

What's New: McAfee VirusScan Enterprise, 8.8

McAfee® VirusScan® Enterprise is the McAfee flagship anti-malware solution, deployed to more than 60 million endpoints across the globe. It includes state-of-the-art technology to proactively stop and remove threats while extending protection for new security risks.

The primary focus of the McAfee VirusScan Enterprise 8.8 release is to enhance the speed of malware scanning and to reduce the impact on system resources. Version 8.8 includes significant improvements in these areas:

- On-demand scanning (ODS)
- On-access scanning (OAS)
- Memory consumption
- Registry scanning
- Battery life
- Boot time

In addition to significant performance improvements, key components of the product have been redesigned to provide a richer end-user experience and improve response time. Highlights of the new or enhanced capabilities include:

- Support for Microsoft Outlook 2010
- Complete integration of McAfee AntiSpyware Enterprise

- Script scan URL exclusions interface
- Added capacity for user-defined unwanted programs

Performance Improvements

File-caching performance

Every file being accessed on the system is scanned by McAfee VirusScan Enterprise. If the file is found to be clean, these files are cached, and, the next time these files are accessed, they won't be scanned again because they were already in cache as "clean." In McAfee VirusScan Enterprise 8.7, the scan cache was limited to one session—in other words, once the system was rebooted, the cached files were lost and needed to be scanned and cached again, resulting in longer ODS and OAS scans. In McAfee VirusScan Enterprise 8.8, the cache is retained, even if the system is rebooted, which means the "clean" files in the cache don't have to be scanned again. This dramatically improves scanning time when files are repeatedly being accessed by applications, such as Microsoft Outlook or Microsoft Word.

In McAfee VirusScan Enterprise 8.8, ODS now uses or shares the cache generated by on-access scanning. This greatly improves the performance of ODS scanning because now it will use the results

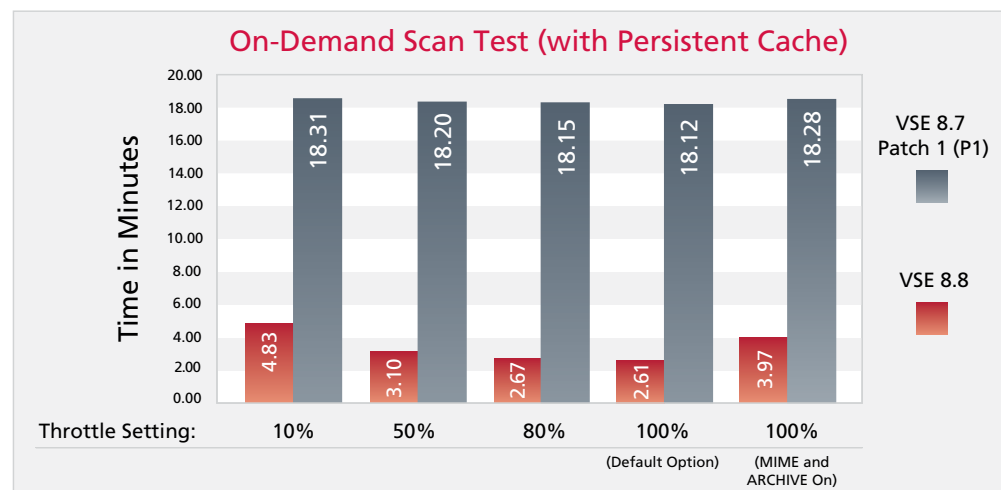


Figure 1. With persistent cache, on-demand scanning has improved dramatically with all throttle settings. (Source: McAfee, Inc., November 2010)

of OAS cache to determine if files need to be scanned again or not. Similarly, the cache built by ODS for clean files will be leveraged by OAS, eliminating the need to repeat a scan of that file again.

When using the persistent caching in McAfee VirusScan Enterprise 8.8, the time for an on-demand scan has dramatically decreased. Figure 1 shows a chart comparing the time (in minutes) it would take to conduct an ODS scan using version 8.7 P1 with version 8.8.

Persistent caching also improves on-access scanning because all of the "clean" files scanned don't need to be scanned again, thus significantly improving OAS scanning. Below is a chart demonstrating how much faster (in minutes) McAfee VirusScan Enterprise 8.8 OAS scanning is compared to McAfee VirusScan Enterprise 8.7, which did not have persistent caching. McAfee VirusScan Enterprise 8.8 OAS is 84 percent faster than McAfee VirusScan Enterprise 8.7 because of persistent caching.

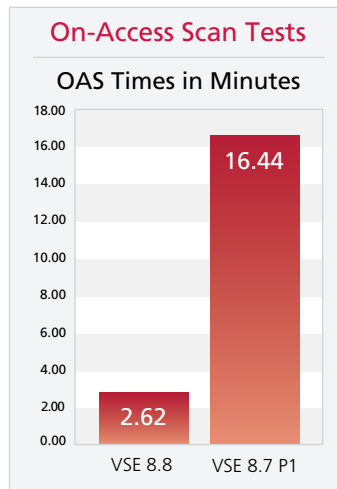


Figure 2. On-access scanning has improved dramatically in the new version of McAfee VirusScan Enterprise. (Source: McAfee, Inc., November 2010)

ODS memory reduction

The consumption of memory by anti-virus solutions is a big concern for users. The less memory the system uses when scanning for malware, the better the end-user experience will be. McAfee VirusScan Enterprise 8.8 consumes approximately 60 MB less memory when conducting ODS scans. This helps endpoints that are not optimized for high performance run faster when conducting malware scanning, improving the overall user experience.

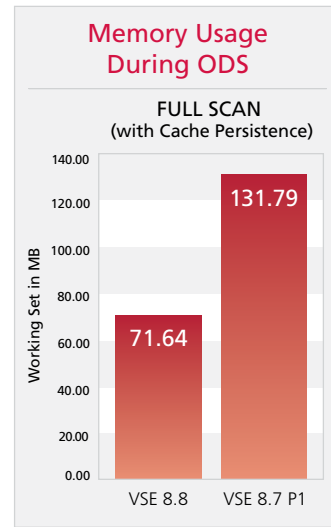


Figure 3. This test resulted in a 45 percent improvement in memory usage when conducting a full ODS scan using persistent cache. (Source: McAfee, Inc., November 2010)

Registry scanning

Applications that access the registry for their operations will see improved response times with version 8.8. For example, opening Microsoft Word generates about 3,900 registry access attempts, and McAfee VirusScan Enterprise monitors each one. The improvement in registry scanning helps reduce the impact on most Microsoft Windows applications and helps them respond better.

In our test environment running a benchmark test, we have seen a 11 percent gain using McAfee VirusScan Enterprise 8.8 compared to version 8.7.

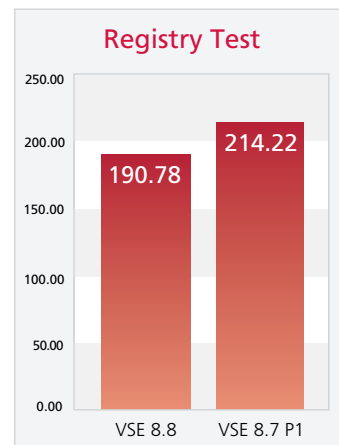


Figure 4. In testing, the registry scanning has seen improvements of approximately 11 percent with version 8.8. (Source: McAfee, Inc., November 2010)

Performance testing methodology
McAfee conducted thorough in-house testing to document performance improvements in version 8.8. The testing was completed by the McAfee quality assurance team.

A clean test environment was created which was deployed on a system of commonly used hardware and software specifications, including:

- DELL OptiPlex 960, X86-based PC
- Pentium Dual Core CPU E5300 @ 2.60 GHz
- RAM: 1 GB
- Microsoft Windows 7 Enterprise x86 (Version 6.1.7600 Build 7600)
- Microsoft Office 2007
- Latest Firefox browser
- Latest Microsoft Internet Explorer



20-Factor Test Profile

Startup/shutdown tests

- PC cold startup
- Shutdown

Network tests

- Download of 20 *.doc files
- Download of 20 *.exe files
- Download of 20 *.pdf files
- Download of 20 *.rar files
- Download of 20 *.zip files

Other tests

- Copy a set of files locally
- Compute MD5 sums for a set of files
- Word 2007 startup while loading a file (after booting)
- Word 2007 startup while loading a file (repeatedly)
- Word 2007 startup (after booting)
- Word 2007 startup (repeatedly)
- Copy Office 2007 installer from network to local PC
- Install Office 2007
- Open a folder containing 200 files (repeatedly)
- Compress a set of files with WinRAR
- Decompress a set of files with WinRAR
- Start Internet Explorer 8 (after booting)
- Start Internet Explorer 8 (repeatedly)

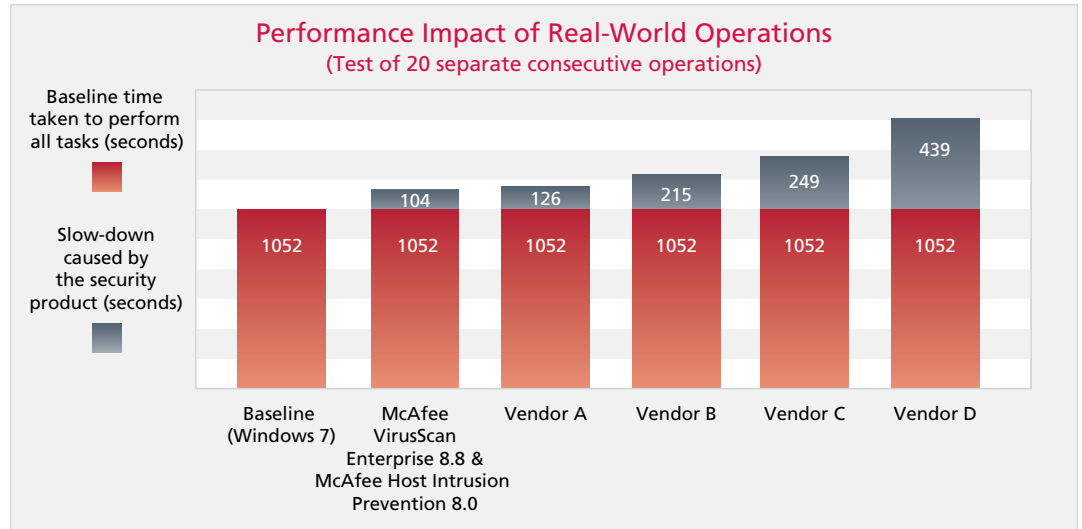


Figure 5. Results from AV-test.org show that high-performance McAfee VirusScan Enterprise dramatically improves user productivity.

Performance impact

To compare McAfee VirusScan Enterprise 8.8 performance to the top anti-virus products on the market, McAfee asked AV-test.org from Germany to independently test performance in a real-world simulation. AV-test.org created a test-bed machine running Microsoft Window 7 and proceeded to run 20 consecutive tests that simulate real end-user activity (see the chart above). The results are shown above and highlight the superior performance of McAfee in reducing the impact of malware protection on end-user productivity. For a detailed report on this test, please contact your McAfee or McAfee partner representative.

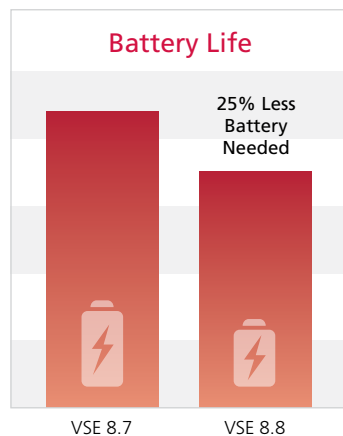


Figure 6. Power usage comparison. (Source: McAfee, Inc., November 2010)

Battery life

Activities like malware scanning increase CPU usage and impact battery life of mobile devices. Improvements in McAfee VirusScan Enterprise 8.8 result in extending the battery life of laptops. In our test environment, it was calculated that a laptop equipped with McAfee VirusScan Enterprise 8.8 uses 25 percent less battery power compared to version 8.7.

Improved system boot time

The time it takes to boot up a system is important to every end user who wants to be productive. McAfee VirusScan Enterprise 8.8 has improved boot time when compared to the previous version. During testing, the time it takes to boot a system decreased by approximately 8 percent when using the newer version.

Script scan improvements

Most websites have scripts that execute when a user does something, for example, filling up a shopping cart on an e-commerce site. Nefarious cybercriminals develop malicious scripts that execute malware that can mimic all kinds of typical user activities and compromise systems. McAfee VirusScan Enterprise scans these scripts to ensure that they are malware free and don't compromise a user's system. In version 8.8, the script scanning time has improved by 30 percent. This means scripts load faster, which provides a better browsing experience for the end user.

.DAT update improvements

All anti-virus programs use a signature, or .DAT file, to provide protection against malware. These are constantly being updated with new signatures to protect systems from evolving malware. In McAfee VirusScan Enterprise 8.8 the .DAT update process is now faster. Based on testing, the .DAT update of McAfee VirusScan Enterprise 8.8 is 12 percent faster than version 8.7. This allows the system to be more responsive during the .DAT update process and does not affect the performance of the application running on the system.

GCC compilation improvements

Developers who use the GNU C Compiler to compile code using McAfee VirusScan Enterprise will see an improvement with version 8.8. For example, if a developer is spending two hours per day compiling code using version 8.7, then he/she will save about 17 minutes, a 15 percent improvement. This saves developers about 5.6 hours per month.

Conclusion

Overall, the test results revealed that McAfee VirusScan Enterprise 8.8 has significant performance improvements in a number of areas, including time to conduct on-access and on-demand scanning, memory consumptions, boot time, registry scanning, battery life consumption, and other performance metrics. This version of McAfee VirusScan Enterprise will not only provide advance malware techniques to protect from all types of malware, it will also now stop threats faster and have less impact on the end-user experience.

To learn more visit www.mcafee.com, or call us at 888.847.8766, 24 hours a day, seven days a week.

About McAfee, Inc.

McAfee, Inc., headquartered in Santa Clara, California, is the world's largest dedicated security technology company. McAfee is relentlessly committed to tackling the world's toughest security challenges. The company delivers proactive and proven solutions and services that help secure systems and networks around the world, allowing users to safely connect to the Internet, browse, and shop the web more securely. Backed by an award-winning research team, McAfee creates innovative products that empower home users, businesses, the public sector, and service providers by enabling them to prove compliance with regulations, protect data, prevent disruptions, identify vulnerabilities, and continuously monitor and improve their security.

