

Optimizing Your Server Infrastructure

Dynamic IT for the People-Ready Business





Executive Summary

Intended Audience

This white paper is best suited for information-technology (IT) directors responsible for a company's server infrastructure, along with IT managers and staff in charge of servers. Others who may benefit include business executives who oversee an organization's IT operations and line-of-business (LOB) managers who rely on server-based IT solutions to facilitate their strategic objectives.

Organization Characteristics

Organizations of all sizes can derive positive results from the information and recommendations included in this white paper. That said Microsoft® has found that companies with 250 or more personal computers (PCs) in their environment, multiple data centers, or multiple branch-office locations can achieve the greatest results from server infrastructure optimization.

Objective

The objective of this paper is to help you understand the benefits of optimizing your server infrastructure and determine which solution areas to focus on first to enable you to gain benefits that are most valuable to your organization. These solution areas include:

- Managing your data center
- Securing and optimizing your messaging and collaboration infrastructure
- Optimizing access to and protection for your information and systems

Once you have a sense for the solution area that will provide the greatest benefits for your organization, you are encouraged to talk with your Microsoft account representative or Microsoft partner to learn more about that solution area and develop a plan to implement solutions that will improve the optimization of your server infrastructure. This paper provides some recommendations on how to get started.

Abstract

IT is playing an increasingly important role in helping modern organizations adapt to change and achieve a competitive advantage. However, a number of challenges make it difficult for IT professionals to maximize their contribution to the organization. To address these challenges and be successful in their efforts to be a strategic enabler of business success, IT professionals should focus on creating a dynamic IT infrastructure. Microsoft Infrastructure Optimization provides a methodology, model, technologies, guidance, and resources to help you assess and improve your server infrastructure efficiently and with confidence. Benefits of optimizing your infrastructure include being able to control IT costs, improve security and availability, and increase agility. For your server infrastructure, the three primary solution areas include data center management, secure messaging and collaboration, and information protection and secure access. There are a number of solutions you can implement that will help you in each of these areas. Microsoft recommends that you learn about these solution areas, decide which area to focus on to gain the most immediate or the most advantageous benefits for your company, and then begin optimizing your server infrastructure in that area. Microsoft and its partners are available to assist you at each step of the way.





Introduction

Never has there been greater pressure on business leaders to grow revenue, profits, and customer loyalty in the face of rapid change. To keep up, organizations must be able to adapt quickly to new opportunities and threats. “Business agility is becoming a strategic necessity. Greater globalization, increasing regulation, and faster cycle times all demand an ability to quickly change organizational processes.”¹

Increasingly, IT plays a central role in a company’s efforts to respond to changes in the marketplace, as evidenced by the escalating IT investment companies are making. In the early 1980s, 15 percent of the capital expenditures of American companies went to information technology; by the end of the 1990s, it had hit nearly 50 percent.² However, while technology can facilitate business success, technology alone cannot offer creative insight into new product development, cannot identify and capitalize on opportunities for process improvement, and cannot develop strong relationships with business partners. Rather, technology simply supports every enterprise’s most valuable asset—its people.

What kind of IT infrastructure does an organization need to support its people? Companies need a dynamic technology infrastructure (often referred to simply as “Dynamic IT”) that can help advance rather than impede the business. An organization with a dynamic IT infrastructure uses technology to amplify the impact of its people, manage complexity, protect information, control access to corporate resources, and achieve the strategic imperatives of the business.

To help companies of all sizes—but particularly mid-sized and enterprise organizations—achieve a dynamic IT infrastructure, Microsoft and its partners are helping businesses move toward a vision of self-managing, self-healing dynamic systems through a variety of optimization efforts. The goal of these efforts is to help organizations build efficient, secure, and optimized IT infrastructures in a logical sequence.

An optimized IT infrastructure can enable you to control costs, improve security and availability, and increase agility. Microsoft Infrastructure Optimization takes a holistic view of a company’s infrastructure by providing a framework to assess and improve a company’s *core* infrastructure (including desktops, devices, servers, network access and security, data protection, and more), *business-productivity* infrastructure (including a company’s unified-communications capabilities, business-reporting and intelligence capabilities, internal search and collaboration solutions, and more), and application platform (including development practices, user-experience capabilities, service-oriented architecture, and more).

“Business agility is becoming a strategic necessity. Greater globalization, increasing regulation, and faster cycle times all demand an ability to quickly change organizational processes.”¹

Server Infrastructure Challenges

Despite the ever-increasing number of IT solutions available, the ability of IT departments to support the broader business in strategic ways is hampered. Competition in an ever-changing and increasingly global business environment is placing greater pressure on IT to provide rich, connected capabilities across the infrastructure while protecting both the network and data from intrusion and disruption. Specific challenges include the following:

Controlling Costs	<p>Many organizations see their IT budgets increase each year, but incremental expenditures are seldom applied to new, strategic initiatives. In fact, according to many analysts' estimates, for most organizations the majority of the IT budget is spent maintaining what they currently have, reaching upwards of 70 to 80 percent in some organizations. Chief Information Officers (CIOs) are under "tremendous pressure to reduce IT costs while improving services to the business."³ More than one-third of IT managers cite getting better returns on their capital IT investments, including servers, as a top priority.⁴</p>
Adapting to Technology Change	<p>Legacy systems and rapid technology change have a significant impact on IT. "Companies have created and populated dozens of legacy information systems...[and] as the data from discrete functions collect in separate databases, more resources are required merely to keep the systems functioning properly."⁵</p> <p>To address compatibility issues among legacy systems, many organizations have resorted to "server silo-ing"—a process by which each workload is assigned its own physical server, but this adds complexity for IT managers.</p>
Security and Compliance	<p>Between July and December 2007, more than 129 million pieces of spyware, malware, viruses, and more were detected by Microsoft worldwide.⁶ These threats pose significant challenges for IT managers. Additionally, threats are becoming more advanced and dangerous. As a result, more than half of IT managers say updating their security software and compliance capabilities are key priorities.⁷</p>
Managing Complexity	<p>As IT managers seek to maintain their physical and virtual infrastructures and simplify complexity, many deploy redundant, point solutions. As a result, though actual systems become easier to manage, the <i>systems-management</i> infrastructure can become time consuming and labor intensive to operate. Not surprisingly, greater than one-third of enterprises identify simplification of their management infrastructure as "very important."⁸</p>
Protecting Access to Networks and Information	<p>Due to the increasingly mobile workforce that many organizations have, a sizeable amount of corporate and customer information resides on employee laptops, or is at least accessible over the Internet. In fact, Gartner estimates that up to 60 percent of corporate information exists outside the data center.⁹ As a result, IT managers must find ways to provide "approved" staff members with the access they need while prohibiting access to all others.</p> <p>No less important than secure access to information is protecting information from loss. In the United States, the U.S. Department of Commerce reported that from 2003 to 2006, sixteen weather-related disasters caused more than US \$1 billion worth of damages.¹⁰ Many organizations have disaster-recovery technologies, but these are often limited to core data center locations and fail to protect branch locations.</p>



Microsoft Infrastructure Optimization

To help you address these challenges, Microsoft has developed a framework and methodology, along with enabling technologies, tools, and services. Referred to as Infrastructure Optimization, these resources have been developed based on industry best practices and refined through engagements with enterprise customers. Infrastructure Optimization provides a methodology to help you, Microsoft, and Microsoft technology partners assess and improve your technology infrastructure. It is based on Gartner’s Infrastructure Maturity Model and the Architecture Maturity Model from the Massachusetts Institute of Technology (MIT). Infrastructure Optimization helps you understand and subsequently improve the current state of your IT infrastructure while enabling you to identify the benefits you can derive in terms of controlled costs, improved security and availability, and increased agility.

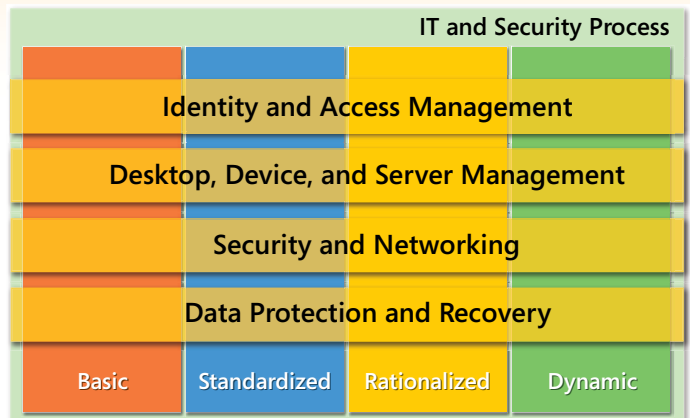
Infrastructure Optimization covers the three primary components of a company’s IT infrastructure: core infrastructure, business-productivity infrastructure, and a company’s application platform. Within each area are a number of supporting capabilities. A company’s server infrastructure falls within Core Infrastructure Optimization. Capability areas for Core IO include Identity and Access Management; Desktop, Device, and Server Management; Security and Networking; Data Protection and Recovery; and IT and Security Process.

Core Infrastructure Optimization

Core Infrastructure Optimization (Core IO) provides a comprehensive, proven, and efficient methodology to help improve your server infrastructure. Core IO is supported with a model, enabling technologies, services, and tools and guidance.

Model

The Core IO model provides a way to think about the challenges that you face, prioritize the areas you want to focus on improving, and organize your activities to pursue those priorities. The model outlines a progression through four stages of optimization and illustrates the strategic value and business benefits of moving from a “basic” level of optimization, where the infrastructure is generally considered a “cost center,” toward a “dynamic” infrastructure, where the business value of the infrastructure is clearly understood and is viewed as a strategic asset.



Technologies

Supporting each of the Infrastructure Optimization capabilities are technologies that have been designed to facilitate your progression from a basic level of optimization through to a dynamic level

Services

Together, Microsoft Services and an extensive network of Microsoft technology partners provide industry-leading expertise to assist you with your optimization efforts. Microsoft Services has developed a number of Core IO service offerings based on industry best practices, plus Microsoft has established criteria and associated competencies in the Microsoft Partner Program to enable partners to certify that they have the required expertise in delivering advanced-infrastructure solutions.

Tools and Guidance

Microsoft has built an extensive set of resources that fit within the context of Core IO to help you deploy and manage solutions more effectively. These tools and solution guides are free and increase the likelihood of a successful implementation.

Infrastructure Optimization Benefits

Core IO from Microsoft is designed to help control IT costs, improve security and availability, and increase agility to enable customers like you to spend less time and money on maintenance and devote more time to creating and facilitating new capabilities and services to advance the business. Benefits of optimizing your core infrastructure include:

Control Costs

Higher levels of IT maturity can result in savings of up to 80 percent in IT labor costs.¹

Improve Security and Availability

An optimized core infrastructure can lead to greater business continuity, enhanced compliance, and better, more secure access to network resources.

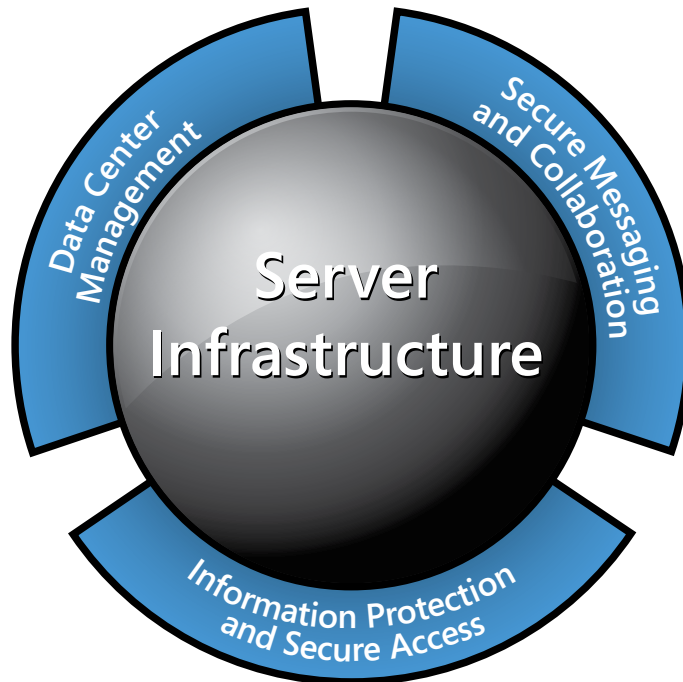
Increase Agility

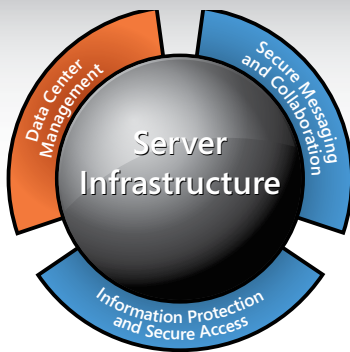
Organizations can achieve notable improvements in the ability to provide faster, more responsive IT service and increase agility.²



Server Infrastructure Optimization Solution Areas

Microsoft offers a number of solutions to help you optimize your server infrastructure. These solutions focus on three important aspects of an organization's IT environment:





Data Center Management

Managing the data center is a significant area of focus for most medium to large-sized organizations. One example of the challenges faced by today's enterprises is Continental Airlines. In 2007, Continental was quickly running out of capacity in its Houston, Texas data center. The company's IT department transitioned to a virtual infrastructure using Microsoft virtualization technologies and System Center Virtual Machine Manager.

With this solution, Continental consolidated servers and deployed and migrated to a new virtual environment, creating the foundation for a unified, centrally-managed virtual data center that will handle future growth, provision servers in two hours instead of four weeks, enhance the IT department's ability to adhere to build standards, and save more than U.S.\$2 million.

Data center management may be an area you want to focus on if any of these challenges are ones you are facing:

- | | |
|--|--|
| <input type="checkbox"/> The electrical costs of your data centers have increased. | <input type="checkbox"/> Server uptime and system availability are a concern or need to be improved. |
| <input type="checkbox"/> Your server utilization rates are significantly lower than you want them to be. | <input type="checkbox"/> You find it difficult to meet service-level agreements (SLAs) with business units. |
| <input type="checkbox"/> You need greater visibility into the health of systems in your data center. | <input type="checkbox"/> You would like to simplify and streamline the provisioning of software and servers. |
| <input type="checkbox"/> You need to improve your disaster-recovery and business-continuity plans. | <input type="checkbox"/> Your organization is under pressure to do a better job of complying with regulations. |

Data center management enables organizations to address these challenges by optimizing the data center through unified management of the physical and virtual infrastructure, configuration management, server compliance, end-to-end monitoring, and disaster recovery.

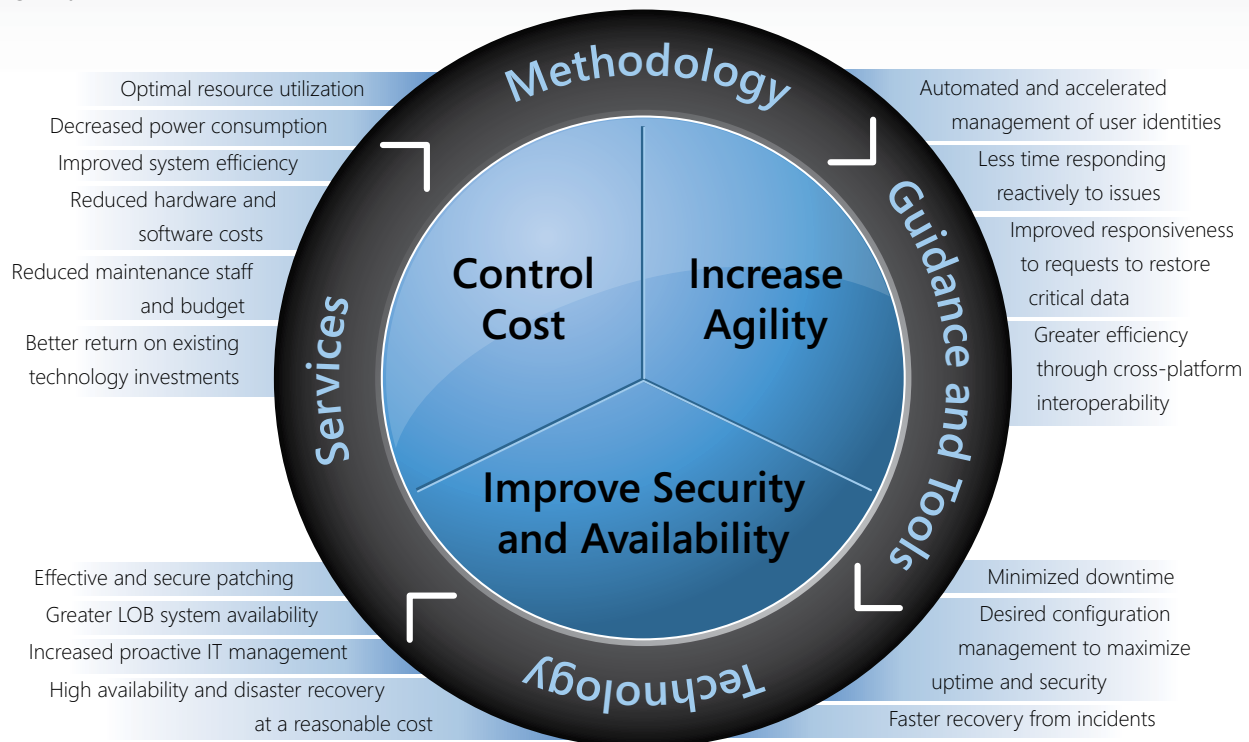
In an optimized data center, organizations experience the following:

- Costs are under control as resources are used optimally and deployments, configuration, and management are all streamlined and in some cases automated.
- Business continuity is maintained because security and compliance standards and disaster-recovery plans are in place and managed and monitored centrally.
- Agility for the business is delivered because the server infrastructure can adapt quickly through streamlined provisioning, updates, virtualization, and more.

Case Study: Gates Corporation

Gates Corporation is one of the world's largest manufacturers of automotive and industrial belts and hoses, posting sales of more than U.S.\$1.4 billion annually and employing 5,500 people worldwide. Gates uses a highly distributed IT environment across five continents—North America, South America, Europe, Asia, and Australia. Gates needed a monitoring system that could provide comprehensive reporting data on its 400 business-critical servers. By using System Center, Gates is benefiting from object-level server monitoring and accurate, reliable in-depth reporting. Consequently, Gates estimates that it will improve manufacturing productivity by 10 percent, boosting annual revenue by more than U.S.\$10 million.

Data center management contributes to controlling costs, improving security and availability, and increasing agility in the following ways:



Data Center Management Recommendations

Contact your Microsoft account team or Microsoft Partner to learn more about these solutions for Data Center Infrastructure Optimization.

Configuration Management

- Automated Provisioning and Updating of Physical and Virtual Environments
- Server Consolidation through Virtualization

End-to-end Monitoring

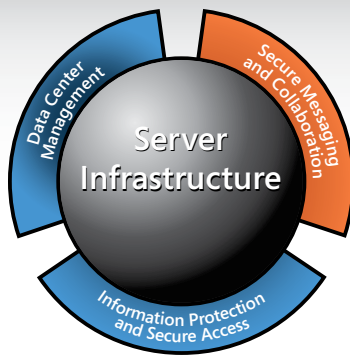
- Proactive Platform Monitoring
- Application and Service-level Monitoring
- Interoperable and Extensible Platform

Server Compliance

- Configuration Controls and Reporting
- Centralized Security Auditing
- Comprehensive Security and Identity and Access Management

Data Protection and Recovery

- Business Continuity through Virtualization Management
- Backup and Recovery
- Disaster Recovery



Secure Messaging and Collaboration

Messaging and collaboration environments are critical components of a company's IT infrastructure. Thus, enhancing and maintaining security of these systems is a top priority for most IT executives. For example, SOK Group, one of the largest privately held organizations in Russia, encompasses more than 40 companies. It had a highly complex IT infrastructure and was using many manual processes to monitor traffic on its e-mail servers and to deploy new domains. The company decided to upgrade to Exchange Server 2007 Service Pack 1 (SP1) and Microsoft Forefront™ security for automated monitoring and reporting and for combating malicious software. The IT

staff is now using new features within Exchange Server 2007 SP1 to create customized tools and reports and to extend protection against spam. With the new solution, the company is enjoying a more reliable e-mail infrastructure, greater security against malicious software attacks, and improved management of its server computers.

Increasing the security of your messaging or collaboration environments may be an area you want to focus on if any of these challenges are ones you are facing:

- | | |
|---|---|
| <input type="checkbox"/> You have seen an increase in the number of security threats. | <input type="checkbox"/> You are concerned about a single-point-of-failure antivirus solution. |
| <input type="checkbox"/> You need to make it easier for your end users to discover content and collaborate on documents more effectively. | <input type="checkbox"/> You are concerned that there is too much "silo-ing" of data, either based on geographic or functional factors. |
| <input type="checkbox"/> You want to tighten your controls on confidential or sensitive Information. | <input type="checkbox"/> You would like to provide better, more secure access to your messaging or collaboration environments for mobile workers. |
| <input type="checkbox"/> You need to find a way for employees to find subject matter experts in other parts of the company. | |

Establishing a secure messaging and collaboration infrastructure enables organizations to address these challenges by protecting against viruses, spam, and information leakage, while enabling more secure remote access. An optimized messaging and collaboration infrastructure improves the quality and reliability of critical business services delivered to internal and external stakeholders.

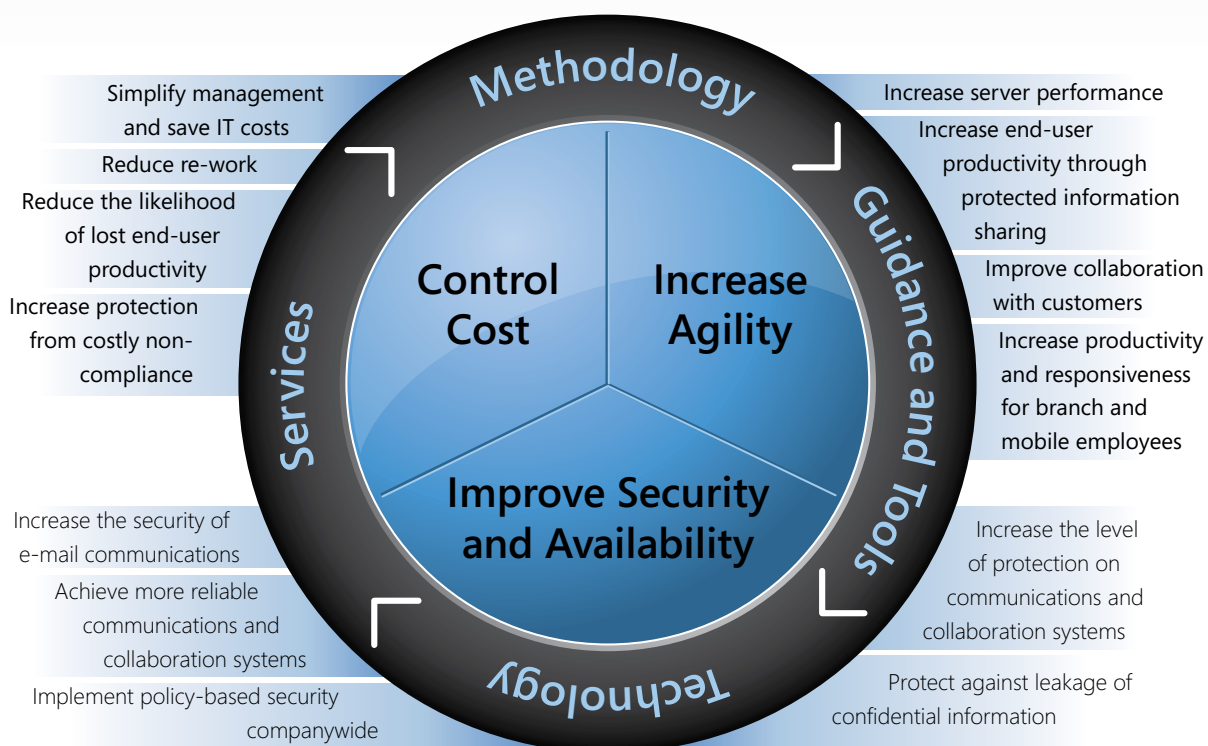
In an optimized messaging and collaboration infrastructure, organizations experience the following:

- IT managers are confident that their email systems are well protected
- Information workers are able to remain productive, informed, and on task, even when they are away from the office
- Customer and partner relationships are enhanced by simplifying external collaboration

Case Study: Del Monte Foods

Del Monte Foods distributes and sells food and pet products, throughout the United States, employing 17,000 salaried and seasonal workers. Messaging and collaboration technologies from Microsoft have played an increasingly important role for Del Monte employees. To improve protection of its information and management of these technologies, Del Monte deployed Microsoft Forefront™ Security for Exchange Server and Forefront Security for SharePoint, Microsoft Forefront Server Security Management Console, and Microsoft System Center Operations Manager. These combined products offer Del Monte easy deployment, solid antivirus protection, and centralized control of the IT environment.

A secure messaging and collaboration infrastructure contributes to controlling costs, improving security and availability, and increasing agility in the following ways:



Secure Messaging and Collaboration Recommendations

Contact your Microsoft account team or Microsoft Partner to learn more about Secure Messaging and Secure Collaboration solutions.

Secure Messaging

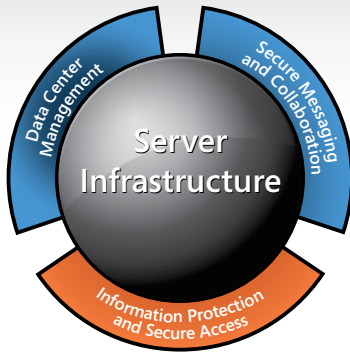
- Comprehensive protection against malware and SPAM that eliminates single points of failure with a multi-engine architecture
- Secure remote access
- Protection for sensitive information with end-user usage controls
- Powerful monitoring and reporting to proactively address issues

Secure Collaboration

- Malware protection both inside the firewall or passed along by trusted partners
- Content filtering to maintain compliance by controlling the sharing or storage of inappropriate materials
- Multi-engine architecture to eliminate single points of failure
- Information usage control

Information Protection and Secure Access

Companies need to balance access to information and resources with the need for security. On one hand, controls that are too strict mean that end users do not have access to the information and systems they need to do their jobs. On the other hand, safeguards that are too loose mean that unauthorized individuals and parties may gain access to sensitive or confidential information. La Trobe University, a leading higher-education institution in Australia, had to automate network



access controls for all clients connecting to the campuswide network. With more than 28,000 students and 2,600 staff, this was no small task. Compounding the problem was the university's high turnover rate. Thousands of incoming new students would arrive each year, bringing with them thousands of new unsecured clients connecting to the network. The university needed to safeguard private information such as student records, commercially valuable research, and financial transactions. To provide an automated solution, La Trobe University upgraded to the 64-bit edition of Windows Server® 2008 Enterprise operating system and could immediately detect and manage the health of every system connecting to the network. This has allowed La Trobe to eliminate unsecured machines connecting to its networks.

Improving security and the level of protection for information and resources may be an area you want to focus on if any of these challenges are ones you are facing:

- Currently you provision and de-provision users manually, which leads to errors and creates security risks.
- Different applications and systems have their own identity directories.
- You find it difficult and costly to provide access for branch or mobile workers.
- Your current VPN solution is not user friendly reducing productivity.
- Your existing perimeter security solutions only control access to data but cannot enforce usage policy of client-device compliance.

Information protection and secure access enables organizations to drive operational efficiency, enable new business scenarios, and enhance security and compliance to address these issues.

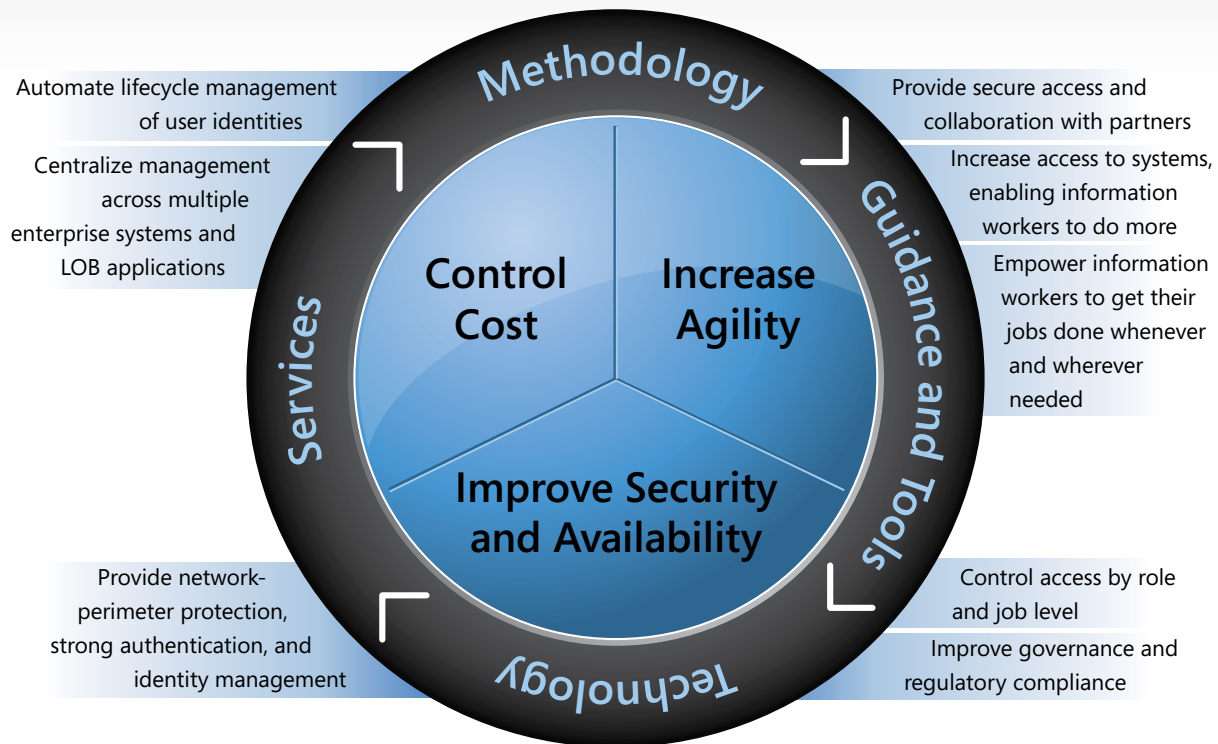
When an organization optimizes its systems to protect and provide secure access to information, it experiences the following:

- Its span of security is extended through stronger, seamless user authentication and persistent information protection.
- Secure, policy-based access control spans networks, applications, and data.
- Management of user and group identities from creation to retirement is automated.

Case Study: Dow Corning

For Dow Corning, which has more than 4,000 patents, protecting its intellectual property (IP) is a business imperative. The company is meeting that need with Active Directory® Rights Management Services in Windows Server 2008, which provides identity-based information protection to help safeguard information from unauthorized access and use. Usage rights and encryption follow content wherever it goes and the same solution enables Dow Corning to protect documents, e-mail, and content stored in SharePoint® Server libraries and to share rights-protected content with business partners. Deployed with minimal additional infrastructure, the solution integrates with desktop programs and helps ensure ease of use for employees. At the same time, its scalability and ease of management will help the company keep costs to a minimum while maintaining full corporate control over rights-protected content.

Optimized access and protection for information contributes to controlling costs, improving security and availability, and increasing agility in the following ways:



Information Protection and Secure Access Recommendations

Contact your Microsoft account team or Microsoft Partner to learn more about Information Protection, Secure Access and Identity Management solutions.

Information Protection

- Protect confidential data in the Office and Exchange
- Enforce usage and distribution policy for documents and e-mails
- Automatically apply usage policies to documents stored in SharePoint Server
- Provide fine-grained access control based on end-point compliance inspection

Secure Access

- Increase security through multi-factor authentication
- Streamline access through universal passwords and Web single sign-on
- Secure remote access to SharePoint and Exchange
- Secure remote access through SSL VPN
- Federate access control to partners and customers

Identity Management

- Synchronize identities and passwords
- Automate account provisioning and credential management
- Provide self-service for access management, user profiles, passwords, and smart-card PINs
- Manage workflow via Office and SharePoint



Selecting a Technology Partner and Supporting Technologies

Though you would likely gain significant benefits by implementing solutions for all of the solution areas above, if you are like most business and technology professionals, you have limited budget and resources. Furthermore, your current infrastructure may already be more optimized in some areas and less optimized in others. As a result, you will likely derive the greatest benefit in the shortest amount of time if you select one solution area to focus on first. Once you have selected an area to focus on, you need to consider what technology partners and technologies you will work with to help you optimize your infrastructure.

Microsoft is Your Technology Partner

Microsoft is dedicated to helping organizations like yours empower employees to drive the business forward. From the start, Microsoft's goal has been to deliver software that enables people to harness their creativity, imagination, and intellect. Over the years, Microsoft has expanded that vision beyond individuals working in isolation to delivering optimized productivity solutions for dynamic teams and a geographically distributed workforce. These enterprise-ready solutions include not just software but also best practices, guidance, and implementation services so you can successfully implement a solution quickly with low cost and risk. With the latest wave of innovation, now is the ideal time to evaluate how Microsoft infrastructure solutions can best be used your organization. Microsoft remains committed to helping you realize the most value out of your IT investments and drive growth and new opportunities.

Microsoft offers a unique value proposition to our customers:

- Our software is trusted and familiar
- Our solutions are unified and comprehensive
- Our software is interoperable by design

Software That is Trusted and Familiar

When you select software that is familiar and easy to use, you reduce IT support and training costs while maximizing the productivity of your users. Every day, in every department, Microsoft dedicates itself to thinking about and understanding how people use software and then applies this knowledge to build software that is familiar and easy to use. One of Microsoft's goals is to make sure that people's experiences are consistent from application to application. Because Microsoft understands how an information worker works with software, how a system administrator manages systems, and how a developer develops new applications and solutions, we build tools that will fit with the way your employees work and deliver a consistent, familiar experience to help them work more productively.

Solutions That are Unified and Comprehensive

Microsoft's comprehensive solution set spans the operating system platform, virtualization, management, security, and identity and access infrastructure to help equip you with the resources and technical capabilities you need to optimize your infrastructure. Microsoft solutions are designed to work together to streamline management and reduce IT complexity. Furthermore, Microsoft solutions span the various aspects of your IT environment, from the desktop to mobile devices to servers to the development platform to security and more for many of the systems in your infrastructure.

Interoperable by Design

While Microsoft products have always worked well together with minimal integration costs, the likelihood that all of your solutions are from Microsoft is low. As a result, you need solutions that provide integration and interoperability between technologies from different vendors. Microsoft delivers interoperability by design. At its most basic level, this means connecting people, data, and diverse systems. As a result, Microsoft is increasingly being recognized as a leader in enterprise platform software. In fact, according to a recent IDC survey of 500 North American organizations, the Windows Server operating system is the most popular platform for running mission-critical applications in the enterprise.³ Furthermore, IDC identified Microsoft .NET as the application-technology platform that enterprises expect to use most often for developing mission-critical applications.

Supporting Microsoft Technologies

Microsoft has also developed a number of technologies to support your efforts to optimize your server infrastructure. These technologies include the following:



Rock-solid, enterprise-level performance, availability, reliability, and manageability make Windows Server 2008 the ideal choice for data centers. With built-in web and virtualization technologies, Windows Server 2008 enables you to increase the reliability and flexibility of your server infrastructure. New virtualization tools, Web resources, and security enhancements help save time, control costs, and provide a platform for a dynamic and optimized data center. Powerful new tools like Internet Information Services (IIS) 7 and Server Manager provide more control over servers and streamline Web, configuration, and management tasks. Advanced security and reliability enhancements, such as Network Access Protection (NAP) and the Read-Only Domain Controller (RODC), harden the operating system and help protect the server environment to ensure a solid foundation on which to build businesses.



System Center solutions for data center management enable IT managers to optimize resources, improve the visibility of IT assets and issues, and meet service levels, all while controlling costs. Today's data centers require more processing power to meet the data and computing needs of the enterprise while at the same time facing resource constraints. System Center can help provide greater availability through virtualization management to enable quick restoration of virtual environments in case of failure. Finally, implementing System Center for data protection and recovery helps simplify storage management, provide higher availability, and improve responsiveness. Implementing a System Center end-to-end monitoring solution helps ensure that IT services, applications, and servers run smoothly with high availability.



The line of Forefront™ business-security products helps provide greater protection and control over the security of your network infrastructure. Forefront products easily integrate with each other and with your organization's IT infrastructure and can be supplemented through interoperable third-party solutions, enabling end-to-end, defense-in-depth security solutions. Simplified management, reporting, analysis, and deployment enable you to more efficiently protect your organization's information resources and secure access to applications and servers. With highly responsive protection supported by Microsoft technical guidance, Forefront helps you confidently meet ever-changing threats and increased business demands.



Identity Lifecycle Manager (ILM) 2007 enables IT organizations to control the cost of managing the identity and access lifecycle by providing a single view of a user's identity across the enterprise and through the automation of common tasks. ILM 2007 builds on the metadirectory and user-provisioning capabilities in Microsoft Identity Integration Server (MIIS) 2003 and adds new capabilities for managing strong credentials such as smartcards, providing an integrated approach that pulls together metadirectory, certificate and password management, and user provisioning across Windows and other enterprise systems.



By using Active Directory Rights Management Services (AD RMS), you can augment your organization's security strategy by protecting information through persistent usage policies that remain with the information, no matter where it is moved. You can use AD RMS to help prevent sensitive information—such as financial reports, product specifications, customer data, and confidential e-mail messages—from intentionally or accidentally getting into the wrong hands.



Exchange Server 2007 has been designed to meet today's communication challenges. It provides advanced e-mail and calendaring while delivering new methods of access for employees, greater productivity for IT administrators, and increased security and compliance capabilities for organizations. It is designed to deliver increased protection for your business and give anywhere access for your employees, while being operationally efficient to deploy, manage, and maintain.

 Microsoft®
Office SharePoint Server 2007

Office SharePoint Server 2007 helps you facilitate collaboration, provide content management, implement business processes, and supply access to information that is essential to organizational goals and processes. You can quickly create SharePoint sites that support specific publishing, content-management, records-management, or business-intelligence needs. You can also conduct effective searches for people, documents, and data, participate in forms-driven business processes, and access and analyze large amounts of business data.

Solution Accelerators

Microsoft has developed a number of solution accelerators to help you achieve a successful implementation for your server infrastructure projects. Use these tested and proven automation tools and guides to assess your network and confidently roll out new services employing architectures with baked-in security and manageability. There are solution accelerators for communications and collaboration; data protection and recovery; desktop, device, and server management; identity and access management; security and networking; and more. For more information, visit www.microsoft.com/solutionaccelerators.



Recommended Actions and Next Steps

You should consider the following actions as you work to improve the optimization of your server infrastructure:

1. If you haven't done so already, work with your Microsoft account representative or a Microsoft partner to assess the current level of maturity of your core infrastructure. You may also want to conduct your own pre-assessment using the online assessment tool available here: <http://www.microsoft.com/optimization/tools/overview.aspx>
2. Review the descriptions for each of the solution areas outlined in this paper (data center management, secure messaging and collaboration, and information protection and secure access) and decide which might be the most advantageous for you to focus on *first*. (You may want to schedule additional meetings with Microsoft specialists to assist you in those decisions.)
3. Based on your current level of infrastructure maturity, identify technology priorities and associated projects to help you improve your server infrastructure based on the solution area that is most appropriate for your organization at this time.
4. Finally, proceed with confidence. The projects and methodologies have been developed by technical specialists at Microsoft, then proven and refined in real-world engagements. You can rest assured that as you optimize your server infrastructure, you can control your costs, improve the security and availability of your infrastructure, and increase your business agility.

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