VALUE PRISM CONSULTING
VALUATION & DECISION SUPPORT ANALYSIS

Business Value of Microsoft® System Center 2012 Configuration Manager

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Abstract: Microsoft® System Center 2012 Configuration Manager ("Configuration Manager") is a systems management software that enables IT to remotely administer software deployment, settings management, and asset management tasks of servers, desktops, laptops, and mobile devices. This whitepaper is aimed at organizations' business and technology decision makers and presents a business case for migration to and adoption of Configuration Manager. Organizations adopting Configuration Manager – either upgrading their previous versions of Configuration Manager deployments or migrating from third party desktop and security management products – can achieve significant benefits via increased IT team and end-user productivity, maximizing their software and hardware investments, and lowering their total cost of ownership.

Microsoft System Center 2012 Configuration Manager

Disclaimer

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CONTENTS

Executive Summary 4

Introduction 5

Cost Savings and Benefits 6

Administration and IT Task Management 6

Consolidation 9

Cross-platform Integration 11

Deployment Costs 11

Cash Flow Analysis 13

Conclusion 14

Appendix A: About Value Prism Consulting 15

Appendix B: About This Study 15

Appendix C: More Information 15

EXECUTIVE SUMMARY

Microsoft® System Center 2012 Configuration Manager "early adopter" organizations were asked to share their experiences. Participants from several different industries and geographies deployed Configuration Manager looking to meet the following goals:

- Improve desktop and security management related IT administration tasks;
- Consolidate software for desktop and security management;
- Improve security and reduce operational risk via role-based access;
- Consolidate server infrastructure;
- Provide improved end-user experience via employee self-service features; and
- Improve management system performance and scalability.

The time and cost savings identified by each participant were aggregated and weighted based on the number of Configuration Manager servers deployed by the organization. Table 1 summarizes these savings, which are presented as an aggregate for a composite organization managing 50,000 clients:

One-time Savings	Hours	U.S. $*
IT Task Management	3,000	$ 160,000
Annual Savings	**Hours**	**U.S. $***
IT Task Management	4,900	$ 260,000
Consolidation	600	$ 30,000
Total	*5,500*	*$ 290,000*

Table 1: Summary of one-time and annual cost savings for the composite organization.

* Assumes a fully burdened hourly wage rate of U.S. $53 for an IT administrator. Cost savings are rounded to the nearest 5,000.

The cash flow analysis (refer to topic: Cash Flow Analysis, Table 3), considering a one-time deployment cost of approximately U.S. $110,000, shows that organizations can expect to see a three year Net Present Value (NPV) of approximately U.S. $760,000 and a payback in only 3 months:

Figure 1: Three year cash flow analysis for the composite organization.

The organization realized a NPV of approximately seven hundred sixty thousand U.S. dollars over a three year period; and was able to pay back its investments in about three months.

INTRODUCTION

IT administrators face many challenges in their desktop and security management tasks. Organizations are experiencing a constant growth in the number of desktop and remote clients, such as PCs and laptops, tablet computers, and smartphones that connect to the corporate network. Employees are more geographically distributed and mobile, with a large portion working from remote and home offices. Moreover, the constant drive towards increasing employee productivity necessitates a user-centric delivery of applications rather than a traditional device-centric approach that is seen in most client management solutions.

System Center 2012 Configuration Manager, part of the Microsoft® System Center 2012 platform, meets the administrative challenges by providing a unified interface and an automated set of administrative tools to deploy software, protect data, monitor health, and enforce compliance across all devices in the organization. Using Configuration Manager, organizations increase their IT productivity and efficiency and drive down the time and cost required to manage the infrastructure.

This business value study identifies the cost savings and benefits realized by the early adopter organizations – which either updated their previous versions of Configuration Manager deployments or migrated from third party desktop and security management products – and presents them as an aggregate for a composite organization with the following demographics (Table 2):

Demographic data	Value
Number of clients managed by Configuration Manager	50,000
Number of full time employees	82,000
Number of desktop and security management servers before consolidation	39
Number of desktop and security management servers after consolidation	26
Number of desktop and security IT administrators	32

Table 2: Demographic data for the composite organization.

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Although the cost savings and benefits may vary for different organizations, business and technology decision makers can scale the presented data to their own client deployment profile and build an initial business case for adopting Configuration Manager.

COST SAVINGS AND BENEFITS

Overall, the early adopter organizations participating in this business value study realized efficiency gains and cost savings by:

- Reducing administrative overheads and delivering agile services via automation of systems management tasks and providing employees with many self-service features;
- Consolidating their server, client, and security management IT infrastructure; and
- Gaining tighter control and visibility over all their Microsoft Windows® based or non-Windows based desktops, servers, and mobile assets.

One-time labor effort savings of **3,000** hours or **U.S. $160,000**; and Annual labor effort savings of **4,900** hours or **U.S. $260,000** per year

Administration and IT Task Management

System Center 2012 Configuration Manager enables infrastructure management and security administrators to streamline and automate their day-to-day operations. By making it easier and faster to keep all their systems well managed and compliant, Configuration Manager helps organizations save on server management and administrative overhead costs.

Overall, the composite organization is expected to realize a one-time administrative labor savings of 3,000 hours (or approximately U.S. $160,000 at a fully burdened IT administrator hourly wage rate of U.S. $53) in site installation and infrastructure deployment tasks. The organization also achieves an annual administrative labor savings of 4,900 hours (or approximately U.S. $260,000) per year in client management, administration, and infrastructure maintenance related tasks. A breakdown of some of the key features and improvements contributing to these savings is discussed below:

"Before, we would manually package, deploy, and test security patches on a monthly basis. After introducing Configuration Manager, we have eliminated the need to package, and also cut down on the time for deployment and testing."

– Systems engineer at a public sector institution in Australia

Unified Management

Early adopter organizations identified a myriad of problems including the need to purchase and maintain separate hardware and software solutions for desktop security and management, managing these tasks from different administrative consoles, and recruit and train multiple administrative teams. A systems engineer at a large public sector institution in Australia explains, "Before, we would manually package, deploy, and test security patches on a monthly basis. After introducing Configuration Manager, we have eliminated the need to package, and also cut down on the time for deployment and testing."

Configuration Manager provides a single interface for managing configuration and securing clients. It integrates with Active Directory® Domain Services (AD DS), Microsoft SQL Server®, Internet Information Services (IIS), and other Windows Server® features such as BranchCache®. This reduces time by simplifying tasks such as user and device discovery, managing network bandwidth, and monitoring client operations and health.

2,600 hours or **U.S. $140,000** saved each year via unified management features of Configuration Manager

Also, along with role-based access to management tasks, a unified administrative console for client management and endpoint protection provides

better visibility and protection against malware and virus attacks. A systems administrator at a European retail chain says, "One of our primary goals was to unify security and desktop management. With Configuration Manager, it is much easier and faster to delegate roles for software updates and endpoint protection, and manage them from one console."

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Desktop and Mobile Client Management

Relying on discrete management tools for desktop, mobile, and virtual client environments, organizations had to create and manage different sets of policies and take a different set of actions when system incidents occurred. Now with one management console, auto deployment rules, auto remediation, and integrated tools such as Windows PowerShell™, Task Sequencer, Collections management, and many others, client configuration tasks are done more quickly.

Administrators now have a central location for creating and applying all client-related policies. With Windows PowerShell[1], administrators can now reduce most of the custom scripting requirements of the previous management systems, and automate console operations, such as creating user and device collections, configuring client settings, and creating email alerts. A systems management administrator at a large electronics manufacturing firm in the United States explains[2], "PowerShell greatly enhances our automation capabilities. We had created a lot of custom scripts over time. The effort required to create any new actions now should be significantly less due to PowerShell integration [with Configuration Manager]."

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– Systems management administrator at a US based manufacturing company

Using the mobile device management feature – Microsoft® Exchange Server connector – organizations can now manage and report on mobile devices that connect to Exchange Server without the need of a client installed on these devices.[3]

Configuration Manager also makes performing administrative tasks much faster via a new context-sensitive ribbon-based interface (similar to Microsoft Office), built-in search capabilities, and grouping of administrative tasks based on business role. The role-based administration was seen by early adopters as a major improvement to Configuration Manager. This allowed organizations to reduce the operational risk by allowing admins to only see and manage objects based on a combination of security roles, scopes, and collections. An enterprise

1,000 hours or **U.S. $55,000** saved each year via improvements in desktop and client management capabilities of Configuration Manager

[1] Requires System Center 2012 Configuration Manager SP1 (beta available September 2012), which provides Windows PowerShell integration with Configuration Manager.
[2] Customer is an early adopter of System Center 2012 Configuration Manager SP1 and was already using some of the new capabilities of SP1 when interviewed for this study.
[3] System Center 2012 Configuration Manager SP1 greatly enhances mobile device management by supporting additional mobile devices, such as those running Windows Phone 8, Windows RT, Android, and iOS (requires Windows Intune connector in Configuration Manager and subscription to Windows Intune).

infrastructure administrator at a United States based financial institution says, "We had a lot of admins who had more access than required resulting in accidental deployment of settings to undesired machines. Now we are able to give privileged access, reduce our operational risks, and save time remediating these machines."

Improvements to the operating system deployment (OSD), software update, and application deployment processes and other features such as auto enrollment of clients, remote management, and mobile device management further helped these early adopter organizations reduce the IT administrative overheads. All of the early adopters evaluating client management features realized time savings in software deployment tasks; while two-thirds also experienced reduction in the labor effort in managing client rules and policies.

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– Enterprise infrastructure administrator at a US based financial institution

Sites and Site Administration

Traditionally, security and desktop management sites required constant maintenance and monitoring to ensure efficient delivery of services and reduce the risk of site failures. System Center 2012 Configuration Manager brings many improvements in site roles and site installation and maintenance tasks. The latest release introduces the Central Administration Site role that provides a central point of administration with the ability to manage multiple sites and hierarchy wide configurations.

One –time labor effort savings of **3,000** hours or **U.S. $160,000**; and Annual labor effort savings of **600** hours or **U.S. $30,000** per year from improvements in site installation and maintenance tasks

The scalability enhancements of Configuration Manager allow organizations to reduce the number of primary and secondary sites and distribution points required for managing their client devices and thus simplify their Configuration Manager architecture, which in turn reduces the amount of time required in maintenance of individual site functions. [Note: This does not include the effort required in maintenance of physical servers. Server hardware maintenance is covered in the Consolidation topic below.]

For example, System Center 2012 Configuration Manager[4] supports 400,000 clients per hierarchy and 250 distribution points per primary site compared to 300,000 clients per hierarchy and 100 distribution sites supported in System Center Configuration Manager 2007 R3[5]. Organizations also realized a reduction in the number of secondary sites by replacing them with System Center 2012 Configuration Manager distribution points, which now have the ability to throttle bandwidth. A systems management administrator at a large electronics manufacturing firm in the United States explains that they were able to bring down the site maintenance effort from 100 hours before to only 25 hours now, "With Configuration Manager 2007 we had 65 primary sites, which we have cut down to 3 now [with System Center 2012 Configuration Manager]. This has

"With Configuration Manager 2007 we had 65 primary sites, which we have cut down to 3 now [with System Center 2012 Configuration Manager]. This has resulted in significantly reducing the administrative overhead – by almost one-fourth of the original time."

– Systems management administrator at a US based manufacturing company

[4] http://technet.microsoft.com/en-us/library/gg682077.aspx
[5] http://technet.microsoft.com/en-us/library/bb680869.aspx

resulted in significantly reducing the administrative overhead – by almost one-fourth of the original time."

Furthermore, features such as Setup Downloader, Prerequisite Checker, Language Pack Support, and Database Replication reduce the amount of time required in site and distribution point installation activities. 75% of the organizations participating in the TCO study experienced reduction in labor effort required for site installation and maintenance activities.

Reporting and Alerts

Most organizations typically spent significant amount of time creating custom queries and ad-hoc reports to monitor and present the status of client health and security. Configuration Manager provides full integration to Microsoft SQL Server Reporting Services and the Report Builder tool. Administrators can now monitor and run reports on desktops and security from within the Configuration Manager console using the Report Viewer. With built-in templates, report creation and actions, such as troubleshooting steps, are faster. An IT administrator at a European public sector organization says, "We often relied on the native reporting features of Configuration Manager 2007. However the process of figuring out where the information is stored, writing queries, and creating custom reports took a long time. With [System Center 2012] Configuration Manager, we are able to use SQL Server to build reports for complex queries in a matter of minutes."

Moreover, administrators are now able to monitor the site operations and conditions in near real-time from within the Configuration Manager console, set up email alerts, and provide self-service features to employees to run their own reports using SQL Server Reporting Services. By using these reporting features, all of the early adopter organizations realized time savings in report building and troubleshooting tasks.

Other Improvements

Early adopter organizations also realized, or expect to in the future, improvements in IT task management from the following feature improvements of Configuration Manager– asset intelligence and inventory tracking, power management, user-centric application delivery, and employee self-service features such as Software Catalog.

Consolidation

Over time, the increasing number of client systems and the corresponding increase in the number of management servers makes infrastructure maintenance a daunting task for the IT teams. Almost half of the early adopter organizations identified consolidation of their IT infrastructure as the primary goal for migrating to System Center 2012 Configuration Manager. The scalability and performance improvements of Configuration Manager helped early adopter organizations reduce their hardware investments and the associated support costs. A systems management administrator at a large electronics

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– IT administrator at a European public sector organization

600 hours or **U.S. $30,000** saved each year via improved reporting and monitoring

Up to **100** hours or **U.S. $5,000** saved each year via other feature improvements in System Center 2012 Configuration Manager

manufacturing firm in the United States explains, "We spend almost [U.S.] $800 per server on annual maintenance activities. Configuration Manager scales to our organization size and now we are able to reduce the number of servers from 110 to 35, thus saving on the maintenance costs."

Organizations were able to cut down on the number of physical servers by:

- Co-locating site system roles onto single server instead of spreading these across multiple servers;
- Eliminating the servers required for client security as System Center 2012 Endpoint Protection integrates with Configuration Manager; and
- Simplifying system architecture by reducing the number of primary and secondary sites and the distribution points.

Moreover, Configuration Manager now supports configuring distribution points that run as a cloud service in Microsoft® Windows Azure.[6] This eliminates the need to plan for, purchase, and maintain the hardware for installing the site system roles – further reducing the infrastructure requirements and costs.

By consolidating the number of physical servers and desktop and security management software, IT departments can reduce not only their hardware maintenance effort, but also cut down on the overall number of licenses that are required for the client management and security infrastructure. A systems administrator at a European retail chain says, "One of the reasons for consolidation was that Endpoint Protection is now integrated into our CAL [client access licenses]. We no longer need to purchase about 10,000 licenses of our previously used antivirus solution."[7]

Apart from reducing the number of servers, Configuration Manager also enables features that allow organizations to make optimal use of their storage infrastructure. Although none of the early adopter organizations were able to evaluate any of the storage improvements so far, the following storage space recovery and savings can be expected:

- Centralized content library acts as a single instance store for all software update files and contents thus saving on storage space. In earlier versions of Configuration Manager, the content files were often distributed in different deployment packages and stored multiple times on the site server and on distribution points.

"We spend almost [U.S.] $800 per server on annual maintenance activities. Configuration Manager scales to our organization size and now we are able to reduce the number of servers from 110 to 35, thus saving on the maintenance costs."

– Systems management administrator at a US based manufacturing company

600 hours or **U.S. $30,000** saved each year due to reduced administration overhead from consolidation of server infrastructure

"One of the reasons for consolidation was that Endpoint Protection is now integrated into our CAL [client access licenses]. We no longer need to purchase about 10,000 licenses of our previously used antivirus solution."

– Systems administrator at a European retail company

[6] Requires System Center 2012 Configuration Manager SP1 (beta available September 2012). Also requires subscription to Windows Azure cloud service. All costs are determined by the customer's Windows Azure licensing, and the volume of data that is stored and downloaded by clients. No additional licensing costs are added by Configuration Manager.

[7] System Center 2012 Endpoint Protection subscription for managed clients is now included in the Core Client Access License (CAL) and Enterprise CAL suites. For managed servers, Endpoint Protection is included in the Server Management Licenses (SML).

- Similarly, when compared to earlier versions of Configuration Manager, application content is now no longer duplicated for multiple application revisions thus minimizing the hard disk space requirements.

Cross-platform Integration

The early adopter organizations also relied on client PCs and servers that were running non-Windows operating systems including Mac OS, Linux, and UNIX. Currently these machines were either unmanaged or being managed by third-party management software such as Managesoft, Tivoli, or BMC BladeLogic. In future, these organizations planned to use the cross-platform integration enhancements of Configuration Manager Service Pack 1 for administration of non-Windows based clients and servers.

With Service Pack 1, Configuration Manager supports installation of the client on computers that run Mac OS X and servers running various Linux or UNIX operating systems. This allows administrators to perform compliance settings, deploy software, and include these devices in the hardware inventory collection tasks. Furthermore, through integration with Citrix XenApp, non-Windows users can still access business applications that are compatible with Configuration Manager.

Although none of the early adopter organizations currently used Configuration Manager to manage their non-Windows clients, the IT teams can expect to eliminate the costs of third party software and also cut down on the administration overheads via a single management interface.

DEPLOYMENT COSTS

The previous topics focused only on the one-time and annual cost savings that organizations can achieve when using System Center 2012 Configuration Manager. However, when calculating the returns from Configuration Manager implementation, it is also important to look at the deployment costs based on the key categories discussed below:

- ***Software licensing*** – The composite organization required 26 configuration management and security servers, and managed 50,000 client devices. However, the software license cost was calculated to be zero as all of the early adopter organizations participating in this study were part of an Enterprise Agreement with Microsoft, and the upgrade to the latest version of Configuration Manager was covered for free as a part of the Software Assurance program. Calculate the number of Configuration Manager and SQL Server licenses that may be required for your organization based on the licensing agreements that you have with Microsoft.
- ***Hardware costs*** –The composite organization in this study required 26 servers after adopting Configuration Manager. Whereas some of the participating organizations required purchase of new server hardware,

most organizations were able to consolidate their existing server infrastructure and reuse the servers that they already own, which led to significant variation in hardware cost across organizations. However, if we consider that the composite organization requires purchase of 26 new commercial two-processor blade servers costing approximately U.S. $1,500 to U.S. $2,500 each, the total hardware cost will be in the range of U.S. $39,000 to U.S. $65,000. Assess the need for new or upgrade hardware for your organization in order to calculate hardware costs for your organization.

- ***Training costs*** – Some of the administrators may require training on the new features of Configuration Manager. Most early adopter organizations did not require any training apart from the feature introduction during the Microsoft Airlift program and some internal learning on-the-go. An enterprise infrastructure administrator at a United States based financial institution says, "The product [Configuration Manager] is an industry standard and large enough in scope that it doesn't require any special skills training. There's a lot of training material and community knowledge readily available. This helps us reduce our risk using the product and makes it easy for us to pick up a Configuration Manager admin from the market even if we lose one." The composite organization was found to require about 100 hours of training across all of its IT, amounting to approximately U.S. $5,000.
- ***Planning and Deployment*** – Labor effort is required in planning, installation, data and settings migration, and testing of the new Configuration Manager infrastructure. The composite organization required approximately 1,000 hours for above activities, amounting to approximately U.S. $55,000.

"The product [Configuration Manager] is an industry standard and large enough in scope that it doesn't require any special skills training. There's a lot of training material and community knowledge readily available. This helps us reduce our risk using the product and makes it easy for us to pick up a Configuration Manager admin from the market even if we lose one."

– Enterprise infrastructure administrator at a US based financial institution

CASH FLOW ANALYSIS

As seen in the cash-flow chart (Figure 2), System Center 2012 Configuration manager provides significant cost savings at a reasonable investment. The composite organization realized a Net Present Value of approximately seven hundred sixty thousand U.S. dollars over a three year period. Also, the organization was able to pay back its investments in about three months.

Figure 2: Three year cash flow from deployment of System Center 2012 Configuration Manager

Table 3 summarizes the deployment costs and the one-time and annual cost savings data for the composite organization, and the assumptions used for the cash flow analysis:

	Year 0	Year 1	Year 2	Year 3
Hardware Costs[1]	$ 50,000			
Training Costs[2]	$ 5,000			
Labor Costs	$ 55,000			
Total Costs	***$ 110,000***	***$ -***	***$ -***	***$ -***
One-time Cost Savings		$160,000		
Annual Cost Savings		$290,000	$290,000	$290,000
Total Cost Savings	***$ -***	***$450,000***	***$290,000***	***$290,000***
Net Cash Flow	***$(110,000)***	***$450,000***	***$290,000***	***$290,000***
Cumulative Benefit	***$(110,000)***	***$340,000***	***$630,000***	***$920,000***
Net Present Value[3]	***$ 760,000***			
Payback Period	***3** months*			

[1] Midpoint of the cost range (U.S. $39,000 to U.S. $65,000) identified in the Deployment Costs section was used for the analysis.

[2] Productivity hours lost during training of approximately 100 hours multiplied by the wage rate of U.S. $53 per hour is used. No additional training facilitation and travel costs were considered.

[3] A discount rate of 10% was used in the NPV calculation.

Table 2: Three year cash flow summary for the composite organization.

All values are rounded to the nearest 5,000.

CONCLUSION

System Center 2012 Configuration Manager can help optimize an organization's hardware and software investments in client and security management. Configuration Manager reduces the administration overhead for many IT teams by automating many administrative tasks, consolidating physical hardware and software licenses, and giving administrators the flexibility to manage non-Windows OS based devices from the same management interface. Moreover Configuration Manager provides many self-service features in reporting and software deployment that improve end-user productivity as employees now have greater control over their managed systems.

Organizations can achieve significant cost savings by adopting Configuration Manager for their client and security management needs. Although, the participating organizations currently only realized savings from improved task management features and consolidation of their servers, they can expect further savings in storage power management, space utilization, and cross-platform integration as the organizations mature in their use of Configuration Manager features.

The benefits and deployment costs presented in the study were representative of the composite organization profiled earlier. The savings will vary for different organizations based on the deployment size, function needs, and the maturity using the product. Organizations can use the numbers presented here as a baseline and scale them to their requirements to prepare their own business case.

APPENDIX A: ABOUT VALUE PRISM CONSULTING

Value Prism Consulting is a valuation and management consulting firm that provides services to a broad range of clients worldwide. Our Management Consulting Practice assists clients with business case development and decision support analysis. Our solutions measure the results of various options related to business process improvement, capital and major budget spending decisions including infrastructure upgrades, and the value of new product introductions. Visit www.valueprism.com for more information.

APPENDIX B: ABOUT THIS STUDY

Participants from System Center 2012 Configuration Manager Technology Adoption Program (TAP) were interviewed over phone towards the end of 2012 to share their experiences ad expectations of the cost savings and benefits from using the Configuration Manager product.

Interviewees represented companies across North America, EMEA, and Asia Pacific (Figure 3). These companies, operating in different industry segments were mainly large organizations ranging in size from 5,000 to over 100,000 employees. See chart below for distribution of companies by location.

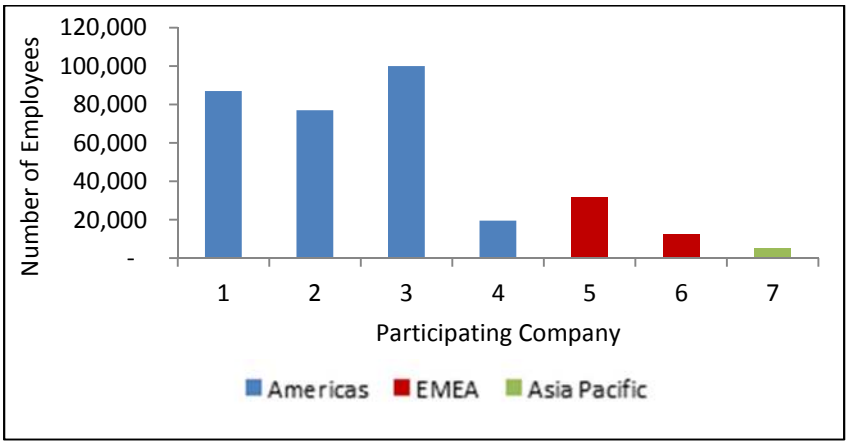

Figure 3: Participating organizations by employee size and geography

APPENDIX C: MORE INFORMATION

For more information on System Center 2012 Configuration Manager, follow these links:

http://www.microsoft.com

http://www.microsoft.com/en-us/server-cloud/system-center/configuration-manager-2012.aspx

http://technet.microsoft.com/en-us/library/cc507089.aspx

http://blogs.technet.com/b/system_center_in_action