

Monitoring the TIBCO Powered Enterprise

Gaining End-to-End Visibility for TIBCO Powered Applications



Introduction

Many TIBCO customers have successfully deployed stand-alone RTView products such as TIBCO RTView EMS Monitor, TIBCO RTView BW Monitor or the RTView Core® Development Tools. We are often asked what additional value does RTView Enterprise Monitor® provide to complement these stand-alone products.

This document describes the five key attributes of RTView Enterprise Monitor that bring a global perspective to monitoring in your organization. Each is presented in the context of a common IT problem, how to best solve it and the mechanism by which RTView Enterprise Monitor addresses that problem.

Consolidate Monitoring Data Across Technology Silos

PROBLEM:

Monitoring Silos Limit Information Sharing – In large organizations, distinct workgroups are responsible for different parts of the technology stack. Infrastructure, middleware, or application groups collect volumes of monitoring data about important subsystems. But this information is typically available only within the group and is not visible to others in the organization. These groups are often disparagingly referred to as “silos” because of their frustrating isolation from one another.

SOLUTION:

Unifying Architecture – RTView Enterprise Monitor provides an architectural backbone and directory service to support the creation of a consolidated view across the multiple distributed technologies supported by these independent workgroups. A standard, unified and extensible console provides access to important data collected by TIBCO RTView stand-alone monitoring products and solution packages, as well as data imported from other monitoring tools.

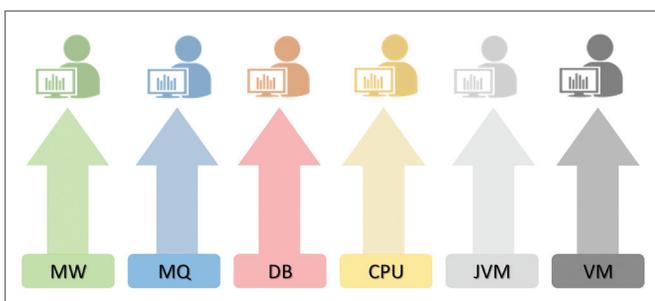
BENEFIT:

Better Visibility for a Larger Audience – With RTView Enterprise Monitor, each group retains control of its own data yet is able to expose the data to a larger audience, improving communication between groups. The result is a proactive approach to avoidance of problems, rather than the typical reactive approach to troubleshooting that occurs simply because one group is not aware of issues brewing in another part of the stack.

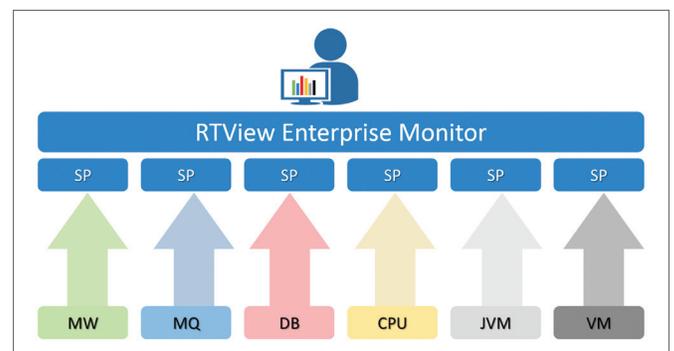
EXAMPLE:

Monitoring and diagnosing an application powered by TIBCO BusinessWorks, Oracle Databases and VMware VMs may employ the management suites from each environment (TIBCO Hawk, Oracle Enterprise Manager, VMware vCenter). With each of these suites focused more on managing than monitoring their own components, development and support teams struggle to get the visibility they need for their critical applications.

Monitoring Silos



RTView with Solution Packs



Correlate Key Metrics Across Heterogeneous Components

PROBLEM:

Complex, Clustered Applications – Modern complex applications are commonly implemented across multiple load-balanced middleware components. Support teams must access data from multiple servers, one at a time, in order to determine aggregate throughput of the system. Because data from different technologies are collected in distinct locations, it is also necessary to access disparate monitoring tools in order to investigate a problem. This makes it challenging and time consuming to troubleshoot problems or to be proactive in preventing them.

SOLUTION:

Correlate and Aggregate Metrics – RTView Enterprise Monitor® provides the framework to correlate key metrics across all components on which applications depend. It can aggregate and total metrics across load-balanced servers and provide end-to-end visualization of complete transaction paths across technologies. This makes it possible to understand causal relationships between different technology components. This applies to both current and historical data.

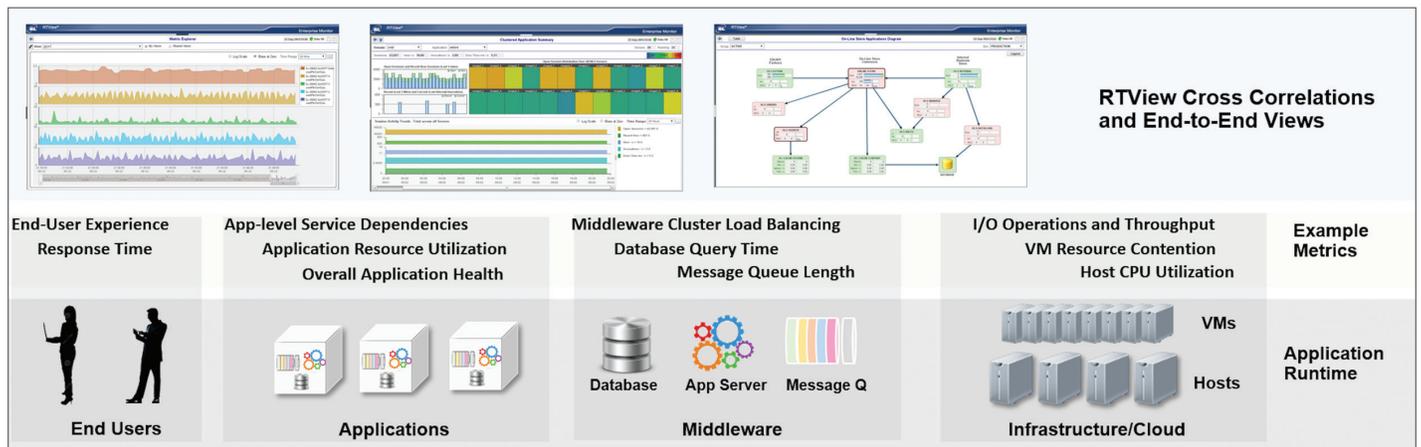
BENEFIT:

Early Warning, Rapid Recovery – With all data readily available in a single console, support teams do not need to waste time or be trained in searching for important metrics in different tools. This is especially important during stressful outage events. The key metrics feature makes it possible to visualize the overall healthstate of all components affecting an application well before alerts occur – providing early warning that there may be degradation in the system. Users are able to avoid problems altogether rather than troubleshoot them later.

EXAMPLE:

Running multiple TIBCO BW instances in a VMware private cloud environment. A rogue process from an unrelated application on the same physical host begins to consume system resources and brings the server to its knees. Without the ability to correlate host, VM and TIBCO performance and healthstate metrics, three separate support teams using three different monitoring consoles may significantly delay problem resolution.

Cross correlations between vendors and application tiers



Safely Expose Data from Critical Systems to More Users

PROBLEM:

Heavy User Traffic Exacerbates Outages – There are often many users who want to see important data from critical systems, particularly during outages for troubleshooting. If many users attempt to make queries simultaneously, the result can be significant performance degradation, often making the problem worse. In addition, you may not want to grant administrative rights to management tools for users simply seeking performance data.

SOLUTION:

Central Monitoring Data Caching – RTView Enterprise Monitor® solves this problem by effectively acting as a buffer to important sources of data. Data can be collected just once by RTView, stored in cache memory, and made available for distribution to many users using a standard, extensible REST or socket-based API. For example, a single query can be made for data contained in a system such as ServiceNow, or a critical database table such as CMDB, and the results are safely made available to dozens of RTView users.

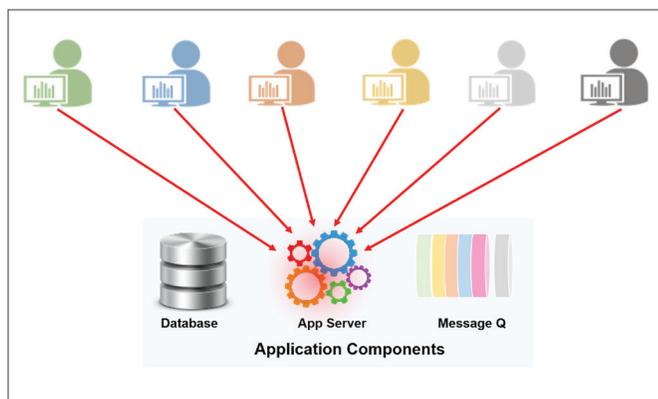
BENEFIT:

Streamlined Monitoring Avoids Performance Degradation – It becomes safer to expose data from critical systems since only a single query is made and they are protected against direct access by too many users. This makes it practical for an organization to share previously restricted, yet important, information more broadly to many users who can benefit from it, where previously it was restricted due to concerns about performance.

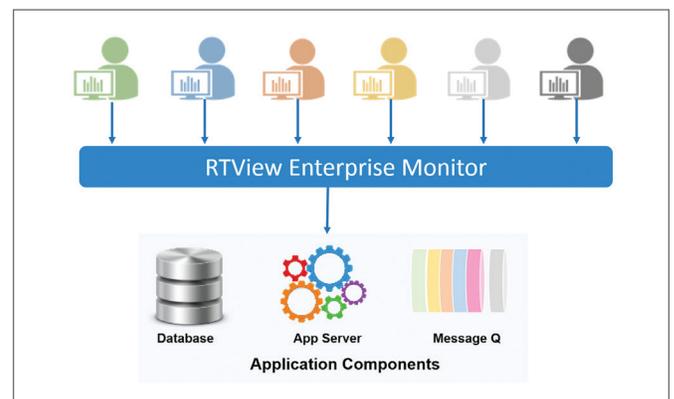
EXAMPLE:

In many TIBCO environments, it is impractical to grant every operations team access to critical systems, databases and administrative tools like ServiceNow during an outage. Too many well-meaning users hammering on the problem area can consume system resources and prolong or worsen the outage. There also may be security concerns or a lack of familiarity with these tools by other teams.

End user overhead can make outages worse



RTView distributed cache ensures minimal performance impact



Scale to Very Large Environments with High Performance

PROBLEM:

Creating a Central Monitoring Repository Doesn't Scale –

There can be hundreds or thousands of disparate components in multiple regions, environments, data centers or workgroups. IT organizations are running into a classic big data problem: transmitting monitoring data to a central location in order to obtain a global perspective is simply impractical and costly. It can also limit the rate at which monitoring data can be collected and archived.

SOLUTION:

Distributed Architecture and Data Model – RTView Enterprise Monitor® provides a distributed and highly scalable architecture and data model. Data collection, aggregation, and archival functions are deployed as close as possible to the target systems, reducing latency and network traffic by transmitting only summary data. Visualization, correlation, and analysis are performed from any location, accessing detailed data from remote servers on demand.

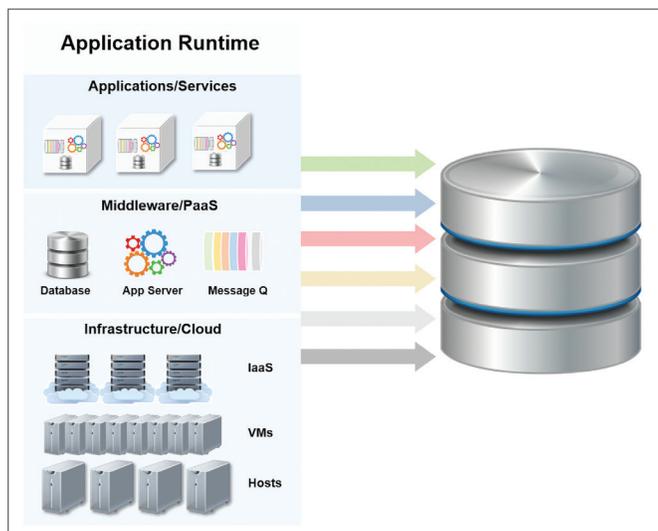
BENEFIT:

Eliminate Expensive Data Movement – An RTView-based monitoring system can scale to very large, globally distributed environments. There is no need to build out costly infrastructure to support a central repository. Usage of network bandwidth for monitoring is minimized and data can be collected and processed at much higher rates. RTView's agentless architecture also makes it much easier and quicker to install than large monitoring suites.

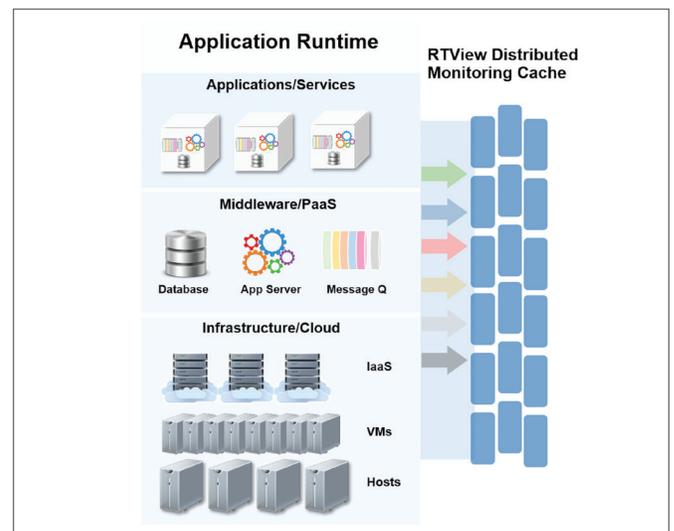
EXAMPLE:

It is not unusual to see large scale TIBCO application runtime environments with hundreds or thousands of instances of BusinessWorks, EMS, ActiveSpaces and so on. Even the most conservative estimates of the monitoring data footprint would quickly reveal that hundreds of gigabytes or even terabytes of data would have to be moved into a data warehouse in order to analyze it. But application teams want instant status and real time monitoring. Only a distributed, cache driven monitoring architecture like RTView can deliver that.

A central warehouse for monitoring data doesn't scale



A distributed cache architecture provides real-time results



Provide Application-Centric Navigation Through Data

PROBLEM:

Monitoring Data Overload Obscures Visibility – There is often so much monitoring data collected by infrastructure and middleware groups that it can be very difficult to know which applications or users may be affected by apparent issues. The IT organization operates by reacting to reports of problems from application users rather than proactively communicating with them about suspicious conditions.

SOLUTION:

Providing Application Context with a Service Model – RTView Enterprise Monitor® organizes and presents component-level monitoring information in the context of the applications or services that are dependent on them. A logical “service model” can be imported from an organization’s central CMDB. Alternatively, the service model can be dynamically created from component naming conventions or configuration data used to deploy the services.

BENEFIT:

Early Warning to Avoid Serious Outages – Support teams are more easily able to identify applications that may be affected by component-level problems. This makes it possible to provide application groups or users with an early warning, so that throttling or other corrections can be put into place to avoid a more serious outage. Application groups are also able to see for themselves the healthstate of the components on which their services are dependent without having to ask the infrastructure teams for that information.

EXAMPLE:

In a very large TIBCO application environment where there are hundreds or thousands of instances of TIBCO BW or EMS, operations teams can waste a lot of time diagnosing how a particular instance is affecting application performance or end-user experience.

Summary

Technology workgroups or silos represent a form of organizational specialization and are not going away any time soon. But gaining visibility and context across silos and workgroups can be achieved as result of RTView Enterprise Monitor’s unique ability to improve communication between these groups and to take full advantage of that specialization. The architecture of RTView Enterprise Monitor supports better collaboration across these teams in a highly scalable and efficient fashion.

There are plenty of tools available to troubleshoot problems once they occur, but this comes at a cost in productivity and downtime. Experience has shown that, for most organizations, the greatest return on investment comes from preventing problems in the first place. Improving communication between key workgroups is the “low hanging fruit” that RTView is able to help harvest.

SL is a San Francisco Bay Area-based company that provides End-to-End Application Monitoring and Middleware Monitoring for Global 1000 and mid-market companies that depend on custom, high-performance applications. Over the past 25 years SL’s exclusive focus on real-time monitoring and visualization, commitment to customer success, and partner-centric culture are why thousands of industry leaders have chosen to work with SL to support their most critical applications and businesses. SL’s RTView product lines address a broad spectrum of enterprise visibility challenges spanning application and service availability, performance monitoring, component-level infrastructure monitoring and custom monitoring.

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