



X t r e m e s o f t

AppMetrics
for Transactions

User's Guide

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Preface

Xtremesoft's AppMetrics® for Transactions is an application monitoring solution for applications developed using Distributed Network Architecture (DNA) technologies. AppMetrics supports the monitoring of COM+, and .NET Serviced Component applications. Using AppMetrics, IT managers can monitor the health of their applications and make projections on server capacity. AppMetrics automates the application monitoring process, making it as easy as possible to manage custom-developed applications.

About Xtremesoft

Xtremesoft develops monitoring and analysis software for application server technology, including Extended Component Object Model (COM+) and .NET Serviced Components. Our products are designed to provide an application view of system performance, regardless of whether the application resides on a single server or spans an entire enterprise.

Xtremesoft products are used by Fortune 2000 companies, application VARs, and ISVs that build mission-critical systems using application servers.

About this Manual

This manual is intended for system management and application management professionals who need to monitor, maintain, and analyze their server applications. It is a guide for installing, configuring, using, and maintaining AppMetrics.

Xtremesoft Technical Support

Xtremesoft support engineers are available between 9:00 A.M. and 5:00 P.M., Eastern Standard Time, Monday through Friday, excluding holidays. This support is available for all registered owners of Xtremesoft products.

For best results, email any questions to supportlist@Xtremesoft.com and include the following information:

- The version number and product ID of the Xtremesoft product that you are using.
- The type of hardware that you are using, including any network hardware.
- The operating system that you are using. Include the version of the Service Pack that you are using.
- The exact wording of any messages that appear on your screen.
- A description of what happened and what you were doing at the time of the incident.
- A description of your efforts to correct the problem.

Additional Contact Information

In addition to the email address given above, you can also contact Xtremesoft via the following means:

- Phone (781) 759-1218
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- supportlist@xtremesoft.com
- <http://www.xtremesoft.com>

Chapter 1

Introduction to AppMetrics for Transactions

What is AppMetrics for Transactions?

AppMetrics for Transactions provides a host of features for system management and application management professionals. These features include:

- **Production monitoring** — AppMetrics measures, displays, and records the health of custom-made applications as they run. It provides performance metrics for deployed COM+ applications and .NET Serviced Components. It can also send email, SNMP traps, Windows Event Log notifications, and call custom components when the applications exceed expected levels of activity.
- **Interactive analytics for diagnosing problems down to the component level** — AppMetrics helps you determine which components are consuming the most computing resources. It works at the transaction level on several components at a time. Once AppMetrics helps you identify a component as the source of a problem, developers can apply third-party debugging tools on that component to further analyze the problem.
- **Profiling and projecting trends for capacity planning** — AppMetrics produces data that can be used in conjunction with capacity planning tools.

Transactions Monitored by AppMetrics

AppMetrics enables you to focus on the critical business transactions performed by your applications. In AppMetrics, a **user transaction** represents a discrete business activity, such as a deposit made to a bank account or a purchase made on a Web site.

AppMetrics monitors the components that perform these user transactions. In particular, AppMetrics monitors any COM+ and .NET Serviced component that is called by a client application. If a call to one of these components results in a root object to perform a function, AppMetrics views the component as an initiator of a user transaction.

Furthermore, AppMetrics can view a component to be an initiator of a user transaction regardless of the component's transactional status in the Distributed Transaction Coordinator (DTC). The DTC manages transactions that span different applications and machines, and it looks to the component's transaction-support setting (in the component's COM+ properties) to determine if the component can initiate DTC transactions. However, no matter what transaction-support setting a component may have, AppMetrics can still identify the component as an initiator of a user transaction. For example, if the transaction-support setting for a component prevents it from ever initiating a DTC transaction, this does not prevent AppMetrics from viewing the component as an initiator of a user transaction.

Once AppMetrics determines which components can initiate user transactions, AppMetrics lets you label these transactions with descriptive business names. These names are then used in place of the component names given by the component designers. When a transaction is given a name in AppMetrics, this name serves to identify the transaction throughout the various AppMetrics panels and reports. As a result, AppMetrics can give business meaning and perspective to your application components.

Key Features of AppMetrics

- AppMetrics does not require embedding performance probes into your COM+ source code. It monitors applications non-intrusively.
- AppMetrics Application Monitors provide a pre-defined set of metrics and information. They provide the profiling information needed to assess the Quality of Service (QoS) of an application relative to its specified requirements, and provide a unique set of metrics and reports at varying levels of detail. Review the available monitor types to determine the one that is best suited to your monitoring needs.
- AppMetrics works with Microsoft tools and technologies, including Microsoft Management Console (MMC) the Windows Event Log, and Systems Operations Manager. Learning to use AppMetrics should only take minutes for Windows Server 2003, Windows Server 2008, XP, Vista, or Windows 7. Note: Only the server operating systems support application monitoring, but the AppMetrics manager and reports can be run on the workstation operating systems as well.

Information Output from AppMetrics

AppMetrics produces information based on the real-time collection and analysis of events from the following:

- COM+ and .NET Serviced Components on Windows Server 2003, Windows Server 2003 R2, Windows Server 2008, and Windows Server 2008 R2, both 32-bit and 64-bit versions.

The following is a list of the AppMetrics output:

- Information about components, transactions, and method calls. This information includes response times, usage, and throughput. Furthermore, you can generate information for one or more specific items. For example, you can create usage information for a specific type of transaction, such as bank account deposits.
- COM+ application system-resource utilization. This includes CPU, memory, and “crash” statistics. Metrics are provided for each package or application currently running on the system.
- By default, AppMetrics automatically uploads the metrics to SQL Server. From the database, you can create reports that enable you to visually evaluate the performance of your monitored applications. The database files and the reports can help you understand an application’s usage and performance characteristics extended over hours, days, weeks, or months.
- As an alternative to uploading them to the database, you also have the option of writing these metrics into detailed log files. You can copy the log files and then manage the data within them using tools outside of AppMetrics.

Supported Operating Systems

AppMetrics supports the following operating systems (32-bit and 64-bit x86 editions):

- Windows Server 2003, Windows Server 2003 R2
- Windows Server 2008, Windows Server 2008 R2
- Windows XP Professional (manager and reports only)
- Windows Vista (manager and reports only)
- Windows 7 (manager and reports only)

Architecture Overview

AppMetrics offers a **Manager / Agent install**, which uses a monitor/agent pair to collect data from a specific Windows application server. In this type of install, the agent is the only AppMetrics software to be installed on the machine running the application. The agent collects data about the application and sends this data to its monitor running on the manager machine. With the minimal role it performs on the machine running the application, the agent monitor consumes few system resources.

In turn, the monitor runs on a separate machine where it receives the data from its agent via the network. The AppMetrics manager analyzes the data and saves the metrics to the database. It can also display the metrics in real time, send alerts, and produce historical reports.