes. If you want to increase the log level of all the SAP processes permanently, this process is useful. The SAP process log level remains even after you stop and start the application.

For these commands, log in to the Tivoli Netcool Service Quality Manager with the user account **saserver**. You might record the value of any parameter before you change it.

Step 1. Stop all of the Tivoli Netcool Service Quality Manager processes on the Tivoli Netcool Service Quality Manager application server with the command **sap stop**.

Step 2, Edit the **$WMCROOT/conf/logging/default.properties** file and set the **comnitel.log.level** attribute to the required level. In the example, set the log level to **DEBUG1**.

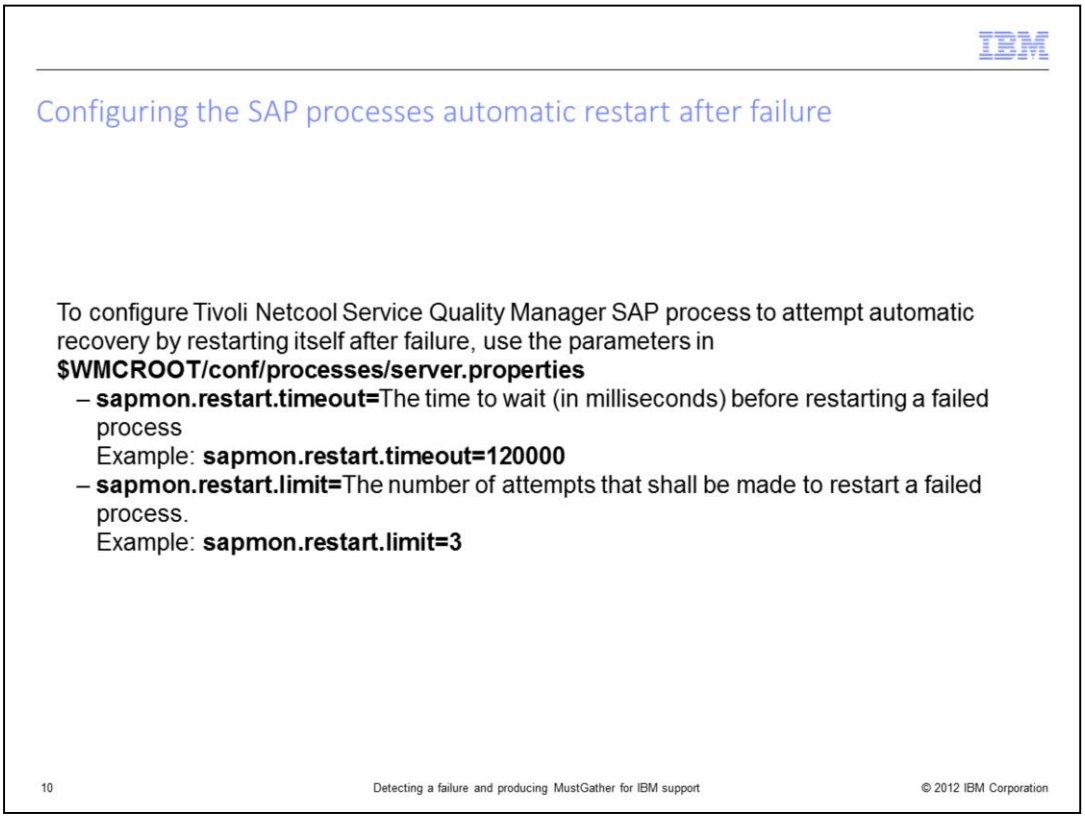
Step 3. Start all the Tivoli Netcool Service Quality Manager processes on the Tivoli Netcool Service Quality Manager application server with the command **sap start**.

This setting is a global log level that affects all the Tivoli Netcool Service Quality Manager processes. When you increase the log level, it might affect system performance and use more disk space. Increase log levels only when necessary for troubleshooting or monitoring purposes.

Tivoli Netcool Service Quality Manager SAP processes log levels

Level	Description
FATAL	FATAL is the lowest level of debug. This level designates severe error events that can lead the application to stop.
ERROR	The ERROR level designates error events when the application might continue to run.
WARN	The WARN level designates potentially harmful situations.
INFO	The INFO level designates informational messages that highlight the progress of the application at coarse-grained level.
DEBUG1	Basic debugging is enabled. INFO, WARN, ERROR, and FATAL are enabled.
DEBUG2	Low intermediate debugging is enabled. DEBUG1, INFO, WARN, ERROR, and FATAL are enabled.
DEBUG3	High intermediate debugging is enabled. DEBUG2, DEBUG1, INFO, WARN, ERROR, and FATAL are enabled.
DEBUG4	Advanced debugging is enabled. DEBUG3 and lower levels are enabled.

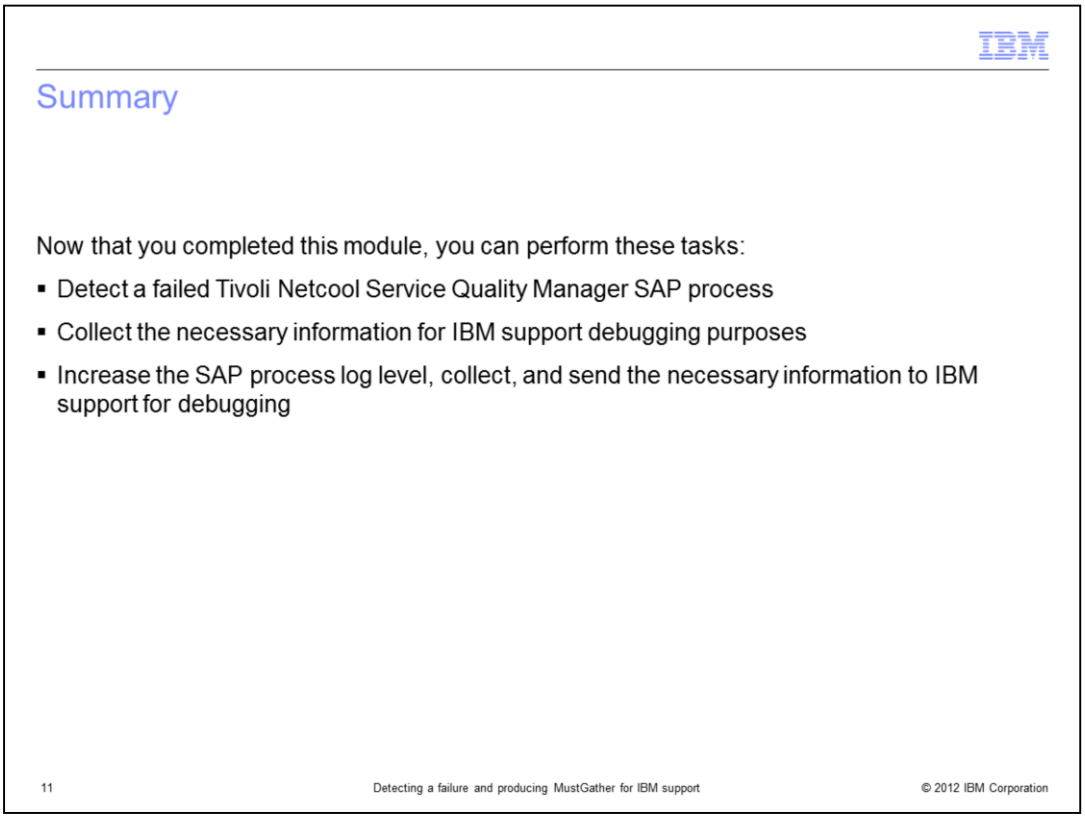
This table lists the log levels that you can apply to the Tivoli Netcool Service Quality Manager SAP processes. There is a description of each log level.



To configure Tivoli Netcool Service Quality Manager SAP process to attempt automatic recovery by restarting itself after failure, use the parameters in the **$WMCROOT/conf/processes/server.properties** file.

The parameter **sapmon.restart.timeout** sets the time to wait in milliseconds before restarting a failed process. For example, setting **sapmon.restart.timeout** to *120000* forces a process to wait for 120 seconds after the process failed before it restarts itself.

The parameter **sapmon.restart.limit** sets the number of attempts which the process makes to restart a failed process. For example, setting **sapmon.restart.limit** to *3* forces a failed process to attempt up to three restarts if the process does not recover from an earlier restart.



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