

Proactive support for PCs and tablets

with Dell™ ProSupport™ Plus
and SupportAssist technology

PROMPT RESPONSE:

ProSupport Plus took up to **84%** less call time to resolve a hard drive issue.*

PROBLEM SOLVED:

Dell Support took up to **80%** less time to deliver a replacement hard drive.*

compared to HP and Lenovo



Taking a proactive approach to hardware or software problems on your PC or tablet can reduce or even eliminate interruptions to your work. Dell ProSupport Plus for PCs and tablets can alert Dell's support team to an issue as it happens, greatly reducing the time it takes to resolve your problem.

Sometimes a system update includes incompatible drivers that cause your operating system to crash. Sometimes you accidentally drop your laptop and damage the hard drive. When these kinds of things happen, how quickly can you solve the problem and get back to work? In the Principled Technologies labs, we compared the tech support capabilities of three popular laptop vendors: Dell, HP, and Lenovo.

We found that ProSupport Plus with SupportAssist technology took up to 58 percent fewer steps on the user's part to get a resolution to these common problems and worked as advertised—with Dell Support calling us at the first sign of an issue. HP and Lenovo, who lack this proactive support approach, took over six times more call time, and took longer to provide replacements for the hard drive issue—five and three days respectively, while Dell had us back in business in just one day.

PC and tablet OEM support options vary considerably in how speedily they can resolve issues. We found the Dell ProSupport Plus with SupportAssist technology was proactive and handled our problems quickly to help us get back to work.



PROACTIVE SUPPORT WITH DELL PROSUPPORT PLUS FOR PCS AND TABLETS

How do you decide when to call your PC or tablet vendor for support? Is it after the first error? Do you wait until the fifth time you've lost precious work during a system crash?

Dell offers ProSupport Plus and SupportAssist technology for PCs and tablets as a premium support service that removes this decision and lets you get ahead of hardware problems by having the Dell Support team contact *you* the first time an issue occurs. Imagine that as you're sitting with your just-crashed system wondering what happened, your phone rings. A friendly, knowledgeable tech support person helps you get to the root of the problem and has you up and running quickly. Wouldn't that be preferable to spending countless hours troubleshooting instead of working?

In our labs, we simulated a hard drive failure on three systems: a Dell laptop with Dell ProSupport Plus with SupportAssist technology, and one laptop each from HP and Lenovo, both of which were equipped with the most comprehensive support plans available from their respective vendors. We then compared our experience seeking help from the vendors of each system. For details on our test systems, see [Appendix A](#). For details on our test procedure, see [Appendix B](#).

THE PROBLEM: HARD DRIVE FAILURE

Omar, a top salesperson at a large business, has just received a new laptop through a laptop refresh program for all sales employees. While saving some sales data to his machine over Wi-Fi® as he walks down the hallway to a meeting, he accidentally drops his laptop. When he sits down at the conference room table, the laptop doesn't appear to be working properly. He tries to reboot it, but the laptop can no longer boot into the operating system. He immediately thinks of the several important meetings he has lined up over the next few days. He calls his vendor's support line for assistance. Will the support team figure out what is wrong with his system and get it working in time for his onslaught of meetings?

How the support teams handled it

Hard drives (HDDs) can fail when you're rushing from place to place and a laptop falls to the floor, or gets bumped during heavy read/write processes. When this happens, your ability to work stops suddenly. The Dell laptop, which included ProSupport Plus with SupportAssist technology, provided the quickest resolution for our hard drive failure. Because SupportAssist alerted Dell Support to the problem, they contacted us, aware that a hard drive failure had taken place. The ProSupport engineer already knew what the problem was and the call lasted around 5 minutes, just long enough to confirm that we would receive a new hard drive from them the next day. HP

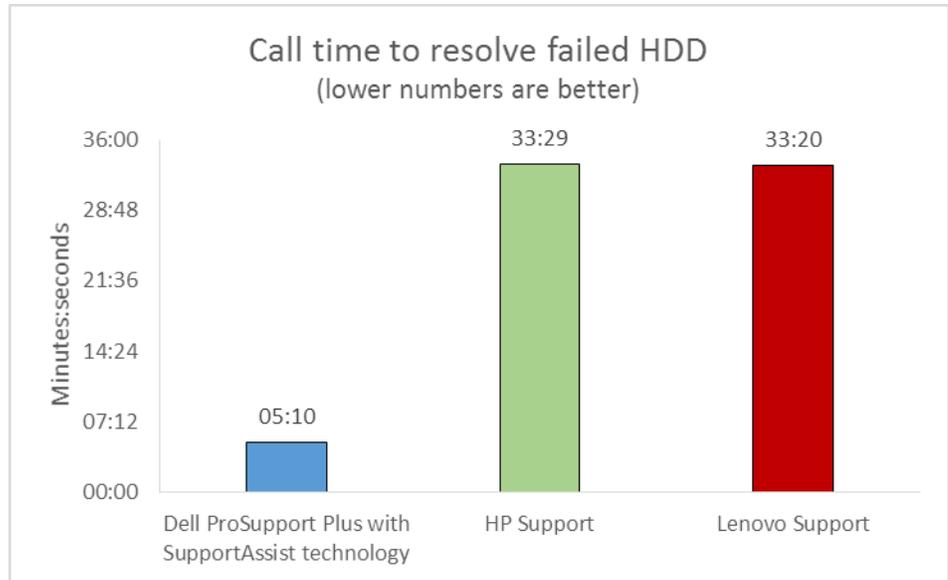
support also accurately identified the root problem, but took five days to get us a replacement hard drive. This means that Omar would be without a laptop for an entire workweek. Furthermore, the HP agent failed to give us a tracking number for the replacement hard drive. Lenovo support was unable to determine the cause of our problem, but promised to send a replacement laptop that we would receive in three days, or the better part of a workweek. Figure 1 compares our support experiences.

	Dell laptop with ProSupport Plus and SupportAssist technology	HP laptop	Lenovo laptop
Total call time	5 minutes 10 seconds	33 minutes 29 seconds	33 minutes 20 seconds
Percent reduction in call time		84.6% less call time with SupportAssist	84.5% less call time with SupportAssist
Steps required by user	8	18	19
Percent reduction in user steps		55.6% fewer steps with SupportAssist	57.9% fewer steps with SupportAssist
Problem identified correctly?	Yes	Yes	No
Troubleshooting steps	None	Ran hard drive check and memory check	Tried and failed to boot into BIOS
Resolution reached	Contacted us with the knowledge that a hard drive failure had taken place, and promised to ship us a new hard drive overnight	Concluded that the hard drive was bad, and promised to ship us a new hard drive	Concluded that the operating system might have crashed, promised to ship us a new replacement laptop
Follow-up	Agent followed up to make sure everything was delivered correctly, and instructed us to contact him if we had any questions	None	None

Figure 1: How the support calls varied with each laptop.

Figure 2 compares the amount of time each support call took. As we noted above, the call for the Dell laptop with ProSupport Plus and SupportAssist technology took up to 84 percent less time than the support calls with other vendors due to proactive alerts to Dell Support.

Figure 2: Call time comparison to resolve our failed hard drive issue.



We also compared the number of steps we took to resolve our issue with each laptop. We found that contacting Dell Support with ProSupport Plus and SupportAssist technology took fewer steps to resolve the hard drive issue than with either HP or Lenovo support (see Figure 3). For detailed support steps, see [Appendix C](#).

Figure 3: The number of steps we had to take to resolve our failed hard drive issue.

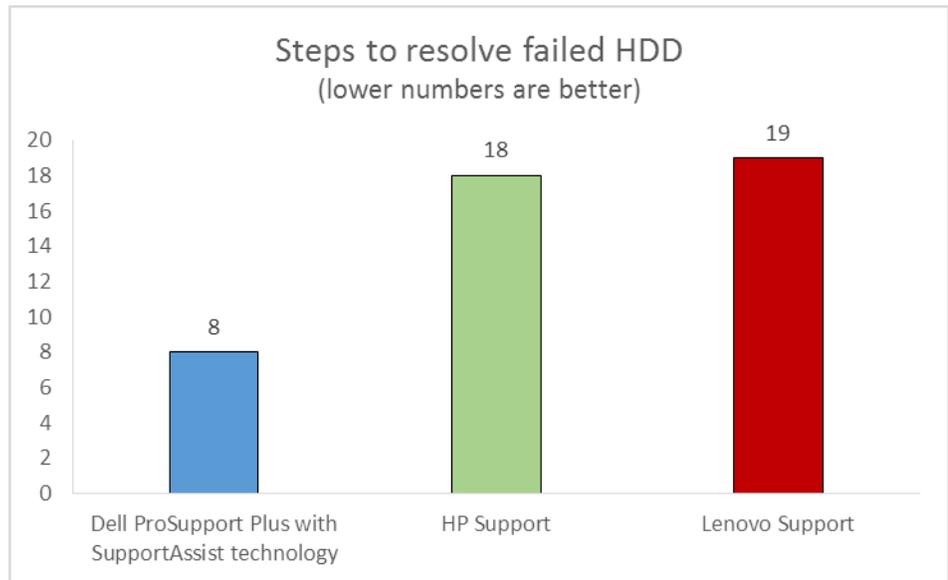
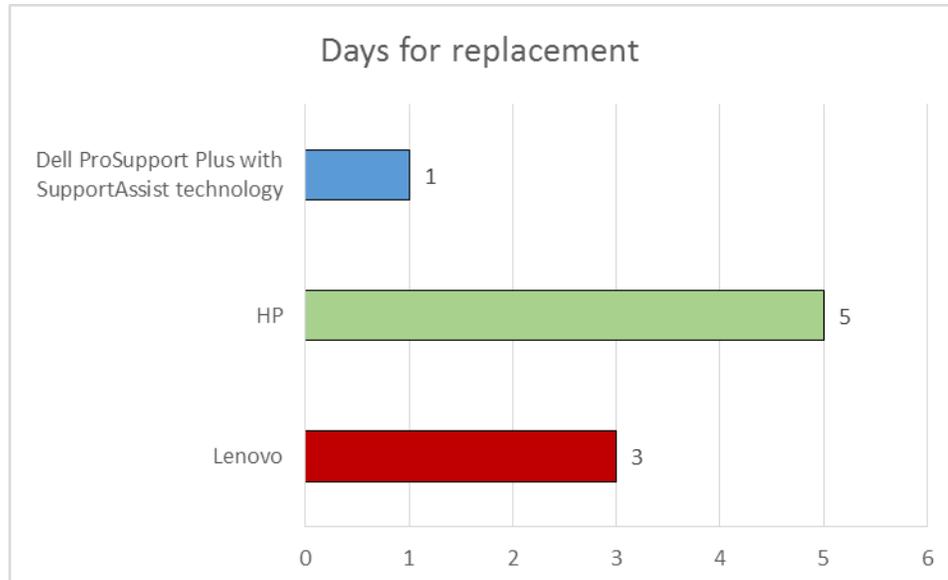


Figure 4 compares the time it took for us to receive our replacements and be up and running again (replacement hard drives for the Dell and HP laptops; a replacement laptop from Lenovo). Dell Support was able to send us a replacement overnight, while HP and Lenovo Support took considerably longer.

Figure 4: The number of days it took to get replacement hardware to get our laptops running again.



WHAT WE TESTED

Inducing a hard drive alert and damaging hard drives

For the SupportAssist-equipped Dell laptop, we launched a Dell-provided executable to trigger a warning in SupportAssist that the system's hard drive's reallocation count was too high, indicating that too many sectors had failed in the hard drive with other sectors reallocated in their place. This problem would put your system in serious danger of losing data. For the HP and Lenovo systems, we installed their hard drives in another laptop, ran a hard drive workload, and dropped the systems from 35 inches above the floor. We repeated this until the hard drives no longer appeared as boot options and reinstalled them in our test systems. Users would certainly panic if they suddenly found their laptop unable to boot into their operating system, prompting them to make a tech support call.

CONCLUSION

Getting ahead of problems with your PC or tablet can save you time and get you back to work more quickly. A vendor that (1) takes a proactive, automated approach to issue resolution through new technology and (2) provides a helpful, positive, and effective support experience can help you do this.

We found that ProSupport Plus with SupportAssist technology was both proactive and helpful compared to competing vendor solutions. Dell contacted *us* to resolve our issues, with knowledge of what happened from the system itself. This led to issue resolution in up to 58 percent fewer steps, and phone calls taking up to 84 percent less time. Dell Support also provided a better overall experience by accurately identifying and resolving both issues and shipping necessary replacement parts in just one day. This allowed us to have our laptop back up quickly, while HP support would have had us out of commission for a workweek and Lenovo for three days.

APPENDIX A – SYSTEM CONFIGURATION INFORMATION

Figure 5 details the configurations of our test systems.

System	Dell Latitude™ E6440	HP ProBook 640 G1 notebook (K4L15UT)	Lenovo ThinkPad® T440
Processor	Intel® Core™ i5-4310M	Intel Core i3-4100M	Intel Core i5-4200U
Processor frequency	2.70 GHz	2.50 GHz	1.60 GHz
Processor cores	2	2	2
Memory	4 GB	4 GB	4 GB
Storage	320 GB	500 GB	500 GB
Graphics	Intel HD Graphics 4600	Intel HD Graphics 4600	Intel HD Graphics 4400
Battery capacity	65 Wh	55 Wh	24 Wh
Display	14" 1366×768	14" 1366×768	14" 1366×768
Wireless	802.11 a/b/g/n	802.11 a/b/g/n	802.11 a/b/g/n
Bluetooth®	4.0	4.0	4.0
Weight (lbs.)	4.76	4.30	3.68
OS	Windows 7 Professional	Windows 7 Professional	Windows 7 Professional
Support	Dell ProSupport Plus with SupportAssist technology	HP Care Pack with 3-year Next Business Day Onsite + Accidental Damage Protection	Lenovo Unlimited Premium Support and 3-year Onsite + Sealed Battery Warranty + Accidental Damage Protection

Figure 5: Configuration information for the laptops we used in our tests.

APPENDIX B – HOW WE TESTED

Simulating a hard drive failure

Dell installed a beta version of the SupportAssist service on the Dell system. Using a tool provided by Dell, we induced a hard drive failure alert to simulate a hard drive failure. Dell SupportAssist technology gathered information on the issue and sent that information to Dell Support, who preemptively called us to fix the issue. We expected the solution to be a replacement hard drive from the vendor for all three systems' issues. For the competitors' systems, we removed the hard drives that came with the systems and replaced them with identical but damaged hard drives. We then called tech support for the respective systems to troubleshoot the problem over the phone.

Damaging the hard drives

We plugged a hard drive identical to the test system's original drive into a laptop suitable to be dropped. We ran HDD Scan from Hiren's BootCD in Mini Windows XP with a Surface Test (Read) and dropped the system while the test ran to damage the hard drive.

Conducting the drop test

We used a Lansmont PDT-56ED Precision Drop Tester, with a landing area covered by commercial carpet. We opened the notebook so that the screen and keyboard formed a 90-degree angle, and then placed the notebook flat on the platen.

1. Boot to Hiren's BootCD through the BIOS.
2. Select Mini XP, Linux, Dos
3. Select Mini Windows XP.
4. Once booted to the desktop, launch HBCD Menu.
5. Click Programs→Hard Disk / Storage→HDD Scan (Low-level diagnostic).
6. Click the New Test button and click Surface Tests.
7. Select Read.
8. Set the height of the platen on the Lansmont Precision Drop Tester to 35 inches above the surface of the 28-ounce commercial carpeting.
9. Place the fully charged notebook onto the platen of the drop tester, with the notebook's base flat on the platen and the screen facing forward, open at a 90-degree angle.
10. Unplug the system from AC power.
11. Click Add Test to start the test.
12. On the drop table controller, hold down the Arm button, and press the Drop button to drop the laptop.
13. On the laptop, from HBCD Menu, click Programs→Hard Disk / Storage→HD Tune (Test / Health / ErrorScan).
14. If the hard drive under test appears in the drop-down menu at the top, close HD Tune, press Reset on the drop table controller, and repeat steps 9-13. If the hard drive under test does not appear, remove the hard drive from the dropped system and install it in the system covered by tech support.

On the Dell system with SupportAssist technology

1. Either copy the Create HDD Alert executable onto the desktop or install the software and create a shortcut to the application on the desktop of the Dell test system.

On the competitors' systems

1. Remove the hard drives that came with the systems and replace them with identical but damaged hard drives.

Running the hard drive failure test

On the Dell system with SupportAssist technology

1. Navigate to the desktop, and right-click the Create HDD Alert shortcut.
2. Click Run as Administrator, and note the date and time.
3. Allow SupportAssist to capture the failure details.
4. Click through the screens in SupportAssist until you get to the final screen that displays the details of the issue.
5. When Dell Support calls, note the date and time, and start the stopwatch and video camera.
6. Stop the stopwatch when the tech support call ends. If the issue is not fixed, and requires an additional tech support call, record additional call times, and add these times to the total.
7. Stop the video camera when all tech support calls have completed.

On the competitors' systems

1. Attempt to boot the system.
2. Start the stopwatch and video camera, and call tech support.
3. Describe the problem. Note any unusual issues that arise during the call.
4. Stop the stopwatch when the tech support call ends. If the issue is not fixed and it requires an additional tech support call, record additional call times, and add these times to the total.
5. Stop the video camera when all tech support calls have completed.

APPENDIX C – STEPS FOR PROBLEM RESOLUTION

Figure 6 compares the steps it took to get the hard drive failure issue resolved.

User steps	Dell laptop with ProSupport Plus and SupportAssist technology	HP laptop	Lenovo laptop
1	Confirm contact info in SupportAssist GUI	Call 1-800-334-5144	Call 1-800-426-7378
2	Answer call from Dell ProSupport	Say "Notebook"	Press 1 for Lenovo products
3	Confirm shipping address for replacement hard drive	Say "ProBook"	Press 1 for Think-branded products
4	Wait one day	Remove battery	Press 1 for a laptop or tablet
5	Receive replacement hard drive	Provide serial number	Press 1 for a new service request
6	Remove damaged hard drive from laptop	Explain symptoms to support agent	Provide serial number
7	Return damaged hard drive to Dell	Run Hard drive test - quick check	Provide machine code
8	Install replacement hard drive in laptop	Run Memory test - quick check	Explain symptoms to support agent
9		Run Hard drive test - quick check	Attempt reboot into BIOS
10		Shut down computer	Get transferred to sales department
11		Power on system, pressing F2	Explain to sales agent that we want a replacement
12		Confirm email address	Provide order number
13		Confirm shipping address	Provide billing address
14		Wait 5 days	Provide telephone number
15		Receive replacement hard drive	Provide email address
16		Remove damaged hard drive from laptop	Check email account for confirmation
17		Return damaged hard drive to HP	Wait 3 days
18		Install replacement hard drive in laptop	Receive replacement laptop
19			Return laptop to Lenovo

Figure 6: Step comparison for resolving the hard drive failures.

About Principled Technologies



Principled Technologies, Inc.
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