ACT! | Whitepaper

Factors that Affect Performance for Individual Users

ACT! by Sage Product Family

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Note: The information contained in this document constitutes recommendations by Sage and does NOT constitute a guarantee or warranty that the ACT! by Sage software mentioned herein will perform in the manner described.

Balancing Expectations for ACT! Performance

When considering the overall performance of your ACT! by Sage Solution, ACT! individual users need to balance their hardware investment, expectations for application performance, customer and prospect expectations, business needs, and reasonable Return on Investment (ROI).

This White Paper examines the factors that affect ACT! application performance for the individual user. It includes results of testing performed by an independent benchmark testing company using ACT! by Sage 2006 (8.0), as well as testing performed by Sage on subsequent ACT! versions.

Legacy Testing

Sage and Key Labs Inc. (now AppLabs) conducted ACT! performance tests to set performance benchmarks for subsequent testing. The Key Labs' tests, performed in August 2006, measured the impact of different hardware on the performance and speed of ACT! 2006. In addition, Sage performs regular and ongoing ACT! testing that focuses on version-by-version application performance on identical hardware.

These two approaches to application performance testing provide a full picture of past and current performance metrics and describe the impact on performance when different hardware components are upgraded.

ACT! Tests Performed by Sage

Sage runs ongoing, automated tests to gauge the performance of the most frequently executed ACT! tasks for all versions of ACT! (see the Appendix for the list of ACT! tasks tested). After each software version is developed, Sage performs these automated tests on hardware that meets the ACT! minimum system requirements and identifies a "worst case scenario" for product performance. We then compare test results for each new version to its previous versions to give a clear picture of performance trending, version by version.

Environment and ACT! Database Configuration

Sage performs all standard performance tests using the following ACT! database and hardware configuration shown in Figure 1:

Database Configuration	System Environment
1000 contact database containing a total of 12,000 histories, 5000 notes, 1000 activities, 1000 opportunities, and 75 groups and companies	550 MHz Pentium® III processor, 512 MB RAM, 7200RPM, XP Professional

Figure 1: Database Configuration and System Environment Chart

Performance results by version (as shown in percentage of improvement)

The increase in startup time from ACT! v6.0 (2004) to ACT! 2005 (v7.0) and up occurred because ACT! 2005 incorporated a true relational database to provide significant product improvements - including multiple user scalability - but caused a slower startup performance when compared to ACT! 6.0.

Other application areas have experienced dramatic performance improvements version over version. Figure 2 shows that various, often-performed, tasks run faster by percentage, in ACT! 2010 as compared to ACT! v6.0 (2004). Subsequent versions verified by ACT! internal testing.

Tasks	ACT! 2010 compared to ACT! 6.0
Launch ACT!:	
Open Database	38 seconds slower
Opening Dialog Boxes:	
Activity	50-60% faster
History	25-35% faster
Lookup	65-75% faster
E-mail (w/client open)	60-70% faster
Opening Detail Views:	
Company	N/A
Daily Calendar	30-40% faster
Weekly Calendar	N/A
Monthly Calendar	35-45% faster

Figure 2: ACT! Task Performance Changes from ACT! 6.0 (2004).

These tests indicate that ACT! 2010 often-used tasks performed significantly faster than the same tasks performed in ACT! 6.0 (2004).

Hardware Factors Affecting Performance

Through extensive testing done by Key Labs (now AppLabs) in August 2005, Sage has identified different factors that affect individual system performance relating to application startup and functionality.

Hardware Impact on Startup

Key Labs' tests identified the impact of hardware configuration on ACT! startup times by performing ACT! tests on 22 hardware configurations. As a result, findings concluded that hardware has one of the biggest impacts on individual ACT! performance.

To assess the impact of hardware on ACT! startup times, Key Labs first assigned a normalized value ("1" in Figure 3) to the time it takes to open ACT! 2005 (55 seconds) using the default database on a PC with minimum system requirements (see Figure 1).

550 MHz PC	Hard Drive Speed (RPM)		
Memory (MB)	5400	7200	10000
512		55 seconds	
1000			
2000			

Figure 3: Normalized Value to Open ACT! Application

Once the normalized value was established, Key Labs then tested and timed ACT! startup times using different PC configurations, with each test resulting in a ratio to the normalized value. These additional test findings are shown in Figures 4 through 6.

In the first set of tests (results shown in Figure 4), a 1 GHz PC was tested with varying degrees of RAM and hard drive speeds.

550 MHz PC	Hard Drive Speed (RPM)		
Memory (MB)	5400	7200	10000
512	82.5 seconds	49.5 seconds	
1000	77 seconds	44 seconds	
2000	71.5 seconds	38.5 seconds	

Figure 4: ACT! Startup Times using 1 GHZ PC

These tests show that ACT! starts much more quickly with a faster hard drive.
- **40-50% faster with a faster hard drive**
- **6-13% faster with twice the memory**

In the second set of tests (results shown in Figure 5), a 2 GHz CPU was tested with varying degrees of RAM and hard drive speeds.

550 MHz PC	Hard Drive Speed (RPM)		
Memory (MB)	5400	7200	10000
512	60.5 seconds	44 seconds	33 seconds
1000	55 seconds	33 seconds	22 seconds
2000	33 seconds	27.5 seconds	22 seconds

Figure 5: ACT! Startup Times Using 2 GHZ PC

These tests showed the most dramatic improvement in ACT! startup performance when using faster hard drives.
- **20-45% faster with a faster hard drive**
- **10-20% faster with twice the memory**

The third set of tests (results shown in Figure 6) were performed on a 3 GHz PC, with varying degrees of RAM and hard drive speeds.

550 MHz PC	Hard Drive Speed (RPM)		
Memory (MB)	5400	7200	10000
512		38.5 seconds	27.5 seconds
1000		22 seconds	22 seconds
2000		16.5 seconds	16.5 seconds

Figure 6: ACT! Startup Times Using 3 GHZ PC

As with earlier tests, the most significant change resulted from faster hard drive speeds. This test also identified that a PC with 1–2 GB RAM optimized the ACT! startup, giving the highest level of performance for all 22 tests performed.

Recommendations for Improving Startup Times

Based on the preceding test results, Sage offers the following recommendations to improve individual performance:

Current PC Configuration	Hardware Improvement Type	Expected % of Improvement in Startup Times
1 GHz CPU 512 MB RAM 5400 RPM Hard Drive	Increase drive speedDoubling memory	Approximately 40%Approximately 6-13%
2GHz CPU 512 MB RAM 5400 RPM Hard Drive	Increase drive speedDoubling memory	Approximately 25%Approximately 10-20%
3GHz CPU 512 MB RAM 7200 RPM Hard Drive	1-2 GB RAM	Approximately 60-70%

Figure 7: Impact to ACT! Startup

Individual users can maximize ACT! startup performance by leveraging the appropriate hardware. Users currently using lower-performing hardware can experience the most dramatic increases in individual performance by ensuring that their PCs are equipped with the fastest hard drives available.

Recommendation: To achieve optimum ACT! start up performance, select a PC equipped with at least 1 GB RAM, a 2 GHz or better CPU, and hard drive speed of 7200 RPM or better.

Operational Performance

"Operational performance" refers to the speed at which a user can switch from one open application to another open application and have the application react to user commands. For example, a user might work in Microsoft® Word and then switch to ACT! to enter a contact. The speed at which ACT! responds to the user's commands, after making it active, is operational performance.

Factors Affecting Individual Operational Performance

Multiple factors affect operational performance. The main factors are:
- Number of open applications or application instances
- Physical and Virtual Memory (disk) swapping
- Processor speed, physical memory, and drive speed

How do these factors affect performance?
- Number of open applications/instances – The number of applications open at any given time will affect system responsiveness overall, since each open application or instance consumes system resources in order to operate. The more open applications, the more system resources are consumed. It's important to note that the amount of resources that an application will use varies from application to application.

- Physical and Virtual Memory (disk) swapping – As users open and activate an application, Microsoft Windows® will swap out fast RAM memory used by other applications and free it up for the now-active application. Windows will swap out the now-inactive application memory needed for hard drive-based Virtual Memory, which is slower, freeing up the RAM for the

active application. Although Virtual Memory disk-swapping makes the newly active application run faster, users can experience a performance problem when switching back to the inactive application, if the PC does not have enough available RAM for both open applications.

- Processor speed, physical memory and hard drive speed – CPU (processor) speed, physical memory, and hard drive speed can all impact operational performance, but at different levels. Faster CPUs and hard drives (RPM), combined with faster and larger physical RAM, enable a user to move between applications more quickly and allow the application to react faster to a user's commands.

How do the above factors fit together? When active, ACT! consumes 130–150 MB of physical memory (RAM). If a user switches to another application, such as Microsoft Outlook®, Windows will free enough physical memory to accommodate the newly active application. If there is not enough RAM for Outlook to run, Windows will swap out the RAM being used by ACT!, exchanging it for virtual memory space on the hard drive, and free up the RAM for Outlook to run. This swapping can cause a delay in the time it takes for Windows to "paint" or render the application for use.

Through operational performance testing, Sage recommends the following configurations (Figure 8), taking into account the number of applications an individual user will have open.

Applications	Minimum RAM	Suggested RAM
ACT!	512MB	512 MB
ACT! + Outlook	512 MB	768 MB+
ACT! + 3-4 Applications	512 MB	1 GB

Figure 8: Recommended Configurations

As seen in Figure 9, 1 GB of RAM is recommended for speedy operational performance as users move from one open application to another if throughout their workday they use ACT!, plus keep three to four additional applications open.

Conclusion

Individual users of ACT! must balance their hardware investment, expectations for application performance, customer and prospect expectations, business needs, and reasonable ROI, when considering ACT! performance. They can also consider their work habits—for example, using ACT! with multiple additional applications open reduces operational performance speed.

From a hardware perspective, to get optimum ACT! startup performance, select a PC equipped with at least 1 GB RAM, a 2 GHz or better CPU, and hard drive speed of 7200 RPM or better. This configuration will also deliver the most advantageous operational performance.

Important Note: Review ACT! system requirements at www.act.com/2010systreq. You must purchase one license of ACT! per user. Scalability varies based on hardware, size, and usage of your database. **Compatibility:** Due to new functionality available in ACT! 2010, we strongly recommend contacting your add-on product provider to confirm compatibility. Using versions of the add-on product that have not been confirmed compatible by the vendor may result in features behaving differently or not appearing within ACT! 2010. Visit www.actsolutions.com or contact your add-on product provider to help determine compatibility.

Appendix

List of ACT! Tasks Tested on an Ongoing Basis

1. Launch ACT!
2. Database Open
3. Open Task List View
4. Open Activity Dialog from Contact Detail View
5. Add an Activity from Contact Detail View
6. Open History Dialog Box from Contact Detail View
7. Open Notes Dialog Box from Contact Detail View
8. Add Note from Contact Detail View
9. Open Lookup Dialog Box from Contact Detail View
10. Open Group Detail View from Contact Detail View
11. Open Company Detail View from Contact Detail View
12. Create New Database
13. Update Database
14. Open Clear Activity Dialog Box from Contact Detail View
15. Open preferences Dialog Box (local)
16. Open Opportunity Dialog Box from Contact Detail View
17. Open Monthly Calendar from Contact Detail View
18. Open Weekly Calendar View from Contact Detail View
19. Open Daily Calendar View from Contact Detail View
20. Open Existing Activity from Contact Detail View
21. Open Define fields Dialog Box (local)
22. Lookup Last Name - Contact Detail View
23. Lookup Last Name - Contact List View
24. Open Opportunity List View from Contact Detail View
25. Open Group List View from Contact Detail View
26. Open Company List View from Contact Detail View
27. Open Contact Detail view From Daily Calendar View
28. Open Contact List View from Contact Detail View
29. Open Write E-mail Dialog Box from Contact Detail View (client closed)
30. Open Write E-mail Dialog Box from Contact Detail View (client open)
31. Save Copy As
32. Mail Merge E-mail Closed - 100 contacts
33. Mail Merge E-mail Open - 100 contacts
34. Mail Merge ACT! Word - 100 contacts
35. Mail Merge MS Word - 100 contacts
36. Contact Report
37. Import Database

Table 1 - Top Tasks ACT! Users Perform Most

Task	View/Feature/Dialog Boxes Accessed
Start Working with ACT!	
	Open Application
	Open Database
See Everything About the Contact in One Place	
	View Contact Detail
	View Group/Company detail
	View Group/Company list view
Schedule/Clear an Activity	
	View Task List
	View Daily Calendar
	View Weekly Calendar
	View Monthly Calendar
	Schedule Activity dialog box – open
	Schedule Activity dialog box - save
	Clear Activity dialog box – open
Look up a Contact	
	Lookup dialog box
	Lookup results – Contact detail
	Lookup results – Contact list
Insert Piece of Data	
	Insert note dialog box – open
	Insert note dialog box – save
Send E-mail	
	ACT! E-mail form – Client closed
	ACT! E-mail form – Client open
Record a Sale	
	Opportunity dialog box – open
Track a Sale(s)	
	Load Opportunity list – 50 items
	Change Opportunity filter to only show open Opportunities

ASIA

210 Middle Road
#06-04
IOI Plaza
Singapore 188994
+65 6336 6118
www.sageasiapac.com

AUSTRALIA /
NEW ZEALAND

Level 6, 67 Albert Street
Chatswood, NSW 2067
Australia
+61 2 9921 6500
www.sagebusiness.com.au
www.sagebusiness.co.nz

BELGIUM /
LUXEMBOURG

Rue Natalis 2
4020 Liège
Belgium
+32 4 343 77 46
www.sage.be

CHINA

Suite 2605,
Liu Lin Tower No. 1
Huaihai Zhong Road
Shanghai 200021
People's Republic of China
+ 86 21 63850097
www.sagesoft.cn

FRANCE

Ciel – Service Commercial ACT!
11 rue de Cambrai
75019 Paris
France
+33 1 55 26 34 77
www.MonAct.fr

GERMANY

Emil-von-Behring Str. 8-14
60439 Frankfurt am Main
Germany
+49 69 50007 6260
www.sage.de

INDIA

100, First Floor
Okhla Industrial Estate Phase-III
New Delhi 110020
India
+91 11 4071 2488
www.sagesoftware.co.in

IRELAND

3096 Lake Park Drive
Citywest Business Park
Dublin 24
Ireland
+353 (0) 1 642 0800
www.sage.ie

MIDDLE EAST

Office No. 315, Building 12
P O Box 500198
Dubai Internet City
Dubai
United Arab Emirates
+971 (4) 3900180
www.me.sage.com

POLAND

Sage sp. z o.o.
Ul. Berna 89
01-233 Warszawa
Poland
+48224555600
www.actsage.pl

SOUTH AFRICA

Softline Technology Park
102 Western Services Road
Gallo Manor Ext 6
Johannesburg, 2191
South Africa
+2711 304 3000
www.pastel.co.za

SPAIN

Labastida, 10-12
28034 Madrid
España
+34 91 334 92 92
www.sagecrm.es

SWITZERLAND

Sage Schweiz AG
D4 Platz 10
6039 Root Langenbold
Switzerland
+41 58 944 19 19
www.sageschweiz.ch

UNITED KINGDOM

North Park
Newcastle Upon Tyne
NE13 9AA
0800 44 77 77
www.act2010.co.uk

UNITED STATES

8800 North Gainey Center Drive
Suite 200
Scottsdale, Arizona 85258
1 866 903 0006
www.act.com

About ACT!

ACT! by Sage is the #1 selling contact and customer manager in the world with 2.8 million users. It's designed so you can organize all the details of your customer relationships in one place for a complete view of the people you do business with. Improve your marketing effectiveness to attract new customers and get more from existing relationships. And, take action on your most qualified sales leads with total visibility and control of your pipeline. Because ACT! is easy to learn and use, you can be more productive right away. Continue working with your existing business solutions, like Microsoft Outlook, Word, Excel, and Lotus Notes, because they integrate with ACT!.

About Sage CRM Solutions

Sage CRM Solutions is a portfolio of market-leading applications consisting of ACT! by Sage, Sage CRM, and Sage SalesLogix. Over 63,500 organizations and 3.1 million users worldwide rely on Sage CRM Solutions to develop profitable, long-term business relationships.

Sage
8800 N. Gainey Center Dr., Suite 200
Scottsdale, AZ 85258
www.act.com | 866-903-0006

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