

Health Monitor: Discover the brain behind the brawn

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The health monitor captures information about the database manager, database, table space, and table space containers. Each health snapshot gives you a report of status for each health indicator based on its most recent refresh interval. The snapshots are useful for detecting existing health problems and for predicting potential poor health in the database environment. The health monitor calculates health indicators based on a formula using database system monitor elements. The health monitor can evaluate a database and its objects only when the database is active. You can keep the database active either by starting it with the `ACTIVATE DATABASE` command or by maintaining a permanent connection.

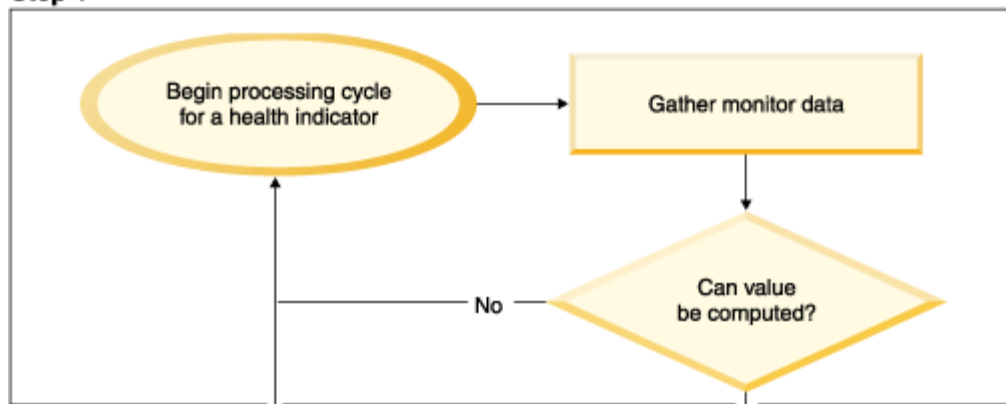
The health monitor retains a maximum of 10 history records for each health indicator. This history is stored under `<db2profile>/<instancename>/hmonCache` on windows and is removed when the health monitor is stopped. The tool automatically prunes obsolete history records when it accumulates the maximum number of records.

Health monitoring requires an instance attachment. If an attachment to an instance has not been established explicitly, a default instance attachment to the default local instance is created. In partitioned database environments, you can take a snapshot at any partition of the instance, or globally using a single instance connection. A global snapshot aggregates the data collected at each partition and returns a single set of values.

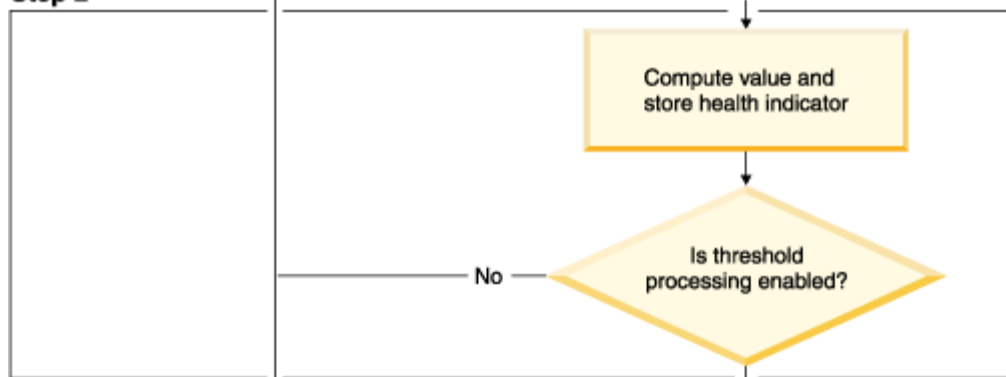
You can capture a health snapshot from the CLP by using APIs in a C or C++ application, or by using the graphical administration tools.

Figure 1 illustrates the process flow in evaluating health indicators. The set of steps is run as required every time the refresh interval for the specific health indicator elapses.

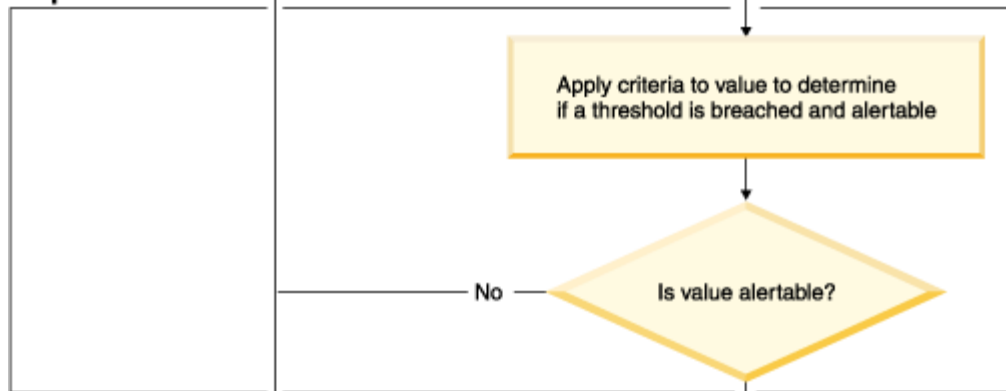
Step 1



Step 2



Step 3



Step 4

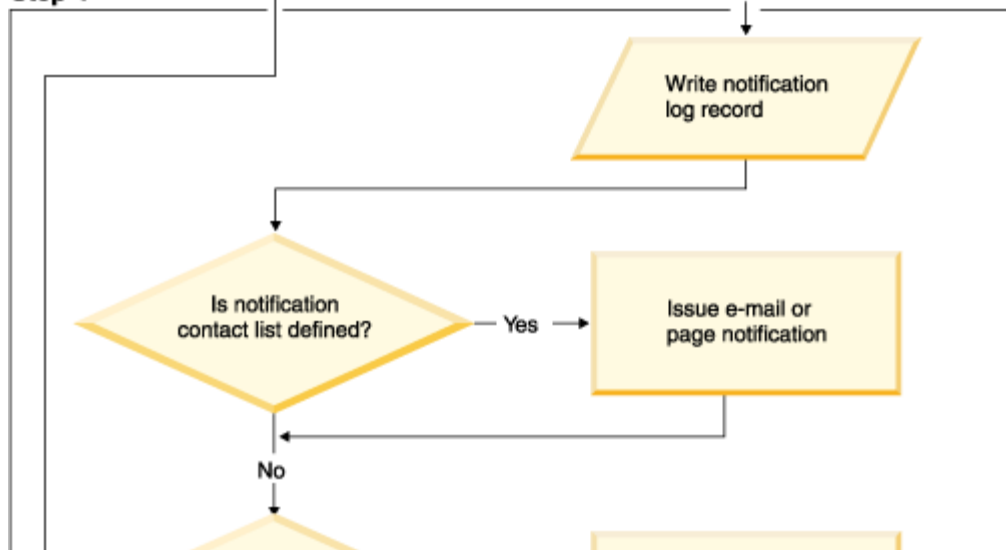


Figure 1. Health Indicator process cycle

Note that the first two substeps in step 4 are dependent on the value of the NOTIFY LEVEL database manager configuration parameter (notifylevel). The notification of the alert to the DB2 administration notification log and to any defined contacts will only occur if the notifylevel is set to a value that includes the severity of the alert state. A minimum level of 2, which is the default value for a Version 8 installation, is required for notification of alarms. For warnings and attentions, a minimum level of 3 is required. Note that when migrating a Version 7.x installation of DB2 UDB on Windows, the value of notifylevel will not be updated and the default at that level is 3.

As you can see there is a lot of activity going on in providing you with the information that you want. This is what makes the health monitor so effective in keeping you one step ahead of any situation and also in being a vital feature in your autonomic arsenal and its all in the name of database efficiency, performance, up-time, and ease of use.