SQL-Server-Performance.Com

Monitor Your Servers around the World with ManageEngine Applications Manager

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| Software Spotlight	
Product:	**ManageEngine Applications Manager**
Version:	6
Publisher:	AdventNet, Inc.
Price:	Starts at $595

In today's fiercely competitive business environment, 24/7 system availability has become necessary, not just an added advantage. To achieve this target you need to monitor your web applications, application servers, web servers, database servers, mail servers, and other related services continuously. Nowadays your servers may be located over several geographical areas. Because of this, day-to-day management is not always rosy for database or system administrators. AdventNet has a solution for monitoring your servers and services: the ManageEngine Applications Manager.
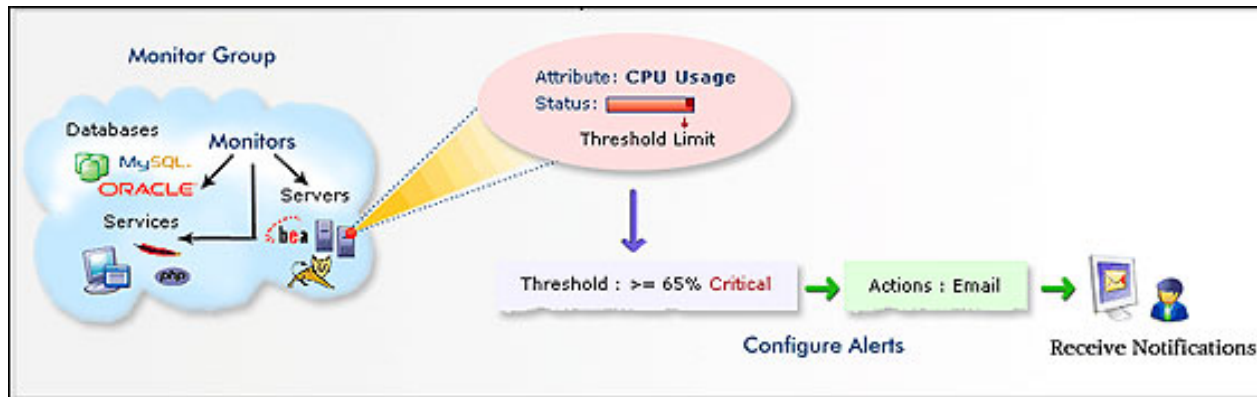
Installation

ManageEngine Applications Manager comes with a vibrant installation that will provide you with information about the product. It is also one of the few products that supports multiple languages — English, Simplified Chinese, and Japanese. This review was carried out on the English language version.

Product Overview

Applications Manager comes with a web interface from which it can be configured and reports created.

The product allows you to monitor all your servers and services from one location, including application servers, transaction monitors, database servers, mail servers, and web services. This review will focus on Microsoft SQL Server.

As a DBA your primary task is to monitor all database servers. The more servers you have, and the more locations at which they are housed, the more difficult will be your job.

The integration of Google Maps with Applications Manager enables you to represent visually, the status of all your monitor groups across the globe. The Google Maps API embeds Google Maps in web pages with JavaScript. The root cause analysis (RCA) data for configured monitor groups is available in the map.

In order to integrate Google Maps, you need to register for a Google Map key: www.google.com/apis/maps/.

When you log into the system, you will see the overall picture of your database servers. Standard colors (green and red) let you identify the status of your server at a glance. Clicking the server icon will give you a detailed view.

When it comes to SQL Server, a DBA looks at many parameters. To measure these parameters, normal practice is to run the Performance Monitor utility. As it is not tailor made for SQL Server, there are some issues associated with it. The main issue is that it does not have an energetic alerting system.

In Applications Manager there are six types of monitoring parameters: Database PagesConnection Statistics, Cache Details, Latch Details, Access Methods Details, Lock Details, and SQL Statistics. Let us see how a DBA can use these values to improve performance in SQL Server. For each parameter, you can define a threshold. You can define an alert based on that threshold.

In Database PagesConnection Statistics you can find the number of connections that have been established. If this has largely higher values then you need to address it by distributing the load. After distributing the load you can verify the distribution. Logins/Min also can be used for the same issue.

Cache Details also is important when measuring SQL Server performance. The Cache Hit Ratio indicates how often SQL Server goes to the buffer. The higher the ratio, the less often SQL Server has to go to the hard disk to fetch data. In an OLTP application this ratio should exceed 90%. The Cache Pages number generally should be close to the total amount of RAM in the server. If the amount of RAM devoted to the data cache is much smaller then you need to so some further investigation to find out why.
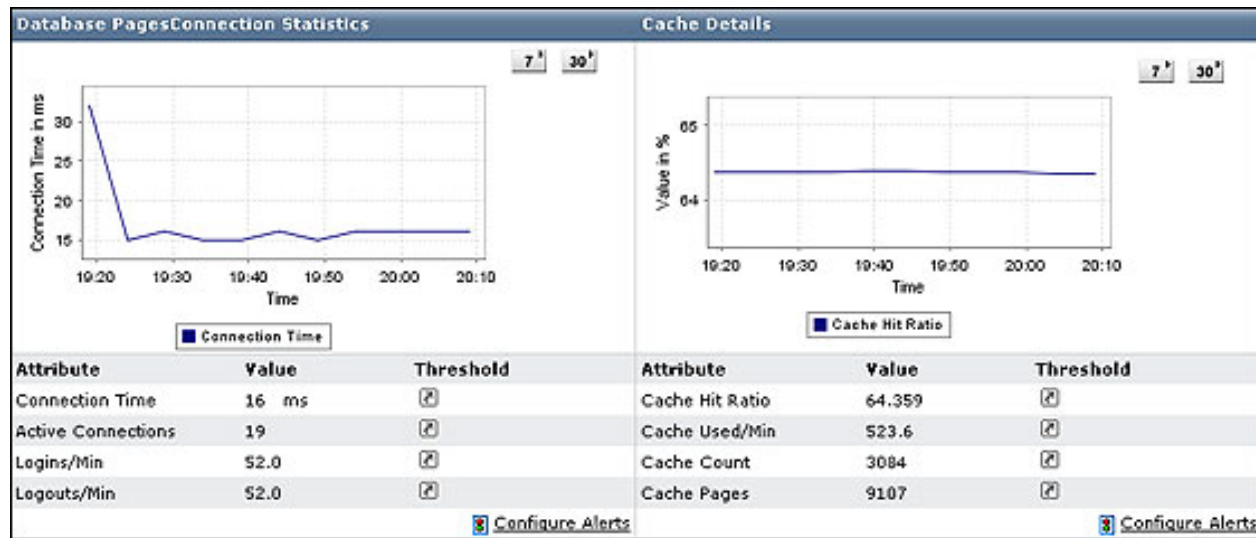
Latch Details and Access Method Details are also helpful to DBAs.

A latch acts as a lock in that its purpose is to prevent data from changing unexpectedly. For example, when a row of data is being moved from the buffer to the SQL Server storage engine, a latch is used by SQL Server during this move to prevent the data in the row from being changed during this very short time period. A latch can prevent SQL Server from accessing rows in a database, which can hurt performance. Because of this, you need to minimize latch time. Average Latch Wait Time and Latch Waits/Sec are the available parameters within Applications Manager.

The Average Latch Wait Time (Min) is a measurement for only those latches for which requests had to wait. In many cases, there is no wait.

The Latch Waits/Min is the number of latch requests in a one-second period that could not be granted immediately. This is measured by Average Latch Wait Time (Min).

Applications Manager doesn't provide a Total Latch Wait Time. However, this can be derived from the previous two counters.

For Access Method Details, Full Scans Per Min tells you how many full scans have occurred per minute. Generally, it is better to have fewer table scans for a healthier database.
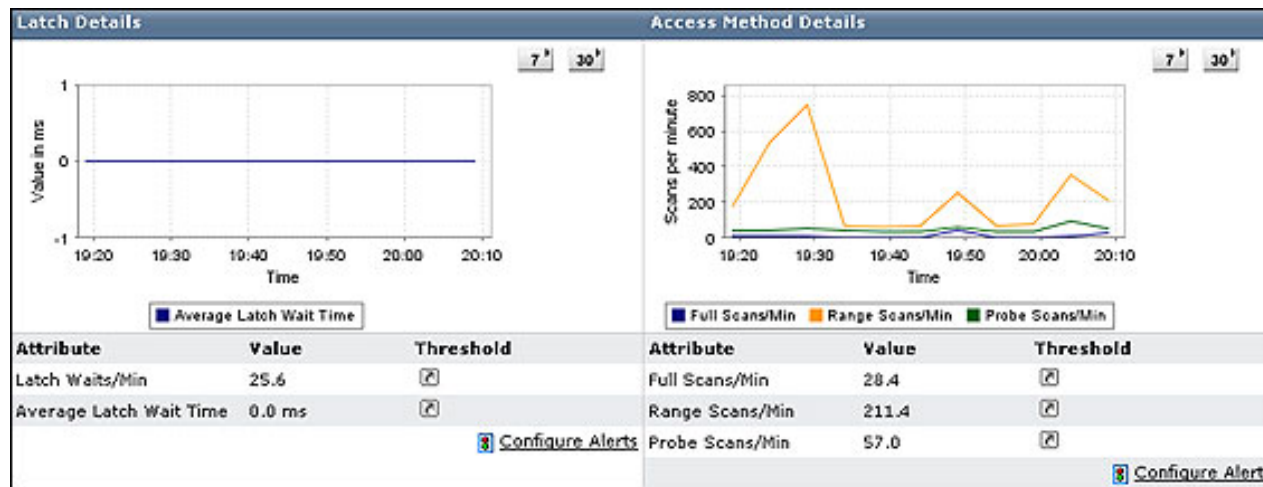
Lock Details are also very important to DBAs. You track deadlocks by using these counters. The Deadlocks/Min counter should be at a low value. You can use the Average Lock Wait Time counter to measure the average wait time of a variety of locks, including database, extent, Key, Page, RID, and table locks.

To get a feel for how busy SQL Server is, monitor the Batch Requests/Min counter under SQL Statistics. Generally, a count over 50,000 indicates a very busy SQL Server. A High SQL Compilations/Min value indicates that the server is going for unnecessary compilations.
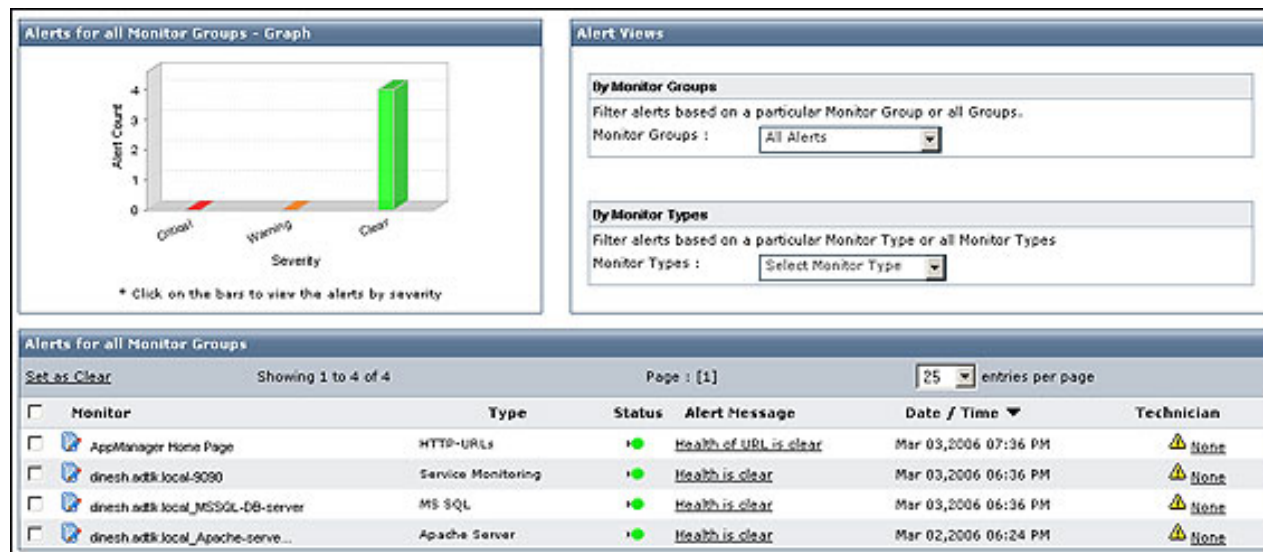
Memory plays a vital role in the smooth operation of SQL Server. Total Memory tells you how much the mssqlserver service currently is using. SQL Cache Memory should be close to the Total Memory for good performance. If it is not close, the server is probably not a dedicated SQL Server.

The Buffer Cache Hit Ratio, in Buffer Manager Statistics, indicates how often SQL Server goes to the buffer to get data. The higher the ratio, the less often SQL Server has to go to the hard disk to fetch data, which is good for performance.

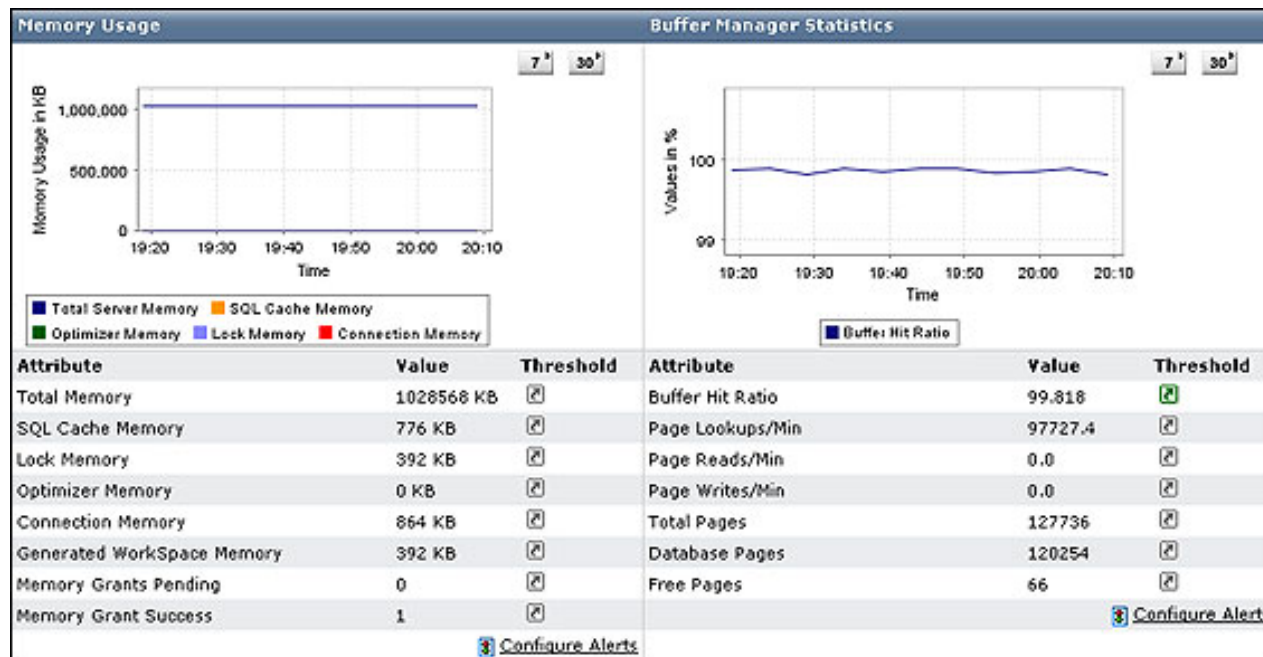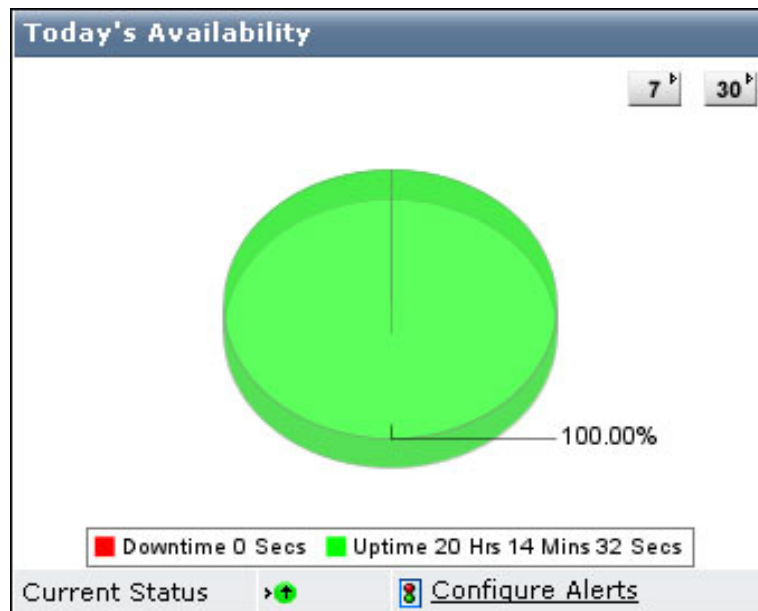| Attribute	Value	Threshold	Attribute	Value	Threshold
Lock Requests/Min	88510.6	▣	Batch Requests/Min	315.0	▣
Lock Waits/Min	0.0	▣	SQL Compilations/Min	182.8	▣
Lock Timeouts/Min	0.0	▣	SQL Recompilations/Min	38.4	▣
Deadlocks/Min	0.0	▣	AutoParams/Min	109.2	▣
Average Lock Wait Time	451159.0 ms	▣	Failed AutoParams/Min	54	▣
		🚸 Configure Alerts			🚸 Configure Alerts
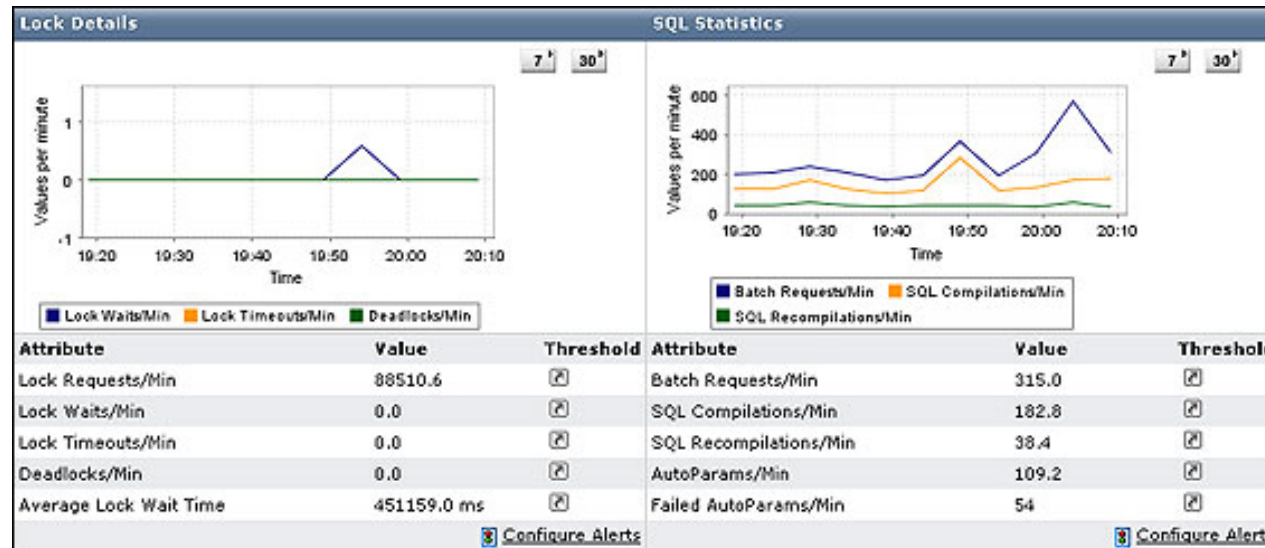
You have the option of displaying charts for seven or thirty days with all the views. Alerts can be configured for each performance counter, so you can immediately take action against negative performance of the server.

Counters for SQL Agent and replications are two important counters not available with Applications Manager.

Memory Usage / **Buffer Manager Statistics**

Attribute	Value	Threshold	Attribute	Value	Threshold
Total Memory	1028568 KB		Buffer Hit Ratio	99.818	
SQL Cache Memory	776 KB		Page Lookups/Min	97727.4	
Lock Memory	392 KB		Page Reads/Min	0.0	
Optimizer Memory	0 KB		Page Writes/Min	0.0	
Connection Memory	864 KB		Total Pages	127736	
Generated WorkSpace Memory	392 KB		Database Pages	120254	
Memory Grants Pending	0		Free Pages	66	
Memory Grant Success	1				Configure Alerts

Configure Alerts

Alerts play a vital role in Applications Manager. These alerts can be defined for several stages like Critical, Warning, and Clear depending on the severity of the alert. By clicking the graph, you will be taken to the detail view of the alerts. Alerts can be filtered by monitor groups and monitor types. It would be helpful if one could filter by date/time and technician.

Today's Availability

Downtime 0 Secs   Uptime 20 Hrs 14 Mins 32 Secs — 100.00%

Current Status   ▸● Configure Alerts

The screenshot below shows the different configuration options available in Applications Manager, which includes the mail server, users, product settings, and Google Map.
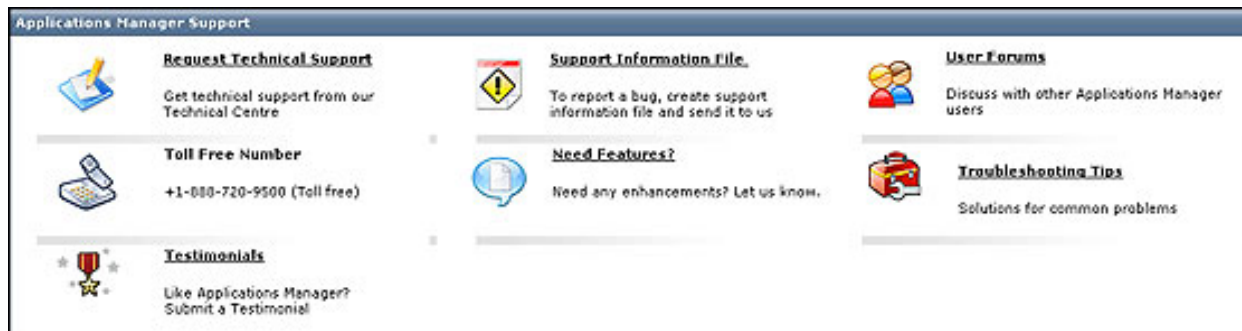
Applications Manager has administrator, manager, and operator user authentication levels so data on your important servers can be secured. The administrator can assign operators for selected monitor groups.

Support

The following screen shows the different methods of support available for the product.

This product is certified as being 100% CLEAN by Softpedia, which guarantees that it does not contain any form of malware, including but not limited to spyware, viruses, Trojans, and backdoors.

Summary

ManageEngine Applications Manager offers unique features that are very helpful to DBAs. Although I focused on its use with SQL Server, you can use it with many other servers and services. Download and review this product for yourself. You won't be disappointed.

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