

z/OS 2.4 IBM Education Assistance

Solution (Epic) Name: ITDS Activity log support async queue

Element(s)/Component(s): TDS-LDAP



Agenda

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- Usage & Invocation
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Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None.

Session Objectives

- Explain the async mode of activity logging.
- A new configuration option to enable the async mode.

Overview

- Who (Audience)
 - Those who use activity logging function. Activity logging internally is managed by multiple threads and is vulnerable to thread contention. Thread synchronization makes code complicated and difficult to maintain.
- What (Solution)
 - Involve a asynchronous mode which using cache to manage log records. The logs in cache will be written to log file periodically, the write interval is customizable in the server configuration file.
- Wow (Benefit / Value, Need Addressed)
 - Thread contentions is eliminated. All the I/O processing of the logfile are done in a same thread, by this mechanism multi-volume and concatenated datasets are supported for activity logging.

Usage & Invocation

- Activity logging run in asynchronous mode.
 - A async queue is maintain to store log records temporarily. Logs are written to log file periodically by time or by size.
 - LDAP server configuration can be customized with a new option to enable the async mode.
 - Reduce resource contention.
- Other enhancements.
 - Support more data set type: multi-volume and concatenated datasets.
 - The log display command is enhanced to display more activity logging settings.
 - Solved the problem of truncations caused by writing a long log record.

Usage & Invocation

- In server configuration file global section a new configuration option is introduced: **logFileSync**
- The new configure option stands for the write interval and can be viewed by LDAP display console command.
 - The valid value is 0 or 30~600.
 - A value of 0 indicated that log records will be written to file immediately (synchronous mode).
 - Value 30~600 indicated activity logging will run in async mode.
 - Default is synchronous mode.
- **Example: logFileSync 30**

Usage & Invocation

- Some constraint of the asynchronous mode.
 - The asynchronous mode has a constraint, that is when LDAP server abends or stops abnormally, if there are records in cache which are not written to file yet, these records may be lost.
 - If LDAP server is properly configured, the “lost” records can be found in the dump when abend occurs.
 - Customers should consider the advantage and disadvantage of the two mode and determine which mode to use.

Session Summary

- At the end of this presentation, you should have an understanding of the enhancements for the activity logging:
 - Async mode of activity logging.
 - How to enable the async mode.

Appendix

- Publication References
 - IBM Tivoli Directory Server Administration and Use for z/OS