



## Simplified Windows Vista Migration

Mitigating Business Risk through Deployment Automation

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## Executive Summary

As Microsoft's first major operating system (OS) release since 2001, Windows Vista™ represents an opportunity for enterprise IT departments to improve their control, security, and management of increasingly distributed and mobile IT environments. To make the most of this opportunity, organizations must take care to avoid missteps. Any enterprisewide deployment of an OS can be expensive and time consuming, while a poor deployment can seriously disrupt business operations.

To accelerate Windows Vista migration, Microsoft developed Microsoft Solution Accelerator for Business Desktop Deployment 2007 (BDD) — a set of best practices, guidelines, and supporting tools.

Working with Microsoft, BMC Software has developed a solution for further streamlining Windows Vista and Windows XP deployments by automating and enforcing the BDD methodology. The BMC® Desktop Deployment Module provides predefined change management templates and an automated workflow specifically developed to accelerate and simplify the deployment of Windows Vista using BDD guidelines. As an integral component of the only automated, integrated, closed-loop Windows Vista deployment solution on the market (BMC® solutions for Closed-loop Change and Configuration Management), the BMC Desktop Deployment Module captures the BDD best practices in a practical closed-loop process, eliminating the process gaps and manual procedures common to the open-loop approach. Leveraging Microsoft's recommended tools for Windows Vista deployment, the solution provides accountability, auditability, and control over the deployment process.

For businesses already benefiting from BMC solutions for Closed-loop Change and Configuration Management, the BMC Desktop Deployment Module will help automate and streamline Windows Vista deployment at no additional cost. For those considering BMC solutions for Closed-loop Change and Configuration Management, the deployment of Windows Vista can serve as both a working example and a successful first step in increasing productivity, driving down costs, and reducing business risk through closed-loop change and configuration management.

This paper illustrates how organizations can use BMC solutions for Closed-loop Change and Configuration Management to ensure successful Windows Vista deployment today, while establishing a foundation to support ITIL best practices and comply with governance guidelines going forward.

## Windows Vista and Microsoft Solution Accelerator for Business Desktop Deployment

Windows Vista is a much anticipated step forward for enterprises that rely on the Microsoft Windows platform. Windows Vista delivers the features and capabilities that will help end users increase productivity. Just as important, it includes security and manageability improvements that IT organizations need to regain and maintain control over increasingly distributed and mobile IT environments.

As the first major release of a Windows OS since Windows XP, Windows Vista represents a significant event for organizations. Forrester predicts that Windows Vista will be deployed on five million new U.S. business PCs in 2007.<sup>1</sup> For most enterprises, the question is not “Will we migrate to Windows Vista?” It is simply, “When?”

Even those companies that are not planning an immediate deployment are beginning to focus on — and plan for — Windows Vista. Recognizing that manual deployments can be costly and time consuming, and that a poorly managed deployment can cause bigger problems with increased business risk, enterprises are looking for the resources they will need for a successful deployment in the coming months or years.

To help customers avoid these pitfalls and simplify the enterprise adoption of Windows Vista, Microsoft has collaborated with leading deployment system integrators and management vendors, such as BMC, to jointly enhance Microsoft Solution Accelerator for Business Desktop Deployment 2007 (BDD) methodologies. BDD is Microsoft's recommended best-practice methodology — complete with guidance and tools — designed to help IT professionals deploy Windows Vista and Microsoft Office 2007 efficiently.

In support of IT professionals using BDD guidance, Microsoft also offers several free tools that it recommends for deployment tasks, including:

- > **ImageX** — a utility for capturing and creating disk images using the Windows Imaging Format (WIM)
- > **Microsoft Windows User State Migration Tool (USMT)** — a tool that migrates files and personal settings from Microsoft Windows 2000 and Windows XP to Windows Vista
- > **Windows Preinstallation Environment (PE)** — a preboot OS that provides IT professionals with access to network and other resources needed to install and troubleshoot Windows Vista
- > **Application Compatibility Toolkit 5.0** — a set of tools that helps IT departments inventory and analyze applications to ensure they are compatible with Windows Vista

## The Need for an Automated Deployment Process

Even with a step-by-step methodology and tools to simplify common deployment tasks, it is likely that some enterprises will struggle with the deployment of Windows Vista. The typical IT budget is already stretched thin; and IT professionals with extra time on their hands to conduct a major OS deployment are rare.

Microsoft estimates that manual deployment of Windows can cost between \$500 and \$1,000 per desktop, while “Light Touch” deployment using BDD and its associated tools can cost \$350 per desktop. Using a more comprehensive set of automated deployment tools, according to Microsoft, can drop the cost to below \$100.

Clearly, enterprises that implement a workflow that automates the BDD guidelines, while also leveraging the tools Microsoft has made available, are positioned to accelerate the deployment of Windows Vista while minimizing risk and costs. Those businesses that view Windows Vista deployment in the context of a comprehensive change and configuration management solution will be well-positioned after the migration to identify, respond to, and control the necessary changes to their IT environment, and to maintain alignment between business, technology, and best-practice processes.

## BMC Business Desktop Deployment Module

At its core, every major OS deployment initiative is about managing and controlling change. When you base your Windows Vista deployment on a solid change and configuration management foundation, you ensure accountability, auditability, and control over the deployment process.

When viewed in this light, it becomes clear that enterprise Windows Vista deployment cannot be effectively carried out using a fragmented, siloed approach characterized by manual procedures, poor coordination, and weak integration.

BMC solutions for Closed-loop Change and Configuration Management integrate and automate the individual rules and processes in change management, release management, and configuration management into a closed-loop process that encompasses all phases of the change lifecycle: request, planning, implementation, and verification. With BMC solutions for Closed-loop Change and Configuration Management, IT organizations can deploy Windows Vista using repeatable and automated workflows and policies based on best practices that adhere to corporate policies, and to IT Infrastructure Library (ITIL®) and BDD guidelines.



## Closed-loop Change and Configuration Management

There are a number of significant disadvantages to an open-loop approach to change and configuration management. In the context of Windows Vista deployment, these disadvantages can result in unnecessary added risk to organizations that fail to take steps to automate and enforce consistent application of the BDD methodology. For example, one IT group, lacking an automated way to solicit and acquire approvals, may skip the approval process altogether. By failing to secure necessary approvals, the group would be in violation of corporate policies established to ensure compliance with Sarbanes-Oxley or other regulations.

Through integration and automation of change processes across the entire change lifecycle, BMC solutions for Closed-loop Change and Configuration Management eliminate the process gaps and manual procedures common to the open-loop approach. From request through planning, approval, implementation, and verification, the closed-loop approach streamlines the deployment process and eliminates inefficient “swivel chair” operations, in which changes entered and managed in one system are manually handed off to be executed in another. Using BMC solutions for Closed-loop Change and Configuration Management to

support ITIL best practices, your teams can monitor the current status of all changes, including Windows Vista deployments. More importantly, they can track the entire process from the time the BDD tasks are introduced to the time they are executed, and can produce a detailed audit trail and reports required by corporate governance and regulatory mandates. As a result, for each change you have a complete, reliable record of who initiated the change, who approved it, who executed it, and how it was verified — providing your team with comprehensive compliance reporting to fulfill audit requirements.

With BMC solutions for Closed-loop Change and Configuration Management, a typical Windows Vista migration effort begins with a change request to migrate a set of machines (see Figure 2.) The change request is then processed, and must be approved before any action is taken. Windows Vista is then deployed as an in-place upgrade on an existing machine, or through a so-called “forklift upgrade” in which the entire machine is replaced. In either case, the machine’s user settings and data files are captured and transferred to the upgraded system. Once the upgrade has been implemented, the change request is closed, and the change is verified — closing the loop on the complete process.

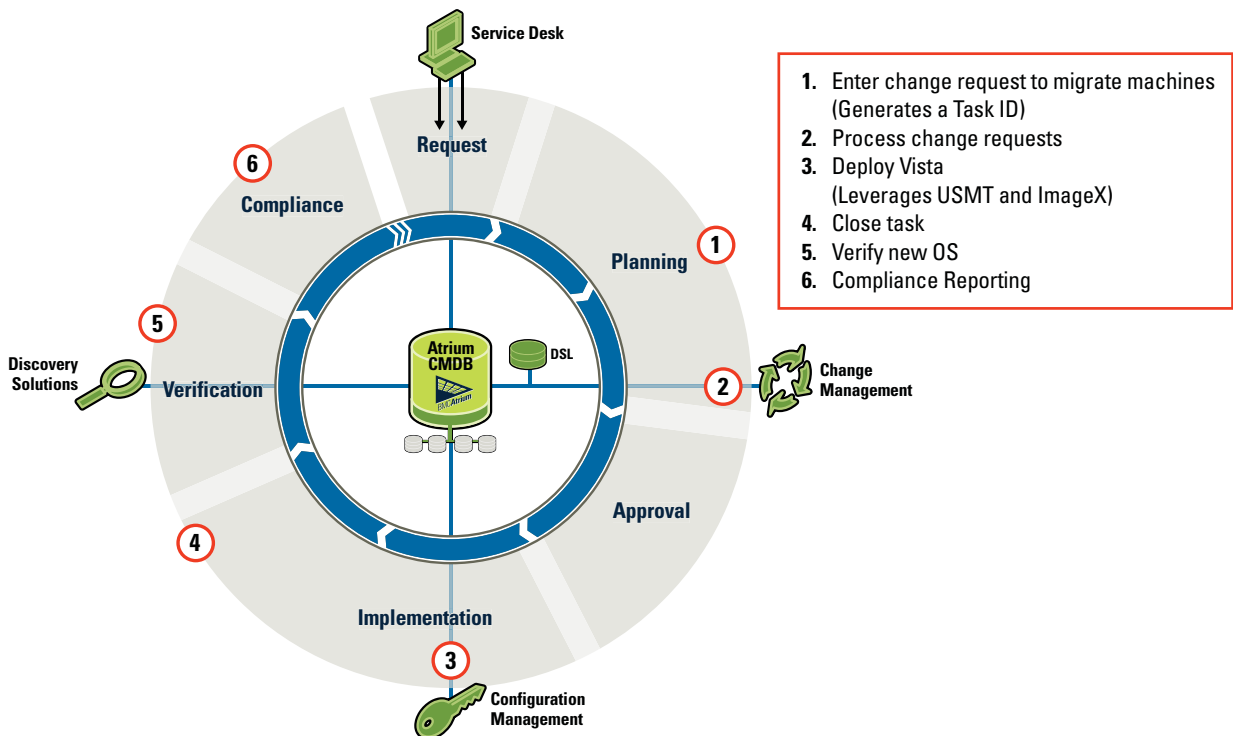


Figure 2. BMC Solutions for Closed-loop Change and Configuration Management ensure accountability, auditability, and control over the Windows Vista deployment process.

## Enforcing the Process

BDD methodology provides an excellent set of guidelines and documentation for deploying Windows Vista across the enterprise. However, benefits will only accrue if your enterprise follows the guidelines. Without a process in place to request, approve, carry out, and verify deployments, BDD steps may be bypassed altogether, resulting in any number of catastrophic scenarios. This is where an automated solution that follows and enforces the BDD guidelines provides real value. For example, without an enforceable approval mechanism in place, an IT manager may begin deploying Windows Vista to a business unit that is unprepared for the switch and unable to meet its own internal deadlines as a result of the upheaval.

There are tools available that will automate aspects of the Windows Vista deployment process. However, these tools often lack both integration with a configuration management database (CMDB) and mechanisms to provide feedback throughout the process.

With BMC solutions for Closed-loop Change and Configuration Management, including the BMC Desktop Deployment Module, each change request is entered, approved, planned, scheduled, executed, and verified — making it the only automated, integrated, closed-loop Windows Vista deployment solution available. The solution simplifies and automates the deployment workflow, ensuring consistency and repeatability while increasing productivity.

In addition, activities and tasks are logged, and steps in the process are recorded, enabling your IT administrators to readily track progress and analyze log files to resolve any issues that arise. For example, and administrator planning the deployment of several dozen machines over a weekend can schedule the work and monitor the progress using BMC® Remedy® Change Management.

BMC solutions for Change and Configuration Management enable you to centrally manage Windows Vista images from one source within the enterprise. An image created and maintained at corporate headquarters will be automatically distributed to deployment management servers at corporate offices around the world. With BMC, you maintain a single, central image that is synchronized efficiently, securely, and reliably across the enterprise.

## Based on a Single Source of Truth

The BMC® Atrium™ CMDB provides the foundation for closed-loop change and configuration management and the basis for effectively coordinating a Windows Vista deployment. It is an intelligent data repository that maintains an accurate, current representation of the enterprise IT infrastructure.

The BMC Atrium CMDB acts as a single source of truth for the IT environment. For Windows Vista deployments, this repository, tightly integrated with BMC solutions for Closed-loop Change and Configuration Management, is an invaluable resource.

In the initial stages of a Windows Vista deployment, your IT team can use the BMC Atrium CMDB to plan the migration by surveying the hardware specifications of all machines and assessing their readiness. Using the BMC Atrium CMDB, your team can easily identify machines classified as Window Vista Capable or Windows Vista Premium Ready, as well as determine which machines do not meet the minimum system requirements for Windows Vista. This information can then be used to prioritize and target Windows Vista upgrades.

As part of the closed-loop process, once a deployment is complete, the BMC Atrium CMDB is automatically updated to reflect the new status of each machine that has been upgraded. The BMC Atrium CMDB is a common view of users and clients (desktops, laptops, and PDAs) that is shared by change management processes, configuration management automation, and software license management. This capability eliminates data overlap, gaps, and conflicts among multiple discovery tools, providing a basis for not only Windows Vista deployment, but any number of IT management processes.

Further, BMC Discovery automatically discovers the details of the changes implemented during Windows Vista deployment as it populates and maintains the BMC Atrium CMDB. Reports of these captured changes provide a second, independent confirmation of the OS migration in the enterprise that satisfies ITIL “separation of duties” guidelines on validating changes. Automated and periodic discovery of infrastructure changes enables your team to quickly identify anomalous configurations and maintain compliance with licensing agreements, regulatory mandates, and corporate policy.

## An Example Deployment

To illustrate how BMC solutions for Change and Configuration Management automate efficient Windows Vista deployment, let's take a closer look at how BMC® Remedy® IT Service Management (ITSM) solutions, BMC® Configuration Management, the BMC Desktop Deployment Module, and Microsoft deployment tools work together in a typical deployment scenario.

- > As a first step, an IT manager opens a request for change (RFC) in BMC® Remedy® Service Desk to initiate a deployment of Windows Vista.
- > The manager uses predefined change templates from the BMC Desktop Deployment Module to review the deployment process. These change templates capture Microsoft BDD best practices, mapping BDD Task Groups to Change Task Groups in the BMC Desktop Deployment Module.
- > BMC Remedy Service Desk automatically assigns the change request to a qualified IT technician.
- > Using BMC Remedy Change Management, the technician reviews the assigned change request and launches an easy to use BMC Migrate Operating System Task Wizard which easily guides the implementer through the deployment process. (see Figure 3.)
  - Identify targets
  - Check Windows Vista readiness
  - Generate Unattend.XML (an XML-based unattended installation file that automates prompt responses)
  - Capture user settings
  - Deploy Windows Vista
  - Apply user settings

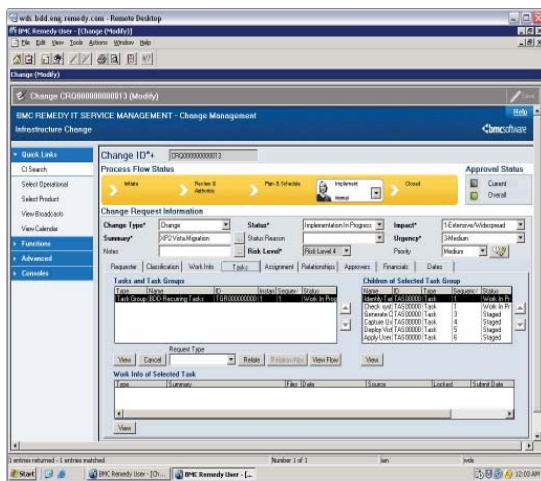


Figure 3. BMC Change Management provides a detailed, ordered list of key deployment tasks.

- > Accessing current machine information in the BMC Atrium CMDB, the technician selects target machines that are identified as Windows Vista Capable or Windows Vista Premium.
- > The technician reviews out-of-the-box reports that provide detailed Windows Vista readiness information for each target machine.
- > With the Microsoft User State Migration Tool, the technician captures all relevant user settings and data.

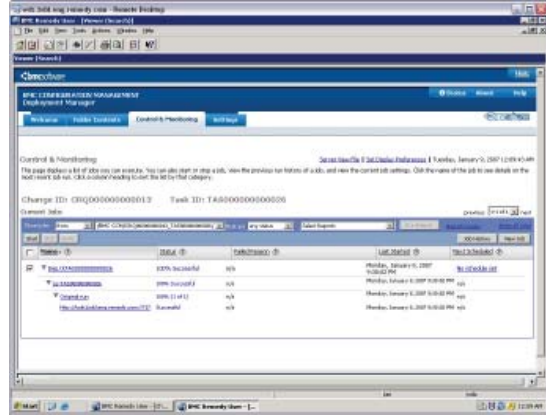


Figure 4. BMC Configuration Management deploys and validates the Vista deployment, which is a critical part of the BMC closed-loop process to help ensure compliance.

- > Using BMC® Configuration Management Deployment Manager, the technician schedules the deployment of Windows Vista for execution at a convenient time (typically at night or on a weekend). During migration, the image created using ImageX, Microsoft's imaging tool, is deployed on the targeted machines. Once completed, the technician reviews the status of the deployment using out-of-the-box live migration status reports and detailed log information, if needed. (see Figure 4.)
- > Upon successful deployment, integration between change and configuration management closes the loop on the change, and the open change request is closed.
- > The BMC Atrium CMDB is automatically updated with the new state of each configuration item (CI), which reflects the successful deployment of Windows Vista on each targeted machine.

Through coordinated and automated support for ITIL and BDD best practices, BMC has provided an end-to-end, integrated solution for Windows Vista deployment.

## Beyond Windows Vista

Windows Vista represents an opportunity for many businesses to improve the productivity of their workforce and to bring the IT infrastructure under the secure control of the IT team. To maximize the value of Windows Vista, the enterprise must minimize the costs and disruptions associated with a major OS upgrade.

BMC solutions for Change and Configuration Management offer the industry's most comprehensive closed-loop Windows Vista upgrade solution that enforces and automates an auditable, enforceable, and repeatable deployment process. BMC Desktop Deployment Module templates provide a practical workflow for implementing the BDD methodology using upgrade tools provided and recommended by Microsoft.

For enterprises that have already deployed BMC solutions for Closed-loop Change and Configuration Management, the BMC Desktop Deployment Module represents an easy way to automate and streamline Windows Vista deployment at no additional cost.

For those considering BMC solutions for Closed-loop Change and Configuration Management, a migration to Windows Vista can provide a practical case study in the advantages of closed-loop change and configuration management, including increased productivity, lower costs, and minimizing business risk.

The deployment of Windows Vista, while a major event for many IT departments, is just a beginning for some organizations. Enterprises that use BMC solutions for Change and Configuration Management as the foundation for their Windows Vista migration are strategically positioned to manage and control change enterprisewide.

For more information, please visit [www.bmc.com](http://www.bmc.com).

## Endnote

1 Forrester Research, Inc., "Windows Vista — Finally!," S. Yates and B. Gray, November 2006



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## About BMC Software

BMC Software delivers the solutions IT needs to increase business value through better management of technology and IT processes. Our industry-leading Business Service Management solutions help you reduce cost, lower risk of business disruption, and benefit from an IT infrastructure built to support business growth and flexibility. Only BMC provides best practice IT processes, automated technology management, and award-winning BMC® Atrium™ technologies that offer a shared view into how IT services support business priorities. Known for enterprise solutions that span mainframe, distributed systems, and end-user devices, BMC also delivers solutions that address the unique challenges of the mid-sized business. Founded in 1980, BMC has offices worldwide and fiscal 2006 revenues of more than \$1.49 billion. Activate your business with the power of IT. [www.bmc.com](http://www.bmc.com).

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