BMC Software Inc.

Technical Disclosure Publication Document

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Overview

This document describes an invention called the Pro-Active Log Sniffer ("PALS") that is of significant benefit to the supportability of any software, particularly where there is complexity around its architecture and integrations. PALS is directed at providing an entity's support organization with the best possible platform from which to begin its diagnosis of a problem with the software. This benefits not only the support organization, but also the end user by achieving the following:

- A pro-active and configurable approach rather than the traditional reactive support methodologies;
- Reducing time-to-resolution when trouble-shooting complex support issues and making available all the low-level technical information from the end user's initial report of the issue, making it unnecessary to wait for a re-occurrence;
- Providing the vendor with the ability to recognize a problem with its software before the end user is even aware of it; and
- Increasing end user confidence in the software and in the software vendor.

Background

End users frequently log software support issues by describing a complex issue or even an outright failure of the software, which can not be reproduced at will. This makes it extremely difficult for a software support organization to establish a reference point from which to trouble-shoot the root cause of the issue, while the end user continues to randomly experience possible outages in the production environment. Such support issues typically have a long life-span, utilizing valuable vendor resources and sometimes compromising the end user's business, reducing customer satisfaction with the product, and negatively impacting the perception of the software vendor.

Solution

PALS will automatically capture all the relevant information in real-time and can provide it to the software vendor at the actual time when the error is encountered. This can be configured to include a variety of vital information such as:

- Server CPU
- Server process memory footprint
- Snapshot of all third-party applications and their footprints
- Detailed activity of calls being made on the server just prior to point of failure
- Number of users connected to the server

In other words, PALS provides the relevant data, which would not normally be available to aid the software vendor in trouble-shooting the problem.

PALS is intended to be a process which sits alongside the core server process. Its primary functions are two-fold:

- silently and constantly tracking the type of data described above;
- monitoring the primary log file being produced by the server.

This period of tracking is configurable, for example every 5 seconds to every 5 minutes. At each of the specified intervals, the PALS process will write the data it is configured to track to a temporary table in the database. Another embodiment of this invention may incorporate a "garbage collector" that deletes aged entries which are greater than a pre-defined period of time, for example 4 hours old (a period of time during which the problem the end user is experiencing would likely have been identified). Another embodiment of the PALS inventions writes an error event to a permanent table in the database whenever there is a match for the data that the PALS has been configured to trap. This information is a dump of the most recent data sets from the temporary table as well as all relevant server log files. In that way, all the information that describes exactly what was happening on the server leading up to the point of failure or other configurable event is captured.

One advantage of this invention is that even in the event of a complete server failure (i.e. the server being no longer available for querying the data), all the relevant data is nonetheless available because it of the temporary data constantly being written to the database. In yet another embodiment of this invention, the relevant server log files are captured using a "delta" method. The delta method of collection means that rather than capturing the entire contents of server log files at each interval, only the portion of server log files since the last interval is captured. The information captured is similar to that captured when a "debug" version of a server process is installed. This saves considerable time and customer confidence because trouble-shooting can take place immediately without having to wait until the error re-occurs.

In another embodiment of the PALS invention, PALS can be configured to automatically submit a new support issue to the software vendor's email address and attach all the relevant log files via FTP to the software vendor's FTP server – even before the end user realizes there is a problem. The PALS process can even query the support email address prior to submission of the support issue. In instances where the end user considers the data and log files to be confidential, PALS can also deposit this information into a repository viewable only by the end user, providing an opportunity to blank out such sensitive data prior to making it available to the software vendor.

A final embodiment of the PALS invention allows a customer to configure it to trap for specific error codes or user-defined free text. For example, PALS may be configured such that it only traps for a server crash, when no licenses are available, or in instances where a specific user is logging onto the server and its IP address.

Drawings

None.