



Incorporating Managed Services into an Enterprise Architecture Strategy

“One of the major changes taking place today in government management (federal, state, and local) is the shift from the government as the historic “provider” of public services to the government as the “manager of the providers” of services to the public. The basic rationale for this change is that — when properly implemented — it results in significant benefits, in terms of improved performance and lower costs, to both the government and to the public being served.”

“Moving Toward Market-Based Government: The Changing Role of Government as the Provider”

Jacques S. Gansler, June 2003

The Powerful Benefits of the Agency-Managed Services Model

As the mission of federal agencies expands, so too does its operational challenges—all while budgets and resources are further constrained. This reality—combined with concerns about security, reliability, and relinquishment of control— is driving agencies once skeptical of the benefits of adopting managed services to reevaluate the merit of today’s managed-services options.

More and more agencies are discovering that out-tasking specific infrastructure services to proven, experienced service providers results in tangible benefits. Beyond securely increasing services availability, the managed-service model has been shown to enable agency personnel to focus on the agency’s core mission objectives. Equally important, many agencies employing managed services are realizing tangible cost savings in the form of improved IT service performance, reduced labor and training costs, and an overall reduction in capital burden.

With a range of managed-services businesses vying for federal contracts, this paper aims to clarify the perceived and actual advantages associated with moving to this model, while sharing lessons learned in the form of industry best practices for implementing such services.

Business Issues and Challenges

Like private-sector businesses, today's agencies and users require ubiquitous, secure information and communication — everywhere, every time, and on every device. But unlike corporations, federal agencies face several unique operational challenges that influence their ability to achieve mission objectives on time and within budget. These challenges include:

- **Legislative and compliance issues** – Agencies must adhere to rigid guidelines to support the Federal Information Security Management Act (FISMA), Health Insurance Portability and Accountability Act (HIPAA), continuity of operations (COOP) compliance, and IPv6 requirements in order to ensure compliance with these federal mandates.
- **Uniform standards** – Initiatives like Common Criteria, Federal Information Processing Standards (FIPS), Computer Security Resource Center (CSRC), and Standard Classification of Transported Goods (SCTG) are designed to ensure uniformity across agencies.
- **Unique operational complexities** – Agencies are tasked with employing custom technologies to deliver unique solutions to a highly specified customer base.
- **Workforce challenges** – According to the March 2007 GAO report to Congress, "HUMAN CAPITAL: Federal Workforce Challenges in the 21st Century," acquiring, developing, and retaining talent is on one of the top four challenges to the federal strategic human capital management agenda.
- **Budget constraints** – Agencies are accountable for fixed and hidden costs under unyielding scrutiny of many government and public entities.



How Managed Services Can Help Agencies Achieve Mission Objectives

A Definition of Managed Services

Managed services generally include the delivery of a specific IT service through the management of software, hardware, and IT infrastructure by an industry service provider. Agencies purchase these specific IT services by means of a service-level agreement (SLA) established to meet the agency's unique mission objectives. Agencies then manage their service provider partner against the performance criteria set forth in the service-level contract award. For agencies that out-task high levels of services, this model provides the support and availability that enable internal IT staff to focus on more strategic activities instead of performing redundant, day-to-day management tasks.

Managed Services Configurations

Agencies have the option to out-task some or all of their management and monitoring tasks and retain control of the rest — even if the equipment is physically located at the provider's site. Depending on a variety of factors including staffing, budget and operational preferences, agencies can:

- Own the assets and outsource the labor
- Completely outsource a business function
- Outsource specific functions to service providers for day-to-day management

Critical Benefits of Managed Services

Managed services offer several advantages to today's agencies, including:

- Reduced costs, including traditional service fees, hardware, IT operations, and transport
- Increased levels of support and network availability without additional staff
- Improved IT budget stability and predictability
- Easy access to leading-edge technology
- Simplified response to evolving requirements
- Allowing the IT group to focus on the core mission objectives
- Diminished financial and improved operational risk factors

Types of Managed Services

The range of managed services available to agencies is nearly as varied as the agencies themselves. Depending on mission objectives, agencies may choose to out-task a single network service or opt for an integrated suite of services.

The main types of managed services include the following:

- **Managed IP VPNs** – Managed IP VPNs are among the most widely used technologies for secure, high-performance, and cost-effective networking.
- **Managed security services** – This type of managed service provides “defense in depth” with a broad range of solutions.
- **Managed IP communications** – By converging data, voice, and video services on the same IP network, agencies are increasing efficiency, productivity, and cost-savings.
- **Managed IP contact center** – Combining traditional call center features with intelligent IP call routing, unified communications, and affordable pay-as-you-go cost models, IP contact centers can improve customer support functions by integrating e-mail, phone, Web, instant messaging, fax, and other human or automated forms of customer contact.
- **Managed hosting and storage** – These services eliminate the costs of acquiring and maintaining equipment, floor space, and hiring and training IT specialists by taking advantage of a service provider's investment in expertise, hardened facilities, and guaranteed SLAs.
- **Managed wireless and mobile computing** – Enjoy the productivity and collaboration advantages of wireless technology without the associated capital expenditures (CapEx), deployment effort, and complexity.
- **Managed WAN services** – Service providers offer a wide range of managed WAN connectivity services, including Multiprotocol Label Switching (MPLS), frame relay, private lines, ATM, metro Ethernet, and others.
- **Managed LAN services** – The cost to maintain and update a network increases proportionally with increased network usage. Service providers can manage a company LAN over the network, helping to reduce total cost of ownership.

Managed Services Trends

The public sector has been taking advantage of managed services for years, and forecasts show that businesses and industries around the world will dramatically increase the move to managed services in the near future. By 2009:

- The managed services market worldwide is set to reach US\$41.5 billion, growing at a compound annual growth rate (CAGR) of 20 percent.
- IP VPN will remain the largest managed services market (53 percent) but IP voice will show the fastest growth (65 percent CAGR).
- Enterprises with 1000 to 4999 employees will represent the highest-growth segment in adopting a managed services model.
- Government will be the second largest market for managed services adoption, growing at 17 percent annually.

As the data clearly shows, government adoption of managed services is growing significantly faster than its overall annual IT budget increases. This suggests a major shift in spending away from direct procurement and management of IT infrastructure to the purchase of IT services through a managed service provider.

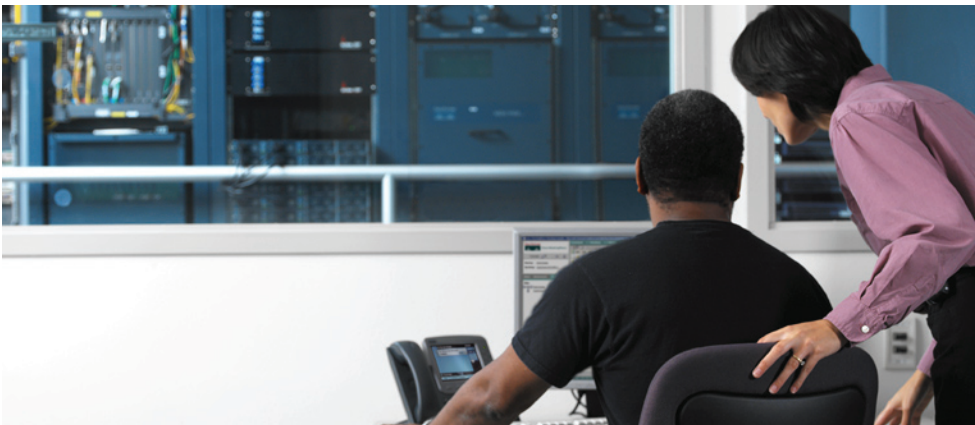
Future of Enterprise Computing

“Information technology is undergoing an inexorable shift from being an asset that companies own — in the form of computers, software and myriad related components — to being a service that they purchase from utility providers. IT’s shift from an in-house capital asset to a centralized utility service will overturn strategic and operating assumptions...”

The End of Corporate Computing

The MIT Sloan Management Review

Nicholas Carr, Spring 2005



Cost is King

Lower cost remains the leading driver for managed services adoption for companies of all sizes.

Reason for moving to managed services	# of Employees				
	20-99	100-249	259-999	1000-4999	5000+
Lower cost	67.20%	65.50%	62.80%	57.80%	55.30%
Higher levels of support and availability	18.80%	20.50%	23.60%	25.80%	28.10%
Predictable Cost	5.50%	6.30%	5.80%	5.30%	7.30%
Access to the latest technology	4.70%	4.60%	5.20%	8.20%	5.70%
Access to an enhanced skill base	1.40%	0.70%	1.60%	1.10%	1.50%

Source: Ovum 2005

A Look at Networkx

Over the past year, the General Services Administration (GSA) Networkx contract has been “front and center” within the federal space and for good reason. It is the largest telecommunications contract in federal government history. But the two pronged initiative — Networkx Universal and Networkx Enterprise — is more than the platform that enables agencies to take advantage of managed telecommunication services. Its intent is to transform disparate legacy agency infrastructures to modern service oriented network architectures (SONA) with significantly improved capabilities, feature richness, service levels, cost efficiencies, and ease of use in a managed service model.

The Networkx program offers comprehensive, best value IT managed services providing for new technologies, industry partners and ways to achieve a more efficient, and effective government. With this program, the network becomes the platform for all forms of communication and IT, empowering agencies to:

- Easily adopt a converged network infrastructure
- Communicate seamlessly from any device to any device, securely, from anywhere, at any time, quickly, and efficiently
- Enable collaboration between individuals, databases, and systems achieving entirely new levels and forms of productivity
- Ensure business continuity in the event of an outage and to do so without human intervention
- Take advantage of comprehensive, best-value telecommunications, networking services and technical solutions
- Significantly lower costs for both agencies and taxpayers
- Achieve unprecedented levels of cross-agency collaboration, transformation and government-wide technology improvement

Selecting a Managed Service Provider

When it comes to selecting a Networkx partner, federal agencies must consider how well each supplier will perform in providing innovative solutions, supporting agency requirements and meeting each agency’s enterprise architecture goals. Learning from public-sector best practices, agencies transitioning under Networkx should consider adopting a governance model focused on maintaining control of enterprise architecture decisions while purchasing a managed service to support defined agency requirements.

Agencies can best capitalize on the many benefits of a managed services model by focusing on the business of each agency’s mission, identifying areas to introduce IP-enabled services, and clearly defining managed services requirements.

What to Look for in a Managed Service Provider

Expertise

- Can deliver optimal network performance, including: lowest average latency, highest number of points of presence (POPs), proximity of network nodes near your locations, and lowest backbone utilization
- Has QoS capabilities
- Employs individuals with the experience, certifications, and qualifications to successfully manage your network

Services

- Offers the breadth of services your organization requires
- Offers service-level agreements that meet your requirements
- Offers path-diversity options
- Provides rich reporting capabilities

Peace of Mind

- Provides lifecycle support teams
- Features physically hardened, redundant operation centers
- Has disaster-preparedness capabilities
- Documented experience as reflected in past performance



Lessons Learned — Industry Best Practices

There are many industry sources to consider when applying industry best practices in a managed service environment. The Carnegie Mellon eSourcing Capability Model for Client Organizations (eSCM-CL) is one such resource. This source provides a “best practices” capability model with two purposes:

1. To give client organizations guidance that will help them improve their capability across the sourcing life-cycle
2. To provide client organizations with an objective means of evaluating their sourcing capability

Specific items for federal agencies to consider in developing requirements for a managed services environment include:

- **Performance management:** How will the provider deliver reporting against the agency’s defined service levels? How will those metrics be governed by the agency?
- **Statutory and regulatory requirements:** Which compliance requirements are relevant for the agency? Are these requirements well defined in the solution selection criteria?
- **Relationship management:** What strategic vendor and supplier relationships is your provider considering? What is the financial viability, performance, and long-term investment (R&D) value of these sources?
- **Future functionality:** How will the agency and the service provider incorporate technology refresh cycles, which provide future features and functionality offered by technology vendors?
- **Innovation:** How will the agency be able to request and introduce solution innovation during a long term contract?
- **Operational versus architectural responsibilities:** Agencies should relinquish day-to-day operational tasks while focusing on controlling architectural decisions that are critical to the success of its long-term vision and mission.

The Right Vendor (Technology Provider) Yields the Right Results

“A successful relationship requires efforts by both parties (clients and service providers). Clients cannot relinquish responsibility for their services when they transfer the service to a service provider. However, some clients tend to abdicate entire responsibility to providers after their sourcing agreement is signed.

“Sourcing engagements often include multiple service providers working together to meet the client’s needs. Regardless of the type of relationship, suppliers and partners of the service providers can have a significant impact on the effectiveness of the service delivery...”

The eSCM-CL v1.1: Model Overview

The eSourcing Capability Model for Client Organizations (eSCM-CL) v1.1

William E. Hefley, ITSqc, Carnegie Mellon University

Ethel A. Loesche, Visiting Scholar, ITSqc, Carnegie Mellon University

Cisco — A Powerful Ally for Service Providers

Leading the transition to a network-centric technology environment, Cisco can help service providers capture the maximum share of the lucrative Networkx opportunity. With a global footprint, industry-leading solutions and unsurpassed expertise, Cisco provides service providers with a powerful advantage in the highly competitive race for federal managed services dollars.

Why Cisco

- Over 20 years serving the federal government market
- More than 80 percent of federal agencies use Cisco enterprise solutions, which provide a common infrastructure across the federal government
- 600 dedicated federal professionals
- 2007 J.D. Power and Associates Certification for Excellence in Technology Support for the second year in a row
- US\$4 billion per year in research and development which provides unmatched innovation to federal agencies
- Established relationships with all federal service provider Networkx prime contractors



Learn More

To learn more about Cisco's managed services and how they can help your agency achieve its most ambitious objectives, email networkx@external.cisco.com, or visit

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