

# IBM Maximo Asset Management V7.1

## Understanding Maximo 7 logging



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This training module introduces Maximo® Asset Management V7.1 users to the Maximo 7 logging functionality. It also shows how to change the log message level when troubleshooting.

## Objectives

When you have completed this training module, you can accomplish these tasks:

- Explain what a logger is
- Name the five log message levels available in Maximo Asset Management V7.1
- Describe what an appender does
- When given an example, distinguish the difference between a root logger and a child logger
- Modify the log message level setting of a child logger
- Determine which log message levels are designed for troubleshooting and which are not

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## Understanding loggers and appenders

- What are loggers?
- How are log statements handled?
- What is a root logger?
- What is a child logger?
- Can you deactivate loggers?
- What is an appender?
- How do loggers and appenders interact?

Loggers are the components of the Maximo 7 system that prepare log statements. Log statements are either written to user interface consoles or output to log files. Root loggers are at the main subtopic or top application functional level of loggers. Child loggers (children are called loggers and parents root loggers) inherit the log message level of the root logger. Child loggers contain the name of the root logger in their name. Root loggers cannot be deactivated, but child loggers can be deactivated. An appender is created for output of written log information. System users determine the size needed for appender. A logger can have either one appender or multiple appenders. An appender can have output from either one logger or multiple loggers.

## Maximo 7 log message levels

Maximo 7 has these five log message levels

- FATAL
- ERROR
- WARN
- INFO
- DEBUG

The five Maximo Asset Management V7.1 log message levels are FATAL, ERROR, WARN, INFO, and DEBUG. Additionally, setting the level OFF turns off the logging function for a specific application.

## Using logs for troubleshooting (sql logger example)

- Written logs are the main troubleshooting information source
- These settings are used for SQL troubleshooting (example)
  - ERROR is the default logging level
  - Changing the SQL logger message level to INFO level shows SQL statements
  - Changing the SQL logger message level to DEBUG captures additional information (for example, data, events) from what is collected at the INFO message level

ERROR is the default log message level for Maximo Asset Management. Set the SQL logger to INFO to show SQL statements. This setting is used only for troubleshooting SQL functionality and is not advised for the regular production run. Set the SQL logger back to ERROR when troubleshooting is completed. General information is contained in the messages when the log message level is set to INFO. Detailed information is contained in the messages when the log message level is set to DEBUG. Like the INFO message level setting, the DEBUG message level setting is only used during troubleshooting scenarios. Reset the SQL logger from DEBUG back to the default ERROR level after troubleshooting is finished.

## Turning on SQL logging and changing log message level command strings

Turn on SQL logging

```
SELECT * FROM MAXLOGGER;
```

```
UPDATE MAXLOGGER SET ACTIVE = 1 WHERE LOGKEY='log4j.logger.maximo.sql';
```

```
UPDATE MAXLOGGER SET LOGLEVEL='INFO' WHERE  
LOGKEY='log4j.logger.maximo.sql';
```

This slide shows the command strings in SQL that turn on the SQL logging. The first query checks for the current setting in the maxlogger table. The second query sets the SQL logging to active. The third command changes the logging level to INFO.

## Verifying log message level changes

After running the script, **log4j.logger.maximo.sql** is active and the log level is set to INFO

Logger	Log Level	Key	Active
▶ crontaskmgr	ERROR	log4j.logger.maximo.crontaskmgr	<input checked="" type="checkbox"/>
▶ crontaskmgr	ERROR	log4j.logger.maximo.sql.crontaskmgr	<input checked="" type="checkbox"/>
▶ report	ERROR	log4j.logger.maximo.report	<input checked="" type="checkbox"/>
▶ security	ERROR	log4j.logger.maximo.security	<input checked="" type="checkbox"/>
▶ <b>sql</b>	<b>INFO</b>	<b>log4j.logger.maximo.sql</b>	<input checked="" type="checkbox"/>

After Maximo Asset Management V7.1 completes the run of commands, the other loggers are still at the ERROR logging message level while the SQL logger is set to INFO log message level.

## Related online documents (1 of 2)

- Enabling Logging and Appenders To Log Application Events  
<http://www-01.ibm.com/support/docview.wss?uid=swg21446599>
- Using debug properties to monitor and troubleshoot performance  
<https://www-304.ibm.com/support/docview.wss?uid=swg21291250>
- Using fetch stop limits to prevent out-of-memory errors  
<http://www-01.ibm.com/support/docview.wss?uid=swg21412865>

Here are links to the DCF technotes on using logging to troubleshoot problems.



## Related online documents (2 of 2)

- Enable Debug Log Level

<http://www-01.ibm.com/support/docview.wss?uid=swg21455460>

- Error accessing the login page

<http://www-01.ibm.com/support/docview.wss?uid=swg21420153>

<http://www-01.ibm.com/support/docview.wss?uid=swg21433828>

- White Screen when logging into Maximo

<http://www-01.ibm.com/support/docview.wss?uid=swg21417720>

This slide contains additional links.

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