



## Advanced Remote Monitoring: Managing Today's Pace of Change

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## Executive Summary:

Independent Software Vendors (ISVs), Original Equipment Manufacturers (OEMs), Managed Service Providers (MSPs) and large organizations responsible for supporting IT end-users have been tasked to achieve three challenging and contradictory strategic objectives:

- Reduce expenses,
- Improve customer and/or employee satisfaction
- Satisfy end-user demands for using new devices and technologies while safeguarding enterprise information.

Historically, organizations have leveraged remote monitoring and management (RMM) tools to pursue these objectives.

RMM solutions enable an organization to reduce the risk of system outages and guard against the impact of unauthorized or malicious uses of technology, however, the accelerated pace of today's technological change and complexity have given rise to new challenges. One only has to consider the expansive difficulties involved with new initiatives such as cloud computing and "bring your own device" (BYOD) to understand the challenges involved in keeping pace. Today's organizations have technology requirements that go far beyond the capabilities of traditional RMM solutions, however, they are still tasked with pursuing the three strategic objectives noted above.

To achieve these objectives, organizations recognize that they must move from a reactive to a proactive approach for monitoring and managing IT. Organizations are demanding new solutions that expand the reactive, protective capabilities of traditional RMM solutions to include proactive functionality that enables the organization to realize quantifiable benefits while simultaneously reducing the risk of system outages, such as:

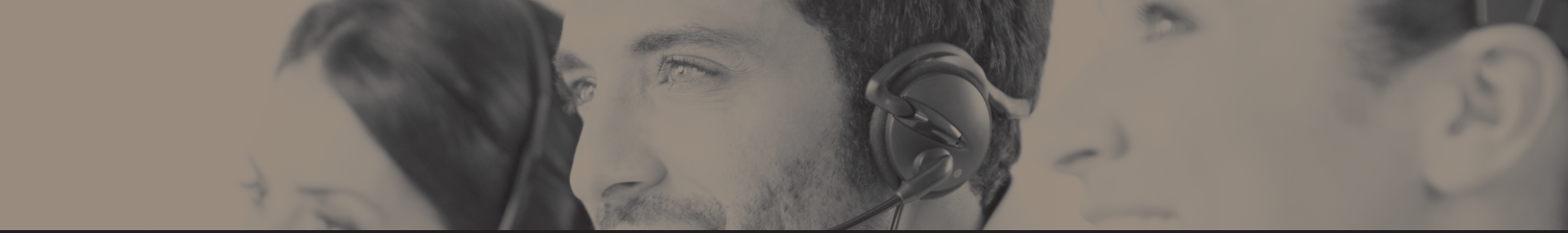
- Reduce Mean Time to Resolve (MTTR) by providing support teams with the information required to identify "root cause" and resolve issues once and for all;
- Improve customer and/or employee satisfaction by minimizing their participation in the issue resolution process and exceeding their expectations in the timeliness of issue resolution; and
- Leverage dynamic configuration capabilities that provide end-users with unmatched flexibility while simultaneously reducing ongoing "care and feeding" expenses for the organization.

By leveraging the new capabilities offered by these advanced RMM solutions, organizations are better positioned to manage today's pace of change, and can more successfully realize the seemingly contradictory strategic objectives being asked of them.

## Overview:

Remote monitoring and management (RMM) software has matured over the decades to include new features and functionality in response to the evolving needs of end-users. The latest RMM tools monitor more information than ever, and offer powerful, customizable user interfaces that present information in practically any manner the end-user desires. Unfortunately, these advances have not expanded the benefits delivered.

RMM software typically is categorized with operating system conversions, software upgrades and hardware refreshes as an IT organization's "cost of doing business." A compelling ROI is difficult to calculate because few, if any, *quantitative* benefits can be realized by an organization as a result of their investment in an RMM solution. The benefits are largely qualitative – i.e., reducing the risk of system outages, ensuring the security of confidential information, etc.



This white paper challenges the “cost of doing-business” paradigm for RMM solutions by exploring three quantitative benefits available to organizations choosing to invest in an advanced, radically different type of RMM solution that will:

- Reduce Mean Time To Resolve (MTTR) by providing support teams with the information required to identify “root cause” and resolve issues once and for all;
- Improve customer and/or employee satisfaction by minimizing their participation in the issue resolution process and exceeding their expectations in the timeliness of issue resolution; and
- Leverage dynamic configuration capabilities that provide end-users with unmatched flexibility while simultaneously reducing ongoing “care and feeding” expenses for the organization.

These benefits can be used to develop a compelling ROI equation and enable an organization to capture meaningful financial returns as a result of their investment.

#### Reduce Mean Time to Resolve (MTTR):

Nearly every RMM tool can alert a support team when known tolerances are being reached or exceeded—available memory or disk space on a server, for instance. Support teams can then take action to add memory or delete unnecessary files in order to keep the server operating and avoid an outage.

Where these types of RMM tools fall short, however, is in providing the support team with insight into the specific changes occurring on the server that resulted in the memory or disk space tolerance being reached. Was a new application recently loaded on the server? Was a complex reporting query being run? Was there a hardware failure?

Support teams continue to require more time to resolve issues, and fewer issues than ever are resolved on the first call.<sup>1</sup> They understand that identifying root cause is a key success factor for reducing their MTTR, which in turn minimizes costs and improves efficiencies.

According to Gartner, approximately 80 percent of the time required to resolve technology issues is spent on identifying root cause. Likewise, IBM noted that 85 percent of technology issues are created by changes made on a system or device.<sup>2</sup>

*Without understanding the root cause of the problem, support teams are left to treat only the symptoms of an issue. Their expertise may resolve the symptoms temporarily, but without addressing the root cause, the issue will most certainly occur again.*

The simple, but unrealized breakthrough inherent in these two statistics is the fact that in most cases, identifying root cause is as simple as identifying “what changed.”

By leveraging an advanced RMM solution to capture detailed information on a daily basis, support teams can compare data points from each layer (hardware, operating system, drivers/firmware, applications, databases) to identify exactly what changed on a supported device. No longer limited to treating only the *symptoms* of an issue, the support team has the necessary insight to pinpoint the root cause of the problem and resolve it once and for all.

<sup>1</sup> Technology Services Industry Association – 2010 Member Benchmark Survey

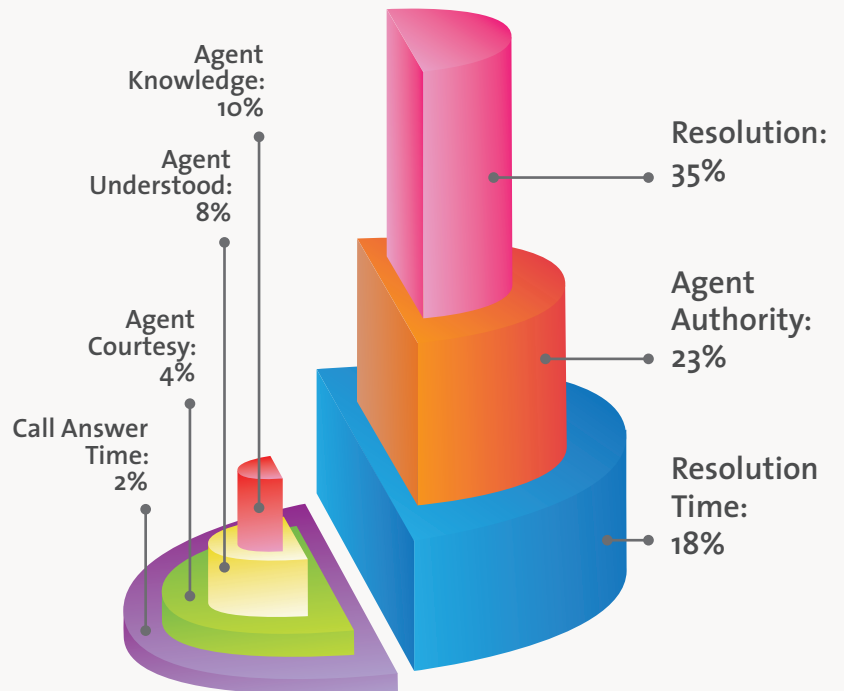
<sup>2</sup> IBM – Tivoli Primary Research, Page 3, [http://www-05.ibm.com/it/ibm\\_software\\_day/pdf/Nugalekime\\_informaciniu.pdf](http://www-05.ibm.com/it/ibm_software_day/pdf/Nugalekime_informaciniu.pdf)

### Improve Satisfaction:

Significant research is available on the drivers of customer satisfaction. The chart at right summarizes the findings:<sup>4</sup>

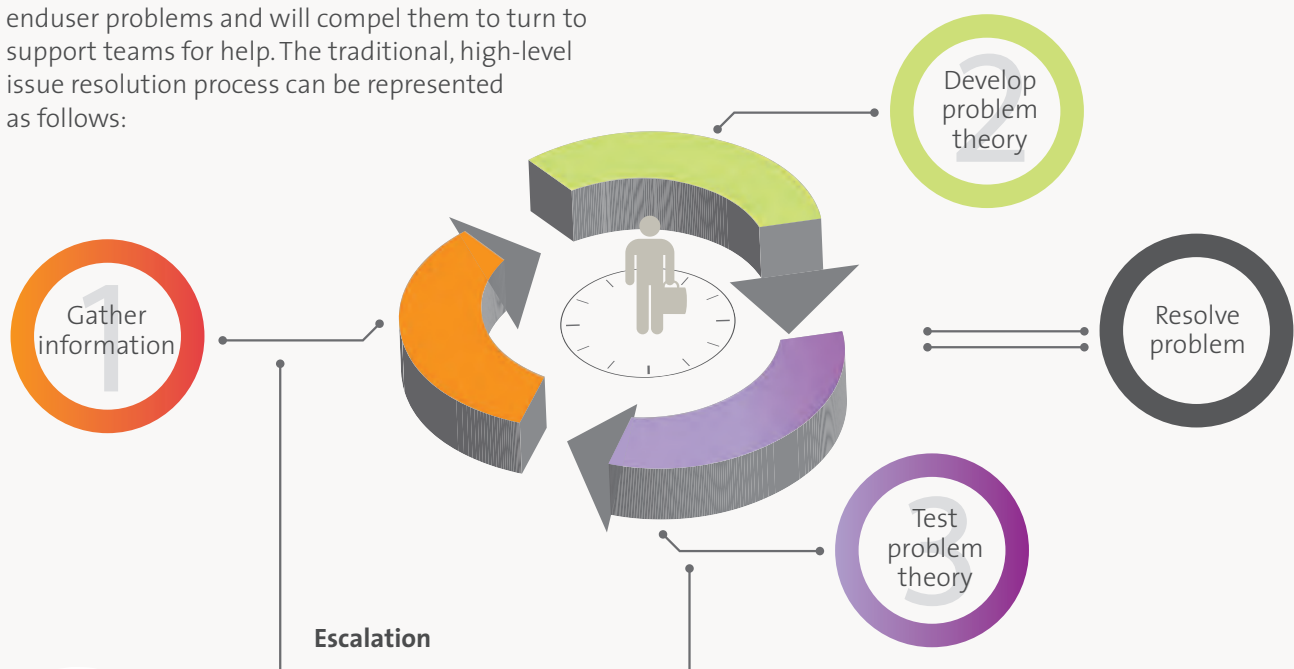
1. The issue was resolved
2. The issue was resolved by a single person (no transfers or escalations required)
3. The issue was resolved in a timely fashion

The first item, resolving the issue (and not the symptoms), was addressed in the preceding section on MTTR. The remaining two items will be addressed in this section - how RMM tools can empower support teams to improve customer satisfaction.



Customer (or employee) satisfaction with regard to the resolution of technology issues is clearly driven by three criteria.

Agreeing that the purpose for traditional RMM solutions is to help identify potential issues before end-users are impacted, it cannot be ignored that the accelerating pace of change will increase enduser problems and will compel them to turn to support teams for help. The traditional, high-level issue resolution process can be represented as follows:



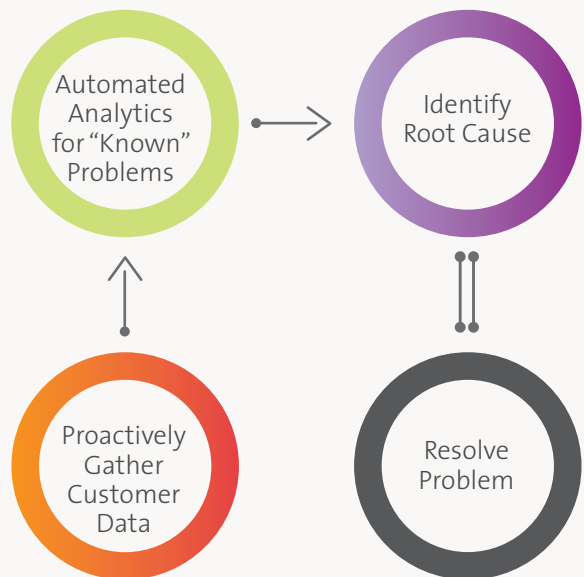
1. When the end-user encounters an issue and contacts the support team, information must be gathered about the nature of the problem. In addition, significant time is spent gathering information that is technical in nature. In many cases, this requires significant time from the end-user as they enter commands or send files as directed by the support team.
2. The support team gathers information until they develop a problem theory. The end-user remains involved in the process to provide information and answer questions.
3. The support team tests its theory by having the end-user perform activities. Again, the end-user remains involved in the process. If the theory is proven correct, the problem is resolved and the support case can be closed. If the theory is proven incorrect, the cycle repeats, beginning with the collection of more information from the end-user.

In this scenario, issues may need to be escalated to different members of the support organization, e.g., more senior members with more in-depth knowledge of the IT infrastructure, or subject matter experts familiar with a particular technology component.

One disadvantage of this process is that the end-user is “held hostage” as an unwilling (but necessary) participant throughout the entire process. Clearly, this has a negative effect on end-user satisfaction, especially if the cycle has to be repeated as different theories are developed and tested. Even worse, consider that the issue has to be escalated, and the process must begin again with a new member of the support team.

Significant improvement in end-user satisfaction can be achieved by leveraging an RMM tool that redefines the issue resolution process as follows:

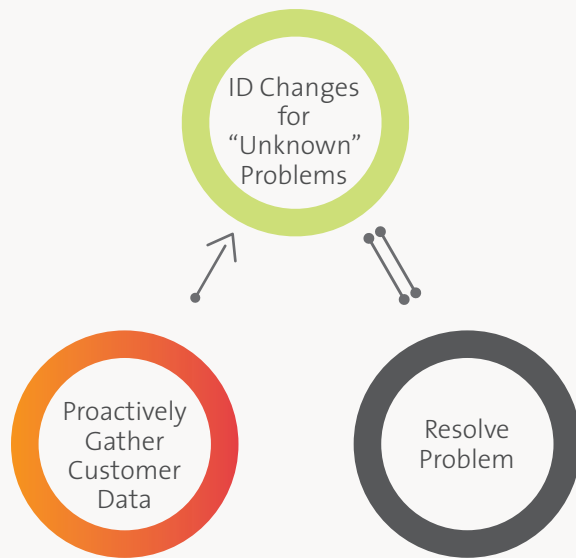
#### Resolve Issues Before Support is Contacted:



By proactively gathering detailed information about supported devices with an advanced RMM solution, information typically obtained by questioning the end-user is *already on hand and available to the support team*. In addition, the hundreds of thousands of data points can be automatically analyzed as they are collected, enabling *known issues* to be identified before the end-user realizes a problem exists.



### Resolve Complex Issues Faster:



Again, by proactively gathering detailed information about supported devices with an advanced RMM solution, information is *already on hand and available* when the customer contacts the support team. The support team can quickly conduct point-in-time comparisons to help resolve the complex, *unknown* issues that historically result in significant downtime and expense, not to mention the negative impact on customer/employee satisfaction.

#### The key impact on end-user satisfaction?

Regardless of whether the issue is *known* or *unknown*, end-user participation in the issue resolution process ends once the problem has been reported and described if, indeed, a problem needs to be reported at all! The information required to resolve the issue already has been captured in an automated fashion by the RMM solution, enabling the support team to provide the end-user with personalized service, dramatically improving customer satisfaction.

By improving customer satisfaction, an organization can improve their customer retention. Improving customer retention by as little as five percent can result in a 75 percent increase in customer net present value.<sup>5</sup> This financial benefit can also be incorporated into the ROI calculation.

### Enable Flexibility:

New technologies, from devices to installed applications to cloud-based solutions, are being leveraged by end-users more than ever before. Progressive enterprises recognize the value of empowering end-users with flexibility to use the tools deemed necessary to achieve their business objectives. Unfortunately, this flexibility often results in frustration for the support teams tasked with ensuring that all technologies work together and perform as expected, and furthermore, that the enterprise's confidential information is safeguarded.

Traditional RMM solutions depend on configuration settings to gather and analyze information. As changes are made to the technologies leveraged (and supported!) by an enterprise, the RMM tool must be continuously maintained to accommodate new technologies as part of the data it gathers and analyzes. Some RMM tools do a better job than others of addressing these changes dynamically; however, *every* RMM tool will require ongoing "care and feeding" of some kind in order to address the continuous barrage of enterprise technology adoption.

Consider this situation. End-users in the marketing department decide to implement a new collaboration and brainstorming application. Each end-user downloads the application, installing and configuring the application themselves. All goes well until one end-user attempts to install the application. When he encounters a problem, he calls the support team,

who has no knowledge of what the application is, much less on how to assist the end-user. The support team now needs to invest significant time understanding the operating behavior of the new application, and create/modify their existing monitoring tool's configuration settings.

By leveraging an advanced RMM solution to dynamically identify information across devices, a support team would be automatically notified of the new application, and they *also* would be able to support the application *regardless* of how each end-user installed and configured the version on their individual machines. The power of a tool that can dynamically identify data points on a device is clearly more flexible and adaptive than policy-based tools relying only on consistency and repeatability.

**The key impact?** End-users are free to deploy technologies they require to achieve their business objectives, and support teams are able to minimize the ongoing investment required to maintain the integrity of their monitoring solution. These hard-dollar savings can be

incorporated into the ROI calculation, and the time typically spent by support teams on this task can be reallocated to more value-added activities.

#### Summary:

RMM solutions, like most technologies, should be evaluated against the needs of an organization to ensure the most appropriate tool is selected. The following table is a partial illustration of how today's most popular RMM solutions compare when evaluated against the criteria set forth in this white paper.

|   | AggreGate | ISODx | Kaseya | Nagios | PRTG | WhatsUpGold |
|---|-----------|-------|--------|--------|------|-------------|
| Intuitive, browser-based user interface     | Y         | Y     | Y      | Y      | Y    | Y           |
| Real-time alerting                          | Y         | Y     | Y      | Y      | Y    | Y           |
| Agent-based technology                      | N         | N     | Y      | N      | N    | N           |
| Policy-based technology                     | N         | N     | Y      | N      | N    | N           |
| Trend prediction                            | N         | Y     | N      | Y      | N    | N           |
| Rapid deployment                            | Y         | Y     | N      | Y      | Y    | Y           |
| Service Provider account structure          | N         | Y     | Y      | Y      | Y    | N           |
| Integrates with Open Source data collectors | Y         | Y     | N      | Y      | Y    | N           |
| Hosted & On-Premise options                 | N         | Y     | Y      | N      | N    | N           |
| API/SDK                                     | Y         | Y     | N      | Y      | Y    | N           |
| Captures & stores device information        | Y         | Y     | Y      | Y      | Y    | N           |
| Compares points-in-time to identify changes | N         | Y     | N      | N      | N    | N           |



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