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Applies To:

The technology discussed in this article is relevant for ABAP application developers who need to use a standard logging processes within applications.

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Summary

This article explains briefly the standard logging processes with Application Log. It should help readers understand what Application Log is and how to use it.

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Standard Logging Processes with ABAP based Application Log

What is Application Log?

Application Log provides an infrastructure for collecting messages and exceptions in a log, saving, reading and deleting logs in the database and displaying them.

Application Log provides multiple advantages:

- system-wide uniform event logging
- accessible standardized UI based on ABAP List Viewer (ALV)
- high capabilities for analysis of log data

Application logging records the progress of the execution of an application. Whereas the system log records system events, you can use the application log to record application-specific events. Application Log is designed to temporarily store messages. Logs should be deleted in intervals (e.g. weekly batch job for deleting logs) to avoid too high database load.

A typical use of the Application Log is within delivery processing. Negative results of a dangerous goods check are written to the Application Log. Application messages and reactions are collected based on a customer defined examination schema (reactions determine how the document will be handled further). This approach increases the transparency of the process for end users. Messages are collected temporarily and are not saved to the database.

You may also use Application Log for complex scenarios such as the ticket selling by internet invoked by a large number of users. With standard ABAP technologies (Enqueue/Dequeue) you can guarantee data consistency (details see below).

How to use Application Log

There are different transactions for use of the Application Log.

- Developer: Use transaction SLG0 to define entries for your own applications in the application log.
- Key user: Use transaction SLG1 to analyze the application log.
- Administrator: Use transaction SLG2 to delete logs.

Hints for developers

- The set of messages is a log. A log usually also has header information (log number, creator, creation time, etc.). The application log consists of several table entries. Applications write their entries object-specifically to these tables using SAP function modules
- The log data are initially collected in local memory, and can be written to the database. This procedure speeds up processing and reduces the number of database accesses.
- A transaction can generate several logs, e.g. one for temporary data to be displayed, one for persisting data on the database.
- If you use the application log in complex scenarios such as the ticket selling by internet used by a lot of users the application developer has to consider and to take care of some fundamental programming principles. If different users need to write into the same log you have to use the enqueue mechanism for the application log. The tool offers corresponding function modules to enqueue and dequeue the log. The log needs to be enqueued after creating it and dequeued after the save and commit.
- Application Log is designed for temporary logs, but not for mission critical data: Data that, for reasons of revision security, have to be available for a long period of time, should not be stored with the Application Log but with the change documents. For further information, please follow <http://help.sap.com/> → Documentation → SAP R/3 and R/3 Enterprise → choose language (English/German) → SAP NetWeaver Components → SAP Web Application Server → ABAP Workbench → BC Extended Applications Function Library → Change Documents.
- The data of an application log are written to database when you commit them (COMMIT WORK) after save. If you want to save application log data independently of other application data (e.g., at a rollback of the application) you have to save them in a separate LUW.
- You will also find answers for many questions in OSS notes (search component BC-SRV-BAL).

Author Bio



In 1993 – after several years of experience in the High Tech industry – Brigitte joined SAP as ABAP instructor. She moved to the ABAP Tools group three years later and was responsible for development and support of reporting tree and transaction variants. Between 2001 and 2005 Brigitte was the central point of contact for Application Log.