

# *Application Performance Management Experts*

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*White Paper:*

## **Ensuring Service Levels for Enterprise Content Management Applications - a Unique Problem that requires a Unique Solution**

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### **Abstract**

Enterprise Content Management applications are an important component of many critical business processes within global enterprises. Therefore it is critical that these applications deliver consistent and excellent service levels to the users and other IT processes that rely upon them. While most organizations have a variety of monitoring tools that are used to instrument the network, server, and systems software that supports these applications, most enterprises still rely upon “application babysitting” by skilled applications support professionals to ensure consistent service levels and to rapidly respond to issues.

This paper defines the requirements that ECM customers look for in a monitoring solution, explains what each category of infrastructure monitoring tools does and the extent to which each addresses the requirements, and makes recommendations on what the “ideal solution” should include. Reveille Software is then introduced as a vendor of a solution that specifically addresses not only the requirements of the ideal solution but also the issues that are un-addressed by the infrastructure monitoring vendors.

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## I. ECM Applications and Critical Business Processes

Enterprise Content Management (ECM) applications play a critical role in the automation and management of a wide variety of important business processes in global enterprises today. Some examples of the roles that ECM applications play are:

- A global provider of insurance services uses EMC Documentum V5 and EMC Captiva InputAccel to support its Claim Processing, and Order Fulfillment processes.
- A global air freight company uses EMC Documentum V5 and V6, as well as Kofax Capture and Microsoft SharePoint in its aviation repair and operations processes.
- A global semi-conductor manufacturer uses EMC Documentum V5 and Microsoft SharePoint to support all of its compliances initiatives and processes.
- A global airline uses EMC Documentum V5 and V6 as well as Captiva and Microsoft SharePoint to manage the documentation of all maintenance operations.
- A global pharmaceutical company uses EMC Documentum V5 and V6 as well as Captiva and Microsoft SharePoint to manage the submission documentation for all products under development to regulatory authorities worldwide.

In all of the above cases as well as in thousands of other examples worldwide, enterprises rely upon the effective and efficient operation of ECM applications to support or automate business critical processes.

## II. Requirements For Effective ECM Application Monitoring

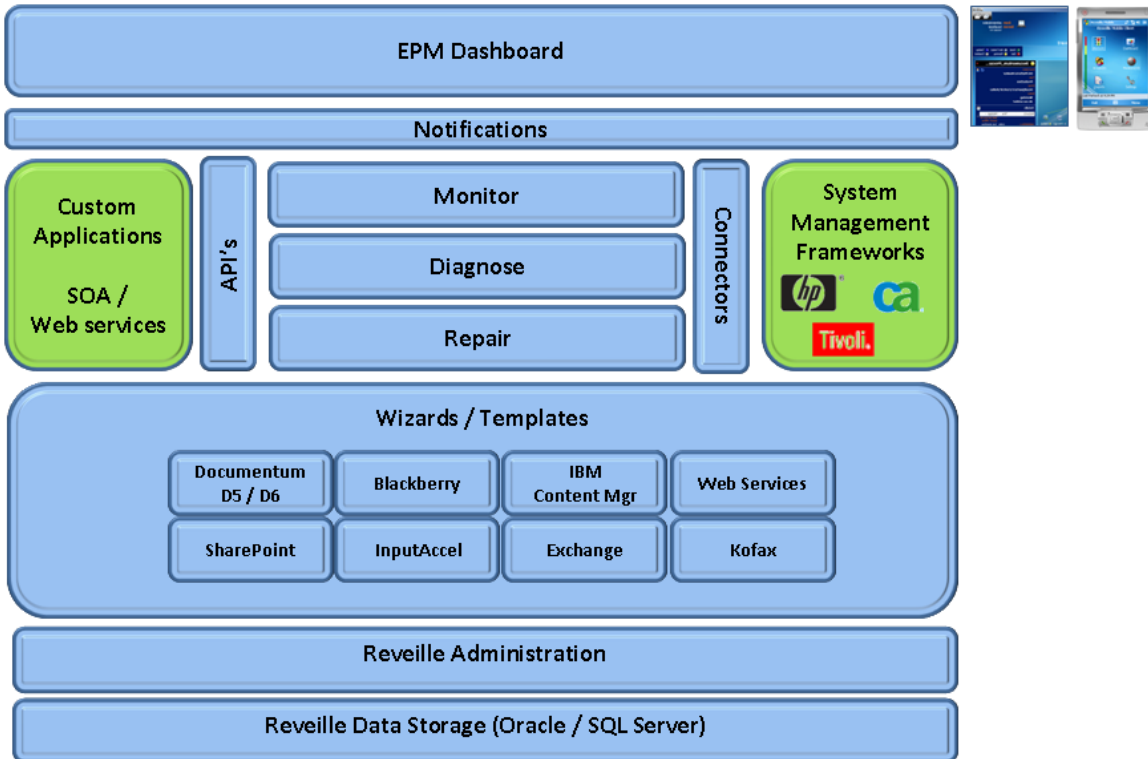
Since ECM applications are used to automate and support critical business processes, these applications need to be monitored with focused solutions that ensure that committed and required applications service levels are met. An effective ECM monitoring solution should meet the following requirements:

1. Monitoring should focus upon the application itself, including the processes and application interfaces that comprise the application, not just the infrastructure for the application. There are plenty of solutions available that monitor the networks, servers, and systems software that support these applications and most enterprises already have such infrastructure monitoring solutions in place.
2. The application should be monitored from end-to-end. All ECM applications have modules that interact with users (typically with a web server), modules where business logic is implemented (typically in an applications server), and modules that interact with back end file and data stores. An effective application monitoring solution should understand all of the modules that comprise the supported ECM applications, and also understand (and monitor) all of the linkages between the modules.

3. There is also great value in monitoring how the business activity supported by the application is being impacted by the application itself. For example, monitoring the number of completed orders per hour, the number of active scanning workstations, or the number of active users, provides administrators with critical context to the nature of a problem and facilitates faster diagnosis and remediation.
4. Since no application is an island, and since ECM applications are typically themselves part of larger compound applications that are stitched together via web services, the monitoring solution should be able to monitor not only the interfaces where the ECM application receives work or transactions from upstream applications, but also the interfaces where it delivers completed work to downstream applications. In cases where the ECM application relies upon other products like Exchange or Blackberry services, the solution should be easily extensible to cover these as well.
5. An appropriate end user monitoring solution should capture real end user transactions as they hit the presentation layer of the system (the web server), in order to be able to “cover the waterfront” of all transactions generated by all users. The use of scripts to simulate end user activity represents only a partial solution for end user monitoring.
6. An application monitoring solution must at the minimum support two constituents - the team that supports the application, and the businesspeople whose key processes are supported by the application. Therefore both SLA and business level dashboards, as well as reports are needed to support both of these stakeholders.
7. Monitoring alone is not enough. In order for an ECM application management solution to pay for itself via a hard dollar ROI, it must allow expensive application architects to be deployed out of “application babysitting” roles, and into roles that deepen and broaden the impact of the ECM application upon the enterprise. Therefore the ideal solution should include logic to determine the root cause of issues found via monitoring, the ability to configure who should receive problem notifications, automated escalation procedures, and in many cases the ability to execute scripts (upon approval of authorized administrators or automatically) that fix these problems once their cause is isolated.
8. A cost effective ECM monitoring solution should be easy to implement and easy to maintain. Instead of taking months or years to complete an implementation, such a solution should be easily implemented in a week or less. It should not require the installation of agents upon servers or end user workstations, and should come with templates or profiles that are pre-configured for popular ECM applications to simplify the construction of the monitoring scripts or tests.

### III. Reveille Solution Overview

Reveille is a comprehensive system designed to monitor the key processes that comprise ECM applications, to automatically diagnose the root cause of issues, and then either automatically run remediation scripts or notify the appropriate personnel. An architectural overview of Reveille is depicted below:



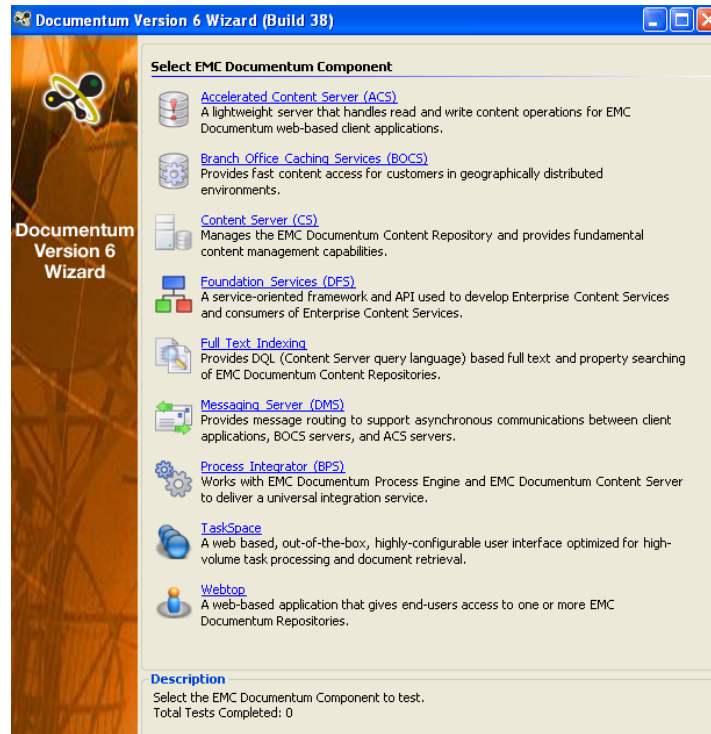
Unlike tradition infrastructure monitoring tools, Reveille provides monitoring, diagnostics and remediation focused upon ECM applications and processes. Reveille is typically implemented in combination with an infrastructure monitoring tool and the resulting combination provides an end-to-end picture to the IT operations team. Reveille includes pre-built wizards that support a wide variety of popular ECM applications including EMC Documentum Versions 5 and 6, EMC Captiva InputAccel, IBM Content Manager, Kofax Capture and Microsoft SharePoint. Reveille monitoring for Microsoft Exchange and Blackberry Services are also available. Reveille is unique with respect to all other monitoring solutions in the following respects:

1. Because of its tight integration with individual ECM applications Reveille EPM provides detailed monitoring of the key processes that comprise these applications - functionality that is not present in infrastructure monitoring tools.
2. Reveille provides a rapid time to value because of it ease and speed of implementation, configuration wizards and robust diagnostics, repair, notifications, and reporting capabilities.
3. Reveille not only monitors the ECM application, it also provides for automated diagnostics, and even automated repair for issues that impact applications performance or availability.

## EMC Documentum Version 6 (D6) - A Detailed Example

Reveille includes pre-packaged wizards for many popular ECM applications. Each wizard contains a deep understanding of how the application actually functions.

Unlike infrastructure monitors that look at how much CPU, memory, disk, and network an application is using, Reveille looks at the key processes that comprise the application itself. In the case of Documentum Version 6 shown to the right, specific monitors included with Reveille ensure that each of the key functions of D6 are working properly. Similar wizards are available for Documentum V5, Captiva, Kofax, IBM Content Manager, and Microsoft SharePoint.



## Infrastructure Monitor Integration

Since Reveille is focused upon ECM applications and the processes that comprise those applications, and since Reveille is not an infrastructure monitor, Reveille integrates popular infrastructure monitors in order to provide the IT Operations team with an end-to-end solution. Reveille integrates with popular infrastructure management products via SNMP and Web Services API's. Integrations for the following popular infrastructure monitors are available:

- IBM Tivoli
- HP OpenView
- CA Unicenter
- BMC
- Microsoft System Center Operations Manager
- Any product that can accept SNMP alerts, or integrate with Microsoft Web Service API's

## IV. The Role of Existing Infrastructure Monitors

Every enterprise has many different types of monitoring products already in use. These products come from a large variety of vendors, some focused upon the entire infrastructure and some focused just upon one aspect of it. However, all of the products that are in use within a typical enterprise generally have the following elements in common:

1. These tools are focused upon teams in IT Operations who support one or more aspects of the infrastructure that IT is responsible for. These tools range from broad frameworks like products from IBM, CA, HP, and BMC, to products that support a specific aspect of the infrastructure like tools from Quest and Oracle that are focused upon database servers.
2. Infrastructure tools are focused upon the availability and performance of the infrastructure components that they monitor. Frameworks look at networks and servers end-to-end. Server focused products look the availability of resources like CPU, memory, disk and network on a server, and generally only monitor applications as processes running on one or more servers.
3. Network focused tools either look broadly at the availability of the network end-to-end, or look deeply into how applications are using the network from a bandwidth and latency perspective.

The table below summarizes how an ECM focused monitoring solution like Reveille compares to the infrastructure monitoring tools that are typically installed within enterprises.

Requirements	Reveille	CA/Wily	Tivoli	HP & Mercury
<b>Experience and Performance Management</b>				
•End-To-End Application Support Including monitoring of:				
• Specific Application Processes	✓	✓	NO	NO
• Linkages with File/Data Stores	✓	NO	NO	NO
• Interfaces Among Applications	✓	NO	NO	NO
• Operational Metrics	✓	NO	NO	NO
•SOA/Web Services Monitoring	✓	Agent	NO	Agent
•Real-time User Experience Monitoring	✓	NO	NO	NO
•Real-time Business Dashboard / SLA Reporting	✓	NO	NO	NO
<b>Implementation &amp; Ongoing Support</b>				
•Agentless (ECM)	✓	NO	NO	NO
•Automated Notifications and Escalation	✓	✓	✓	✓
•Automated Diagnostics and Repair	✓	NO	NO	NO
•Packaged ECM Wizards				
• EMC Documentum V5/ V6	✓	NO	NO	Agent
• EMC Captiva InputAccel	✓	NO	NO	NO
• SharePoint	✓	NO	Agent	NO
• IBM Content Manager	✓	NO	NO	NO
• Kofax Capture	✓	NO	NO	NO
•Wizards for Web Services, Web, Windows Apps, Blackberry , etc...	✓	Agent	Agent	Agent
•Rapid Implementation (3-7 days)	✓	NO	NO	NO
<b>Traditional Systems Management / Infrastructure Monitoring</b>				
•Server Monitoring	NO	✓	✓	✓
•Operating System Monitoring	✓	✓	✓	✓
•Network Monitoring	NO	✓	✓	✓
•Application Discovery	NO	✓	✓	✓
•Root-Cause Analysis/Correlation	NO	✓	✓	✓
•Hardware Monitoring	NO	✓	✓	✓

## V. Conclusion

Only Reveille provides enterprises that rely upon ECM applications with a comprehensive application-focused method to automate the monitoring, diagnostics and problem remediation of these applications. This capability is distinct from and in addition to the infrastructure monitoring that is widely deployed in IT Operations groups within these enterprises. The unique monitors of the actual business processes within the ECM applications allows ECM applications owners and support staff to deliver significant value to both the employees that rely upon these applications to do their jobs, and to the executives that require the timely execution of critical business processes supported by these applications. Installed and in production in over 270 enterprises worldwide, Reveille also is the proven safe choice and market leader in the monitoring for ECM applications.

## VI. About APM Experts

APM Experts is founded and lead by Bernd Harzog. Bernd is a former Gartner Group Research Director, a former CEO of a performance management company, and currently an independent APM strategy analyst and consultant. Please visit APM Experts on the web at [www.apmexperts.com](http://www.apmexperts.com) to learn more about us.