

IoT and Big Data Reshape Support

Cutting-edge technologies thoroughly shake up the client support world

Executive Summary

The world of client support has been generally staid and predictable for years, with innovation focused on reducing cost and streamlining efficiency, often at the customers' expense. The market is littered with either a confusing array of support choices or pre-packaged offerings that miss key elements, none of which have kept up with the latest technology advances.

With its new ProSupport Plus for PCs and tablets, Dell is leveraging innovative technologies to fundamentally change the client support landscape. This service puts Dell significantly ahead of the competition by delivering a complete, predictive, and proactive support option that brings enterprise-class support to the client space.

Client Support Has Lagged the Enterprise

For years, enterprise products have enjoyed a higher level of support due to their perceived criticality and impact on productivity. Client support has lagged, as it focused mainly on the break/fix process. But new complexities in the client world—initiatives like bring your own device (BYOD) and mobility—are driving the need for a different approach. In a world where client hardware is less differentiated than ever before, it is now true that software is rapidly becoming a key component, not only for the system but for support as well. New approaches to support are needed to drive true differentiation. Proactive and predictive software tools have been available in the enterprise for years due to the persistent network connectivity and the downtime impact on productivity. Now these tools need to move over to client as well.

In seeing how enterprise support has been changed by software, companies now can begin migrating these technologies to their clients. For midmarket companies, many IT services are now being hosted in the cloud—meaning automating client support and leveraging new technologies will align more closely with their business. For large companies still hosting much of their infrastructure, 80% of their support cycles are being consumed by tactical issues; there needs to be a better way to automate their internal help desks, so they can spend more than just 20% of their time innovating. Clearly from the midmarket and larger enterprises there is an opportunity to leverage new technologies to drive better efficiencies, whether support resides inside or outside of the company.

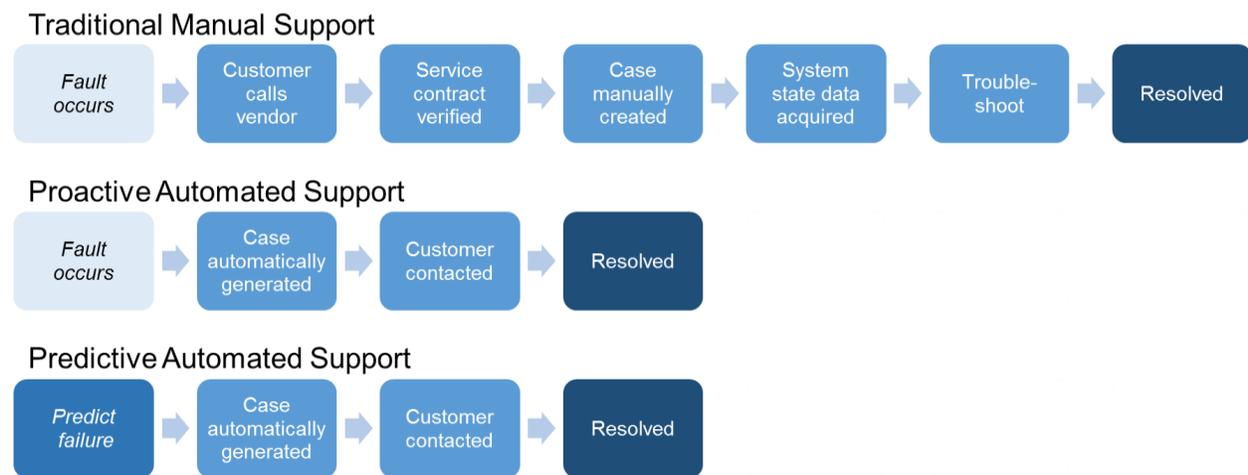
With today's reactive support, end users need to experience a failure first, and then spend time with help desk technicians, who in turn must go to the vendor for resolution. That contact sometimes can take more than 30 minutes upfront on the phone and require as many as 20 steps before the issue is diagnosed and the resolution process can begin through the vendor's fulfillment. All the while, the company's expensive IT resources are involved, which drives the cost and productivity impact up even higher.

Dell ProSupport Plus for PCs and Tablets Truly Differentiates

The typical client support issue begins with a failure then a call to the support desk personnel who have to determine the asset tag/configuration, gather the relevant incident data, and then try to find the right vendor contact to address the issue. All of this takes time, and often the communication will proceed to multiple vendor agents, thus starting the whole process over again. The internal costs to a company are high. As an example, a marketing analyst ([\\$38/hour salary](#)) calling a company support analyst ([\\$23.50/hour salary](#)) for a typical 30-minute conversation alone is over \$30 per incident—without considering of all of the other time, lost productivity, or lost files/data that results from the issue.

Dell recently introduced a new client support offering called ProSupport Plus for PCs and tablets which brings the first truly complete, predictive, and proactive service to the client world. This service leverages cutting-edge technologies to streamline, anticipate, and rapidly resolve issues. By using Internet of Things (IoT) and Big Data technologies to analyze and predict issues, **Dell can move the resolution ahead of the actual failure**. This service can cut critical time and steps out of the process by proactively delivering replacement components *before* an actual failure occurs. Replacements then happen at the most convenient time, which boosts productivity for both IT staff and end users. Similar to the world of medicine, prevention is far less expensive than treatment—for both the provider and the recipient. Principled Technologies (a leading independent testing organization) [determined](#) that ProSupport Plus reduced call time by 84% and required 58% fewer resolution steps.

Figure 1: Traditional vs. Automated Support Models



Through ProSupport Plus, a software agent on the client device communicates with Dell and feeds a Big Data cluster with information. When patterns indicate an impending issue, a support case opens automatically, and Dell proactively communicates back to the IT organization with a finite resolution—all without having to experience an actual failure or consume the typical resources upfront. For instance, a customer may receive a notification that one of their client PCs has a hard drive issue while a new drive is already en route, thus allowing support staff to back up the existing drive and eventually swap out the suspect drive at a convenient time—all before a failure happens and

before critical data is lost forever. In situations where software (BIOS, driver, settings, etc.) may be the culprit, this service even allows for automated updates to the client system to resolve issues immediately without an additional call.

ProSupport Plus is now available in 66 countries and 19 languages for Dell Latitude, OptiPlex, Precision, Vostro, XPS, Venue, and Chromebook products, giving customers a consistent worldwide experience through the same set of processes. In addition, Dell's channel partners can resell the offering using the same processes, procedures, and flows. Alerts for deployed devices can be sent to the reseller's support simultaneous with the notification to Dell—making the offering customer-centric and delivery agnostic.

ProSupport Plus is enabled by Dell SupportAssist and Dell TechDirect capabilities for seamless case and dispatch handling, regardless of how a customer or channel partner structures their support workflow. The automation allows IT administrators to insert themselves into the process or simply allow the automation to flow without any human interaction. Dell channel partners can leverage the same infrastructure, technology, and backend to develop their own service offerings. The offering is transparent to the customer, so whether they are using a channel partner or Dell directly, the experience is identical and seamless.

Initially, ProSupport Plus' predictive support covers hard drives and batteries—two of the most failure-prone components—with future plans to cover other components prioritized based on typical failure rates. Today, all components are covered proactively; eventually Dell would like every component to become predictive as well.

Customer Feedback

"We continue to expand Service King at an exponential rate and technology is key to our success.

To deliver the expected Service King level of customer service, we have to ensure our estimation and tracking tools are always available.

Dell's ProSupport Plus gives us confidence that the systems in the collision-tech's hands will be up and running so we can support our customers and our business growth plans."

*-James Meese
CIO, Service King*

Driving Innovation through the Latest Technologies

While many are preaching the future of Big Data and the Internet of Things, Dell is already using these technologies today, managing over 110 million devices, and helping accelerate its support offerings. Through the purchase of Compellent, Dell acquired best-in-class management, monitoring, and reporting technologies. These concepts inspired SupportAssist, which initially applied to Dell enterprise products and now is being used for client products as well. Though the products have different instrumentation and software agents (which will be consolidated over time), they leverage a common backend for better consistency and scalability.

Through the headless software agents, client devices send health data and system state information (never actual user data) to Dell through an established outbound-only communications channel. This IoT data is uploaded into a Hadoop cluster for analysis.

When anomalies or trends develop that predict a future failure, the Dell support system can automatically open a support case or dispatch parts, then notify the customer support desk (as well as a channel partner, if involved). Parts ship immediately from the closest of Dell's hundreds of worldwide hub locations.

Similar to predicting changes to weather or the stock market, prediction accuracy is greatly boosted as the data points increase. The massive amount of Dell data on both enterprise and client systems, fed through Dell's Big Data mechanisms, helps to fine-tune predictions for the highest level of proactivity. Dell's direct relationship with its customers puts it in a phenomenal analysis position where competitors have, at best, incomplete data with which to predict future issues.

The tight linkage between the systems, components, vendors, customers, specialized interfaces, and APIs allow the constant communication of health status back to Dell. Data is correlated not only from this program but also from Dell's massive customer history. As a manufacturer who also provides integrated support, Dell is in the unique position to amass more data and do so more quickly, all of which leads to a fine-tuned, end-to-end analysis. By becoming more predictive in its analysis and support, Dell can significantly change the support economics, benefitting both Dell and the customer. The insights gained from the wealth of Big Data analyses can also influence design choices for future products.

Customers are becoming far more trusting about sharing system data, as public cloud services have accelerated this phenomenon. While customers are often asked to share input with manufacturers, it usually feels like a one-way street. However, with this program, a customer will see an immediate tangible benefit in more proactive support services and lower long-term internal support costs. In addition, ProSupport Plus customers are entitled to a Technical Account Manager who will provide detailed reporting on their systems, including information on service events, issues, and trends.

With this established framework, Dell can continue to build on its capabilities and grow the offering in the future to expand it out to other products including software (where Dell is already on the front line as an OEM provider of Microsoft products).

Delivering Where the Competition Can't

Because Dell has the broadest combined client and enterprise portfolio, it is easier for customers to do business with Dell, at a time when other OEMs are either divesting themselves of businesses or trying to establish themselves in new markets. As the only vendor with both an established and significant portfolio to draw from, **Dell can offer its customers a seamless support experience from the client to the enterprise.** This combination is crucial, because this type of program requires enterprise margins to build out the infrastructure, and it requires client scale to tune enough data trends to drive true predictive and proactive outcomes. Having a massive number of data points allows Dell to accelerate troubleshooting with other customers as well, so they can holistically visualize the situation (down to cables and connections) and jump ahead in the troubleshooting process based on best known data from previous issues.

Proactive replacement also advantages Dell customers in relation to its own suppliers. If a supplier is experiencing quality issues with a product, through Dell's proactive monitoring and replacement, Dell customers will be replacing components ahead of the potential wave of warranty claims that eventually will arise. Dell customers are on the frontend of the replacement requests, while there are usually more ample supplies instead of the backend when shortages may exist. In fact, Dell's suppliers leverage Dell's Big Data resources to gain more insight into their own products, thus creating a **full data chain from supplier to manufacturer all the way through to the customer and benefitting every party along the way.**

Through this unique use of cutting-edge IoT technology to track billions of data points, and using Big Data analysis in a meaningful way today to drive proactive outcomes, only Dell is able to extend this level of service from the enterprise space to client PCs and tablets. Just as Dell led the way with Internet and ecommerce technologies, this new program is a natural extension of their capabilities through Dell's enhanced supply chain and customer relationships. And all of these programs further reinforce the set of support tools that lead to outstanding service as well as strengthening the level of support that Dell's channel partners can provide to customers.

Call to Action

Based on our analysis of the program benefits, Moor Insights & Strategy believes that companies should seriously consider Dell ProSupport Plus for their client devices. In an increasingly commoditized world where client products are becoming less differentiated, ProSupport Plus adds a clear advantage to these products. As the client world "becomes software" and productivity becomes more crucial to driving business agility, this service is a clear differentiator.

In light of shifting client strategies from other major vendors, Dell ProSupport Plus is a compelling reason for companies that are not Dell customers today to reconsider their current client strategies and potentially open up to Dell as an alternative supplier.

And finally, for companies that are trying to understand how the Internet of Things and Big Data can be leveraged in their future technology strategies, we recommend taking a look at how Dell is productizing and leveraging these technologies today to deliver clear business differentiation in a highly commoditized world.

Important Information About This Brief

Inquiries

Please contact us [here](#) if you would like to discuss this report, and Moor Insights & Strategy will respond promptly.

Citations

This note or paper can be cited by accredited press and analysts, but must be cited in-context, displaying author's name, author's title, and "Moor Insights & Strategy". Non-press and non-analysts must receive prior written permission by Moor Insights & Strategy for any citations.

Licensing

This document, including any supporting materials, is owned by Moor Insights & Strategy. This publication may not be reproduced, distributed, or shared in any form without Moor Insights & Strategy's prior written permission.

Disclosures

Moor Insights & Strategy provides research, analysis, advising, and consulting to many high-tech companies mentioned in this paper. No employees at the firm hold any equity positions with any companies cited in this document.

DISCLAIMER

The information presented in this document is for informational purposes only and may contain technical inaccuracies, omissions and typographical errors. Moor Insights & Strategy disclaims all warranties as to the accuracy, completeness, or adequacy of such information and shall have no liability for errors, omissions, or inadequacies in such information. This document consists of the opinions of Moor Insights & Strategy and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice.

Moor Insights & Strategy provides forecasts and forward-looking statements as directional indicators and not as precise predictions of future events. While our forecasts and forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could cause actual results to differ materially. You are cautioned not to place undue reliance on these forecasts and forward-looking statements, which reflect our opinions only as of the date of publication for this document. Please keep in mind that we are not obligating ourselves to revise or publicly release the results of any revision to these forecasts and forward-looking statements in light of new information or future events.

©2015 Moor Insights & Strategy

Company and product names are used for informational purposes only and may be trademarks of their respective owners.