



WHAT ARE MANAGED SERVICES?

***OR:
HOW CAN SPENDING LESS, PROVIDE
MORE COMPUTER SUPPORT?***

A White Paper by Valueforge Inc.



VALUEFORGE INC
3432 WOODLAND DRIVE
MURRYSVILLE, PA 15668

 (724) 327-2010
 (724) 327-3032
WWW.VALUEFORGE.COM

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(Or: How Can Spending Less, Provide More Computer Support?)

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Managed Services are the latest innovation in computer network maintenance. They are best described as health-care agreements for computer systems. For a flat monthly fee per covered system, an Agreement is entered into by the client and a Managed Services Provider. The Agreement spells out the amount of service to which the client is entitled over the term of the contract. Contract terms are typically one or more years.

Many technology users are familiar with Computer Support Agreements. Support Agreements are usually of one year duration and offer reduced hourly rates for a commitment by the client to purchase a pre-specified number of support hours every month for the duration of the contract. The agreement typically works on the use-it, or lose-it principle, meaning that unused monthly hours cannot be carried forward and banked to future months. The result is that unused hours, though already purchased, are lost to the client. Any labor requirement above the monthly contracted hour allotment is charged at the provider's standard hourly fee.

A Managed Services Agreement is distinctive from a Support Agreement in that the amount of support contracted is unlimited for items covered by the scope of the agreement ... hence the comparison to health insurance. Managed Service Agreements strictly limit the maximum labor expense for which the client is responsible, to the monthly contract fee. Whether an issue requires two, or two-hundred hours to resolve, the expense is the same.

The goal of Managed Services is to benefit both the Managed Services Provider (MSP) and the end-user (the MSPs client). The main benefits for each are:

Managed Services Provider Benefits

1. Reduce support costs for client computer systems.
2. Become more competitive in the marketplace by passing cost-savings on to clients in the form of reduced support expenses.
3. Become more competitive in the marketplace by reducing client computer down-time, maintaining computer performance at high levels and thus improving the productivity of the client's employees.
4. Provide a more uniform cash flow not dependent on correcting end-user system failures.

End-User/Client Benefits

1. Reduce support costs for internal computer systems.
2. Increase employee productivity by reducing system down-time and increasing efficiency of computer systems through preventive maintenance.
3. Simplify the computer maintenance budgeting process by achieving budgetary predictability.
4. Eliminate unexpected, budget-busting expenses.

I'm Skeptical, How is this Possible?

You are right to be skeptical. Computer (IT, or Information Technology) Support Agreements are often thinly veiled attempts to enhance provider revenue at client expense. The use-it or lose-it model pretty much guarantees this.

This section's title-question will be answered in two parts since there is an implicit hidden question in "I'm skeptical, how is this possible?"

The hidden question reads something like this: "I know that the provider would like to increase his revenue, so what's in it for him to be lowering his prices? I don't believe it!" The answer is fairly straight forward. From the perspective of the service provider, either he works to lower his and your costs, or another provider will step in and take your business. So the reasoning is easy to understand; the provider lowers his price for purely selfish reasons. Further, by lowering the client's computer downtime, the provider frees up his time, allowing him to enhance his revenue by taking on more clients. Both the client and the provider win financially in this scenario.

The second part of the question is: "How is this possible?"

Expanding on the question a little: How is it possible to provide a greater level of computer/network uptime and support at reduced cost? Or stated another way: How is it possible to provide more services at a reduced cost?

Managed Services reduce provider cost through the application of four tried-and-true cost-reduction principles. Here they are:

1. Spread Risk
As does the insurance industry, a Managed Service Provider (MSP) spreads the costs involved of recovering from a computer failure over a larger number of computers. Computer hardware failures are predictable over a large number of systems. What is not predictable is which *individual* computer will fail at any given time. Managed Services apply to groups of computer systems, allowing the high cost of recovering an individual computer to be spread over a large number of computers.

2. Practice Preventive Maintenance
We've all heard the adage "An ounce of prevention is worth a pound of cure." Computers, and especially computer operating systems and software, respond to maintenance the same way as does a car. By regularly changing the oil, checking the air in the tires, following the maintenance schedule, maintenance costs are reduced on a vehicle. With computers, the equivalent would be: check for viruses/spyware, make sure that employees are not installing prohibited software/hardware, check the system log for errors that can be corrected before they become catastrophic, and update/patch the system as soon as new patches are available and have been *tested for reliability*. Small problems can grow into large problems, so it is best to deal with them while they are small.

3. Apply Principles of Mass Production
Henry Ford revolutionized manufacturing through the invention of the production line. Prior to the production line, workers moved themselves and their tools from product to product resulting in time lost in the action of relocating physically and packing/unpacking tools. Workers were responsible for a wide variety of assembly operations. This further slowed production via the simple acts of changing tools and preparing mentally for each new task. The production line moved the product (the automobile) from worker to worker, eliminated relocation costs, and created specialized tasks for each worker. Through repetition, the workers became experts at their respective tasks, and the time required for each task was reduced.

Managed Services applies this same approach to computer support. Enabling this whole concept is the revolution in remote computer control. Support workers operate from their desks in a network operations center. Via remote control, the support worker can visit a client's desktop without leaving his own desk. This is equivalent to bringing the automobile to the worker on the production line. The computer now goes to the worker, not the other way around. Generally, about 90% of all support issues can be resolved remotely. The travel time component is removed from the support cost equation. Only the remaining 10% of support issues require a desk-side visit.

To further improve efficiencies, support tasks are handled by groups of technicians who each deal primarily with issues of a specific type. This assures that the staff sees the same problems over and over again. Consequently, technicians become very proficient at resolving the most common types of computer issues, reducing the average time for problem resolution.

4. Reduce Wage Expenses
Outsourcing part, or all, of the remote support duties to countries with lower prevailing wages is a trend employed in nearly all sectors of the American

economy. Computer support has been following this trend for many years. Computer manufacturing companies have been outsourcing their help desks to foreign Operations Centers since the late 1990's. The results have been mixed. Costs have certainly gone down for the companies employing this approach. However, many computer users who utilize this foreign remote support are frustrated with the results. Frustration arises when users feel that their support representative does not understand their questions (language/culture issues) or the user cannot understand the support person.

Outsourcing can be successful when the proper balance is struck in the amount of support outsourced. It is acceptable to outsource the tasks that do not require a high level of English proficiency and cultural knowledge. However, the tasks that do require this type of knowledge need to be kept in America.

The level of outsourcing among Managed Services Providers ranges from 100% to 0%. The more support is outsourced, the lower wage expenses become.

Are All Managed Services Offerings Equal?

Quite simply: "no". The amount of service agreed upon can vary largely from provider to provider, and Agreement to Agreement. Managed Services offerings start with basic "alerting" installations and range up to "one-price-for-all-you-can-use" support. "Alerting" type of Managed Services utilize only the preventive maintenance cost reduction methodology of the Managed Services model. Often they include automated virus scanning and spyware removal. However, if an alert requires technical intervention, the service provider charges a service fee. The "all-you-can-use" approach covers all maintenance generated by event alerts, system issues, crashes, site visits by technicians, and even help-desk telephone support calls. In the all-you-can-use model, client (user) expenses remain the same whether a technician takes two minutes or twenty hours to resolve an issue. Variations on these support models offer all levels of service in between, with a popular one being "all-you-can-use" minus the free help-desk support.

One thing all plans *do* have in common is that they cover only *existing* hardware and software, and so can be considered an agreement to maintain the status-quo in your healthy computer network. Additions and replacements to a computer network in the form of new computer systems and software are typically considered to be excluded from the maintenance agreement. Once new products are in place, they can be placed under a maintenance agreement. If an existing product under agreement fails and needs to be replaced, this falls under the heading of maintenance, and is supported at no extra charge.

It's essential to get a clear view of what is, and is not included in any Managed Services agreement.

How Much Can I Expect to Save with Managed Services?

Ah, the \$64,000 question. To arrive at an answer, it is important that anyone thinking of subscribing to a managed services plan understand his *true* computer maintenance costs. It is our experience that large-medium companies have a good handle on what these are, but small businesses typically underestimate their true expenses. Companies such as *Computer Economics* exist to analyze technology related expenses for American industry.

In their 2008 survey of IT expenditures (copy of executive summary containing the quoted data available upon request), *Computer Economics* surveyed 201 CIOs (Chief Information Officers) employed in a range of American companies. The demographics of the survey, based on company size were as follows:

Large Companies:	Revenue	\$1,000M + / year	38%
Medium Companies:	Revenue	\$350M - 1,000M / year	35%
Small Companies:	Revenue	\$50M - \$350M / year	27%

Note that with this sample size, the relative error in the result is +/- 7%. Experience has shown that smaller companies spend a greater percentage of their revenue on IT support than larger companies. This is likely due to the economies of scale that large companies can bring to bear on the most common IT issues.

There are several ways to approach budgeting for technology expenditures. One approach is to use the percentage-of-revenue model. In the *Computer Economics* studies of industry over the most recent three years the numbers have been:

2006:	2.0% of revenue
2007:	1.8% of revenue
2008:	1.5% of revenue

The 2008 number is extrapolated from the expenditures-to-date for 2008. Companies tend to spend more in the later third of the year, so the 2008 number is somewhat suspect. Whether this delayed spending trend will hold true for 2008 is yet to be seen.

Another way to budget is to use industry average numbers for the annual operational budget per user. For the past three years, expenditures were:

2006:	\$7,791 / user
2007:	\$7,397 / user
2008:	\$6,667 / user

It should be noted that as companies grow, their demand for technology, software and customization also grows. For companies in the 100-employee-and-under group, one could argue that reduced demand for technology and customization could result in a discount of up to 50% on maintenance costs.

A third approach is to perform a back-of-the-envelope calculation using the following rule of thumb: over the five-year life-cycle of the average desktop computer, hardware acquisition costs represent only 5-10% (average 7.5%) of total cost of ownership. With a mid-grade, conservatively configured, industrial-quality desktop system currently costing approximately \$1000, this means the lifetime cost for a machine is $\$1,000/0.075 = \$13,333$, or $\$13,333/5 \text{ years} = \$2,666/\text{year}$.

Small business owners often argue that these numbers cannot possibly be true. However, this disbelief is likely the result of failure to consider the price of servers (and server software) that support the network, desktop software, anti-virus subscriptions, network firewalls, power, and the price of in-house labor used in resolving issues. The back-of-the-envelope numbers are basic starting figures. First hand experience in small business (with fewer than 20 employees, revenue approx \$4M/year) in the 1990's revealed maintenance expenses of around \$3,500/computer/year. The Chief Information Officer of a well known regional hospital shared with us that his 1999 figures were between \$5,000 and \$6,000/computer/year.

Applying further optimism to the back-of-the-envelope numbers, an even *more* monetarily favorable estimate of support costs would be \$2,000/computer/year. Assuming that the electrical power to run a system costs roughly \$250/computer/year, computer support costs would then calculate to be \$1,750/computer/year. This number is an estimate for *desktop* computer systems. Laptops have higher maintenance costs than desktops due to their lower reliability and shorter life-span (typically four years rather than five). Total cost of ownership for laptops is further increased by a higher initial purchase price. Higher maintenance costs apply to server hardware also. Though servers are more reliable, the more complicated nature of their software makes them more labor intensive to maintain. Additionally, servers have an even higher purchase price than laptops.

Despite general agreement among industry professionals on the validity of the above estimates, small business owners continue to underestimate their computer support expenses. It is difficult to reconcile the expectations of small business owners with the results of the industry in general. It is not reasonable to dismiss industry results by assuming that all the CIOs in America don't know their jobs. Clearly, in very small businesses, either something is being missed when IT support costs are estimated, or no maintenance and repair is being performed. But just as a car without oil changes and maintenance, unmaintained computers eventually exact their due. If no maintenance is provided in the long term, businesses are likely paying for support expenses in the form of lost worker productivity.

Summary

Managed Services have the potential for simultaneously providing reductions in computer maintenance costs, increases in worker productivity and stabilization of computer maintenance budgets. They achieve monetary savings by applying four proven principles of cost reduction to the task of computer maintenance: spreading risk, practicing preventive maintenance, applying principles of mass production and reducing wage expenses. Worker productivity is enhanced through frequent and vigilant use of preventive maintenance routines designed to keep computers running at top efficiency. Managed Services can provide computer maintenance budget stabilization by offering a budgeting model based on predictable flat monthly fees, rather than a model based on the unpredictability of individual computer failures.

While savings will vary between users of Managed Services, it is difficult to imagine that anyone will derive *no* financial benefit.

Harold Poley
President
Valueforge Inc.
724-327-2010
hpoley@valueforge.com