# Executing DBLOG

The DBLOG utility logs each Adabas command, or DL/I and SYNC/ROLB call, or SQL statement after it has been processed by the database system. Logging starts when you activate DBLOG and execute or run a Natural program.

This section covers the following topics:

- Basic Principles of Database Logging

- Data Processing and Storage

- Activating and Deactivating DBLOG

- Using Selective DBLOG

Basic Principles of Database Logging

The following graphic illustrates the process flow when database calls are being logged from a Natural program with the DBLOG utility:
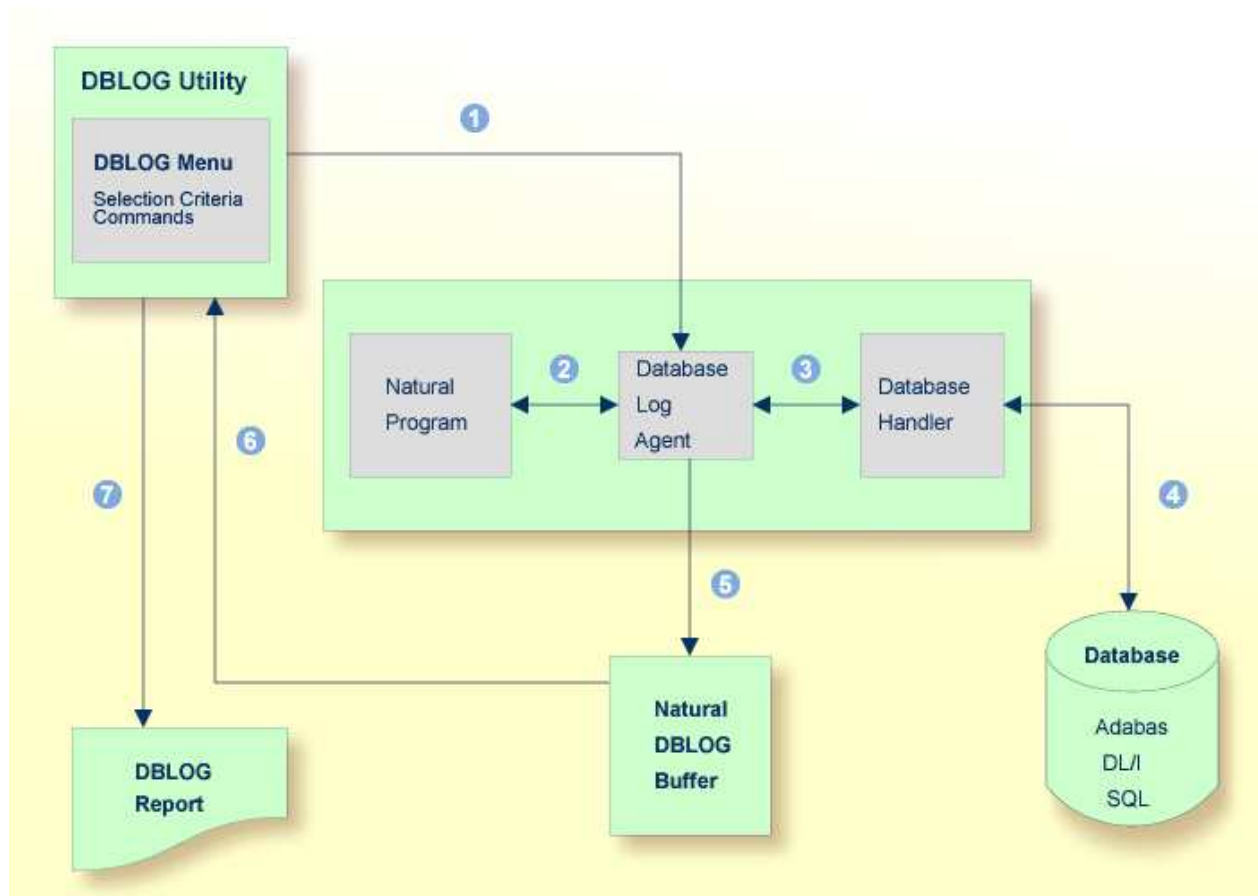
Legend

1 The logging of database calls (Adabas commands, or DL/I and SYNC/ROLB calls, or SQL statements) is activated by using the corresponding **DBLOG Menu** function or the Natural system command TEST DBLOG.
In the **DBLOG Menu**, you can specify individual selection criteria (for example, restrict the logging to a particular database ID or file number).

2 A Natural program issues a statement that initiates a database call, for example, FIND or READ.

3 The database log agent forwards the database call to the database handler.

4 The database handler adapts the database call to the particular database (Adabas, DL/I or SQL), retrieves the data requested by the database call and returns this data to the database log agent.

5 The database log agent records in the Natural DBLOG buffer the data returned by the database handler and forwards this data to the Natural program.

6 The report function of the DBLOG utility reads the data recorded in the Natural DBLOG buffer and selects records according to the selection criteria specified in the **DBLOG Menu** in **1** .

7 From the data records selected, the report function of the DBLOG utility generates a report that can be displayed, written to a work file or used for batch processing.

Data Processing and Storage

The data logged by the DBLOG utility is recorded in the Natural DBLOG buffer. The initial and maximum sizes of the buffer are determined by the `DSIZE` profile parameter described in the *Parameter Reference* documentation.

If there is not enough space to hold the data in the DBLOG buffer, Natural increases the DBLOG buffer size appropriately (possibly several times) until the maximum size specified with of the `DSIZE` profile parameter is reached. After the maximum is reached, only the most recent log data is held in the Natural DBLOG buffer.

If the DBLOG buffer size cannot be further increased due to lack of storage, Natural issues a NAT7545 message that indicates insufficient space for the DBLOG buffer. All data logged prior to this lack-of-storage situation will be kept in the Natural DBLOG buffer and can be displayed by using the `TEST DBLOG` command.

DBLOG can be used online or in batch mode. DL/I and SYNC/ROLB calls can be logged under CICS, under IMS TM or in batch mode. For further information on batch-mode processing, refer to *Natural in Batch Mode* described in the *Operations* documentation.

The logs recorded are displayed on the **DBLOG Trace** screen.

The DBLOG utility provides default settings for data recording. When using the **DBLOG Menu**, you can specify selection criteria for the commands, calls or statements to be logged and the information displayed. The **DBLOG Menu** also provides functions for activating or deactivating logging. You can also use the Natural system command `TEST DBLOG` to control DBLOG execution.

The fields of the **DBLOG Trace** screen, the **DBLOG Menu** and the Natural system command `TEST DBLOG` are explained in the relevant sections of the DBLOG documentation.

Activating and Deactivating DBLOG

The commands used to activate or deactivate DBLOG with the default DBLOG utility settings are described in the following section. See also *TEST DBLOG Command* for additional information.

▶ **To activate or deactivate DBLOG for Adabas**

- Enter the following Natural system command (toggle command):

```
TEST DBLOG
```

Or:
Enter the following to activate:

```
TEST DBLOG ON
```

Enter the following to deactivate:

```
TEST DBLOG OFF
```

Or:

In the **DBLOG Menu**, enter function code B (to activate) or function code E (to deactivate).

▶ To activate or deactivate DBLOG for DL/I

- Enter the following Natural system command (toggle command):

```
TEST DBLOG D
```

Or:

Enter the following to activate:

```
TEST DBLOG D ON
```

Enter the following to deactivate:

```
TEST DBLOG D OFF
```

Or:

In the **DBLOG Menu**, enter function code B (to activate) or function code E (to deactivate).

▶ To activate or deactivate DBLOG for SQL

- Enter the following Natural system command (toggle command):

```
TEST DBLOG Q
```

Or:

Enter the following to activate:

```
TEST DBLOG Q ON
```

Enter the following to deactivate:

```
TEST DBLOG Q OFF
```

Or:

In the **DBLOG Menu**, enter function code B (to activate) or function code E (to deactivate).

Using Selective DBLOG

The following are example instructions for logging Adabas commands, DL/I calls or SQL statements with selection criteria specified in the **DBLOG Menu**.

▶ **To perform DBLOG with selection criteria**

1. Invoke the **DBLOG Menu** by entering one of the following Natural system commands:

   - For Adabas:

   ```
   TEST DBLOG MENU
   ```

   - For DL/I:

   ```
   TEST DBLOG D MENU
   ```

   - For SQL:

   ```
   TEST DBLOG Q MENU
   ```

   The **DBLOG Menu** appears.

2. In the **DBLOG Menu**, specify logging restrictions and activate logging: complete the input fields and enter function code B.

   The message DBLOG started now is displayed.

3. Execute a Natural program which contains Adabas commands, DL/I calls or SQL statements.

4. Invoke the **DBLOG Trace** screen and deactivate logging by entering one of the following Natural system commands:

   - For Adabas:

   ```
   TEST DBLOG
   ```

   - For DL/I:

   ```
   TEST DBLOG D
   ```

● For SQL:

```
TEST DBLOG Q
```

The **DBLOG Trace** screen appears.

5. Clear the Natural DBLOG buffer and deactivate logging by entering one of the following Natural system commands:

   ● For Adabas:

   ```
   TEST DBLOG OFF
   ```

   ● For DL/I:

   ```
   TEST DBLOG D OFF
   ```

   ● For SQL:

   ```
   TEST DBLOG Q OFF
   ```

   DBLOG terminates and the NEXT prompt appears.

See also the section *TEST DBLOG Command* for additional information.