Time is money and
downtime is expensive

Why it pays to have a robust technical support strategy
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Executive summary
The old adage that “time is money” is the foundation of IT in the enterprise. A primary goal of IT is to increase the productivity and capabilities of line-of-business (LOB) end users, thereby decreasing cost and increasing profit. Productivity is increased by integrating IT into business processes, which has yielded significant business benefits for enterprises. At the same time, companies are also looking for ways to reduce IT costs. As the forces of cloud computing, big data and analytics, mobile computing and social have converged, the focus on enabling integrated, optimized IT solutions has expanded even further.

Ironically, though, higher levels of IT integration and optimization have resulted in new challenges and risks. With business processes increasingly dependent on IT, the consequences of downtime ripple throughout an organization, affecting user productivity in departments across the organization, potentially impacting revenue streams and perhaps even damaging your reputation in the marketplace. For example, the increase in expectations of mobile employees using “companion devices” frequently means there are no “normal” work hours—applications, data and the infrastructure that support them must be available 7x24. New capabilities are a double-edged sword: they increase end-user productivity when functioning properly, but magnify the business impact when there are problems in the IT environment.

71 percent of CEOs surveyed cited technology as the number-one factor they see impacting their companies.¹

At the same time, a highly converged, optimized IT environment is typically more complex and requires specialized skills to maintain. Given the interconnected and interdependent landscape of multivendor networks, servers and storage devices, it becomes ever-more difficult and time consuming to even identify—much less quickly resolve—causes of outages, the costs of which have dramatically increased since 2010.²

According to a Ponemon Institute and Emerson Network Power 2013 study on downtime, the overall, average per-incident cost of an outage in 2010 was US$544,498, and has increased over 20 percent to US$680,000³ in 2013.

How can IT organizations help achieve business goals and reduce costs while mitigating risks and the negative impacts of outages? Balancing these seemingly mutually exclusive priorities can be a struggle. This white paper outlines the benefits of having a carefully planned, holistic technical support strategy and describes how IBM’s focus on both short- and long-term solutions can help organizations achieve optimal support, at the lowest-possible cost.
I. Introduction: The “ripple” effect of downtime

High levels of IT integration and optimization are now the backbone of business success for organizations operating in every industry. New initiatives are designed to increase alignment of IT with business strategy, drive down costs and provide new business capabilities that support growth and competitive market position. Many organizations are undertaking projects that:

- **Use cloud computing** to optimize resources through virtualization and provisioning technologies
- **Use data—the new natural resource—and analytics** to streamline processes, better understand current customers and discover new customers, and support the creation of new, innovative services
- **Exploit social media tools** to enable cross-enterprise collaboration and better customer service
- **Incorporate mobile** devices that enable “anytime, anywhere” access to data and applications, supporting higher productivity and user efficiency

A reactive break/fix approach to IT is increasingly costly and underscores the criticality of having a comprehensive, robust technical support strategy in place.

Although new technologies are enabling innovative applications of IT to create new business capabilities, they also increase the dependence of business processes on ubiquitous, always-available IT resources. This amplifies the negative impact from device failures, creating the “ripple” effect of downtime. (See figure 1.)

Examples of the ripple effect of downtime are numerous. Downtime that affects:

- **Enterprise Resource Planning (ERP)** can cause orders not to be processed, shipments to be delayed and replacement materials not to get ordered, which disrupts the entire business flow.
- **Customer Relationship Management (CRM) systems** can cause sellers to be unable to take advantage of opportunities and close sales, which impacts revenue.
- **Analytics solutions** can delay information required for strategic and tactical decisions, causing missed opportunities and under-served customers.
- **Social and collaboration capabilities** can inhibit teamwork, slow down projects, shut down communication with customers and cause your company to disappear from the social landscape.
- **Mobile solutions** can prevent mobile workers from being productive, such as an inability to scope or price proposals, or result in cancelled customer orders.
- **Cloud computing** can cause degraded performance and response time across the enterprise if an unexpected outage exceeds the architected headroom.

![Figure 1](image-url) The “ripple” effect of downtime in integrated and optimized IT environments magnifies the negative impact of a device failure.
With business goals so highly dependent on IT, optimal performance is dependent on every device—network, server and storage. Even a single device failure can have an enterprise-wide impact, because every minute of downtime (or even degraded response time) is multiplied by the number of business users whose productivity is decreased. And a multivendor environment complicates and extends the time it takes to determine which vendor is responsible for a given device, delaying problem diagnosis and resolution.

A Pomenon Institute and Emerson Network 2013 study on downtime showed that the business impact of outages has increased significantly. While the frequency and duration of outages has declined slightly, the cost per minute of downtime has increased 41 percent since 2010, taking it from US$337,020 per hour to US$474,480 per hour. Today’s highly integrated and optimized IT environment makes a reactive, break/fix approach to IT support increasingly costly. The results of the study underscore the criticality of having a robust technical support strategy in place. But what, exactly, does that mean—and what does it require?

II. Step 1: Take a holistic view of IT technical support strategy

IBM has created an integrated support services capability framework to enable a more comprehensive approach to IT support in a converged environment. It encompasses three categories: people, process and technology.

The “people” category includes the roles that people play in a highly optimized technical support world, which may be centralized, or may include remote locations that require an onsite presence. The “process” category encompasses how all activities and tasks are performed in a cross-platform, multivendor environment. The “technology” category includes the environment being supported and the tools that are being used to support that environment and prevent problems.

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**Figure 2.** The Technical Support Strategy Framework from IBM.
A well-thought-out strategic approach to reviewing, prioritizing and improving IT support can help you transform from a reactive mode to a foundation that’s based on analysis, anticipation and prevention.

These three categories form a framework that serves as the basis for an IT support strategy that can optimally meet business priorities, nimbly respond to new opportunities and consistently improve and innovate. It can take you from a reactive break/fix response to an IT support foundation that’s based on analysis, anticipation and prevention. And while it may seem like there’s a daunting array of elements to consider and incorporate into your strategy, it can be simpler than you think to begin your transformative journey to a more prepared and proactive IT support environment.

III. Step 2: Conduct a thorough assessment of your current IT support structure

Using the three categories from IBM’s Technical Support Strategy Framework—people, processes and technology—we have developed a model designed to assess the maturity of technical support environments. (See Figure 2.) The more complex the IT environment, the greater the need to reevaluate IT support to mitigate the risks and costs of downtime through a higher maturity level. Our model includes three stages:

- **Ad hoc**: lacks standardized tools and processes for opening, tracking, diagnosing, resolving and reporting on incidents; doesn’t have a reliable hardware and software inventory; issues are dealt with in a manner that results in unpredictable responses/resolutions, and an inability to respond quickly and effectively to device failures which can cause subsequent outages

- **Reactive**: provides a single point of contact for end users; includes well-defined, repeatable processes including service level agreements (SLAs) and escalation; provides a standardized, dedicated toolset for tracking, resolving and reporting on issues; enables accurate hardware/software inventory; takes a multi-vendor approach when appropriate; helps manage compliance with all applicable corporate and government guidelines

- **Proactive and preventative**: is solution oriented rather than box oriented; inventory is based on electronic discovery of all components attached to the network; includes automation and analytics; uses a project-based approach to firmware and operating system updates; provides Centers of Excellence for maturing and evolving best-practice processes and technologies, and results in a strong alignment with business needs

To help evaluate where you are in your IT maturity journey, here are some important questions to ask:

- How many vendors are involved in supporting your environment? Was vendor selection a component of your overall strategy and based on appropriate criteria?
- What impact does downtime have on your users and lines of business, and when was the last time you updated these calculations?
- What do you consider to be your mission-critical systems—that is, what causes your business the most difficulty if it goes down? Is your technical support strategy aligned with business outcomes?
- What’s the risk for each application? What server, storage and network devices are critical to provide to end users? Does that risk rise during peak hours?

The more you have integrated IT into your business processes, the greater the need to reevaluate IT support to mitigate the risks and costs of downtime through a higher maturity level.
Lifecycle management is a key—but often neglected—component of a technical support strategy. It can not only help you optimize availability, but also support a higher return on investment (ROI) and a reduced total cost of ownership (TCO). Knowing when your products become eligible for third-party savings, as well as identifying the most cost-effective time to migrate, can save you thousands of dollars per year.

Also consider the possibility that IT availability can be impeded by organizing support primarily around platforms, which can become silos. Many of our customers tell us they struggle across lines of business and platforms—network, mainframe, x86, Microsoft, Linux, and so on—to coordinate both prevention and reactive maintenance support. This is often a natural consequence of IT specialization, but it can impede efficient, effective problem resolution. This makes it critical to have a shared strategy that speeds cross-platform support.

After you've evaluated your current IT support environment, you're ready for the next step: developing a detailed, thorough plan that can take you from where you are to where you want to be along your IT support maturity.

**IV. Step 3: Develop a roadmap to define and prioritize transformative initiatives**

After you've assessed your current level of IT technical support maturity, you may find that there are gaps, overlaps or opportunities for improvement that will impact business outcomes. The next step is to develop a roadmap that is based on your priorities, the issues affecting availability and the levels of support that you require. The focus should be on high ROI areas that can increase IT staff and LOB productivity, enhance revenue streams and relationships with customers, and reduce your vulnerability to the risk and costs of downtime.

A detailed technical support services roadmap can provide a clear path to improvements, leading you to a more efficient, optimized IT support model that supports better business outcomes.

At the most basic, organizations with an “ad-hoc” level of maturity have only device-oriented, basic support for their IT hardware and software. At the “reactive” level, an organization is solution oriented, has an accurate IT inventory with associated support levels, a single point of accountability, rapid access to deep skills for problem diagnosis and resolution, accelerated response times, and efficient support contract management. And at the proactive and preventative level, an organization has enabled a cross-enterprise, business-outcome-oriented approach, lifecycle management, integrated infrastructure availability management, systems monitoring and automated services.

As an example, here is a roadmap that IBM helped one of our clients create. A workshop was held to review each area of the Technical Support Strategy Framework, compare to best practices and identify areas for potential improvement. When the “as is” was compared to the “desired” state, it resulted in a clear path to improvements that led to a more efficient, optimized IT support model. (See Figure 3.)
**V. The new math: Add up the benefits of a comprehensive managed solution**

In a converged multivendor IT environment, the merely challenging becomes deeply complex and a strain on internal staff, taking significant time to respond to even basic support issues required to keep users productive and meet service level and cost objectives. Establishing and achieving consistent service levels depends on:

- Having an accurate IT inventory with pre-defined service levels
- Running a responsive, effective help desk
- Managing multiple service contracts from different vendors
- Determining the cause of problems—whether hardware, software or both—and who to call
- Performing root-cause analysis and applying the findings to your entire environment
- Managing IT growth and change

A “do-it-all-yourself” approach can be cost and time prohibitive, since it requires that you:

- Retain internal resources that have the deep expertise required to address the needs of every product deployed in your environment
- Ensure the availability of specialized skills for extremely complex combinations of technology
- Endure delays when IT staff must be diverted from mission-critical functions in order to quickly respond to outages
- Maintain a repository of problems fixed previously to accelerate future problem resolution

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**Figure 3. An example roadmap: Assess current position, determine appropriate levels and establish priorities.**
A managed support solution can help you more effectively and cost efficiently link, integrate and optimize all aspects of IT support across your business environment.

Often, transferring the burden of IT support and management to a third-party solution provider can deliver value-added services and save you far more dollars than it costs. The right service partner can provide a single point of contact that can support multivendor products and peripherals for faster problem resolution, a single contract with simplified invoicing and more consistent service levels, and a solution that’s tailored to your business objectives and availability requirements. (See Figure 4.) This can help you:

- Reduce downtime and improve availability through proactive reporting and analysis
- Reduce the cost of maintenance, service and support
- Keep IT staff focused on business-critical initiatives

Figure 4. The enterprise-wide benefits of having a comprehensive technical support strategy.
VI. Conclusion

To summarize, there are concrete steps you can take to help proactively reduce the cost and impact of outages, and facilitate more robust, responsive and cost-effective IT support capabilities:

- Make sure that your support priorities and decisions are based on the current cost of downtime, which is significantly higher than just a few years ago and continues to increase.
- Conduct a thorough assessment of your current IT support that includes all aspects of people, processes and technology.
- Align your technical support needs with business goals, including infrastructure support and strategy, using your technical support improvement roadmap.

When evaluating support vendors, it’s important to:

- Have a well-defined technical support strategy that addresses the entire spectrum of people, process and technology.
- Make decisions not based on who offers the lowest price point, but rather on who will help you avoid the cost of downtime—which will help you reduce overall business and operational costs; avoiding a single outage can more than pay for higher levels of services and competence.
- Approach vendor selection as a “partner-of-choice” decision: look closely at their methodologies, tools, parts and logistics resources, and experience and intellectual capital—which, depending on their capabilities, can significantly reduce your support costs.
- Make sure that your service provider can provide critical metrics on demand for a data-driven approach to improving service levels such as:
  - How many times did you call for support? What proactive measures could be taken to reduce the number of calls?
  - What percentage of issues was resolved by the first-contact focal point?
  - How long did problem resolution take? For hardware issues, what percentage of the time did your service provider have the correct replacement part? What percentage of problems was fixed right the first time?
  - Did someone come to your site, and if so, how long did it take for them to arrive? Would it have been possible to resolve the problem remotely?

VII. Why IBM?

IBM Technical Support Services (TSS) has a well-deserved reputation for employing industry-leading processes, tools and people to help prevent and rapidly resolve issues. TSS is product agnostic. We are focused on quality and speed to help enhance clients’ results. We measure ourselves on customer satisfaction, response times, resolution times, root-cause analysis and data analytics to help you prevent future problems. We relentlessly pursue process improvement, service level improvement and increased client satisfaction. We also use unique propriety tools to help better support your IT environment, such as:

- IBM® Watson™ Knowledge Engine, which provides cognitive analytics to help improve availability, plus a clear action plan to help decrease problem resolution times, increase remote and first-time fix resolution rates, and enhance IT and end-user productivity.
- IBM ProWeb queries servers and storage devices to aid in proactive service planning.
- “Phone home” technologies such as IBM Electronic Service Agent recognize and report potential issues, which can include automated opening of a service request ticket so the resolution is underway without requiring human action.
- Our Technical Support Appliance, which can better manage assets—including IBM and non-IBM servers, storage and network appliances, and inventory—plus support better strategic planning and help you avoid entitlement delays.
Plus, our IT support resources—both local and global—are virtually unmatched. We have:

- 57 call centers worldwide, with regional and localized language support
- 23,000 IT support specialists worldwide
- 585 parts centers, stocked with 1.3 million IBM and non-IBM parts
- 114 hardware and software development laboratories and 11 global research laboratories, whose insights and resources we use on your behalf

Additionally, our technical support capabilities are reflected in our performance:

- We completed more than 160,000 preventative maintenance actions in 2013
- We can help you reduce operating costs by up to 20 percent through outage mitigation and problem resolution
- We can provide up to a 94 percent first-call hardware success rate
- We handled 6.8 million hardware and software service requests in 2013
- Parts are delivered within four hours for 99 percent of US customers
- Seventy-five percent of software calls are resolved by the first point of contact

Finally, IBM is committed to providing valuable thought leadership. According to Rob Brothers, IDC, Director Software and Hardware Support and Deploy Services:

“IBM is providing valuable thought leadership by presenting a framework and maturity model to assist organizations in evaluating and improving their technical support posture.”

“IBM’s tools can help organizations identify, prioritize and remediate gaps while providing a roadmap to improvement. Organizations who are serious about improving business outcomes need to seriously consider IBM Technical Support Services.”

Experience the confidence of having IBM on your team as a trusted support provider. We’re ready to provide you with high-value services to help you become more proactive in your IT support strategy, increase your IT resiliency, reduce your vulnerability to downtime, and simplify and drive down support costs.
Additionally, IBM Global Financing can help you acquire the IT solutions that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize an IT financing solution to suit your business goals, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit: ibm.com/financing

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3 Ibid (US$544,498 for 97 minutes, and US$680,000 for 86 minutes)

4 Based on IBM internal data; current as of March 2014.

6 Ibid

7 Ibid

8 Ibid

9 Ibid

10 Ibid

11 Rob Brothers, IDC, Director Software and Hardware Support and Deploy Services, September 2014.