Reducing TCO in Managing Microsoft Exchange Server

This document provides a benefit analysis of BindView's Microsoft Exchange solutions.

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INTRODUCTION

There has been tremendous growth in the usage and importance of e-mail and messaging systems in the past few years, and this trend is forecasted to continue. In March 1999, the GartnerGroup [1] estimated that the growth in both the number and size of messages would continue to average over 35% annually through the year 2003. As the standard mail and messaging platform in many Fortune 1000 companies [2], Microsoft's Exchange product is a leader in this high growth area.

In addition to sheer volume growth, the criticality of e-mail systems is on the rise as well. More and more companies are relying on e-mail systems for purposes beyond simple internal communications, including online order processing, fulfillment and customer service. A July 1998 report by the MERIT Project [3] found that 34% of survey respondents reported significant loss of productivity when e-mail systems went down.

With e-mail systems in general, and Microsoft® Exchange in particular having such business-critical roles within companies, the need for complete management tools to ensure the maximum return on e-mail investments becomes apparent. BindView's Exchange management solutions provide customers immediate benefits via security, availability and administrative management.

> *"Customers are looking for a comprehensive solution to help them configure, administer and secure their complex, mission critical e-mail environments. Technology companies that lead the effort to address these problems are going to reap the benefits of this fast growing market."*
>
> Richard L. Ptak, Vice President, Systems and Applications Management, Hurwitz Group, Inc.

Organizations know more about their own business than do product vendors. However, they always expect product suppliers to provide some form of evidence that purchase and installation of a particular product will be a net positive. This paper describes the cost considerations associated with Microsoft Exchange Server, and provides hypothetical examples that illustrate how BindView's Microsoft Exchange solutions can be financially justified.

WHAT ARE BINDVIEW'S MICROSOFT EXCHANGE SOLUTIONS?

BindView has product offerings to improve the effectiveness of Microsoft Exchange deployments in several key areas, including security, availability and administrative management. These benefits are achieved through solutions that address Exchange specific problems in BindView's bv-Control™ and bv-Admin™ product families.

The bv-Control product family provides security, availability and configuration management capabilities, and includes the bv-Control for Microsoft Exchange product specifically for messaging management. The IntelliPACS™ component provides capabilities for availability and performance monitoring and includes real-time monitoring of Windows® and Exchange systems. The bv-Admin product family simplifies day-to-day administrative tasks and migration to Windows 2000 and Exchange 2000, and includes the bv-Admin for Microsoft Exchange product.

EXCHANGE BENEFITS

BindView's Exchange solutions provide customers immediate benefits by solving the critical problems that are consistently mentioned by Exchange administrators, managers and others.

Identify potential security breaches.

- report how long since public folders were last accessed, and by whom
- quickly reveal end-users with delegation permissions enabled
- identify unneeded mailboxes still in existence

Reduce time spent on tedious administrative tasks.

- move mailboxes between Exchange sites with a simple point-and-click interface
- simultaneously create, update or delete Exchange mailboxes, distribution lists and containers concurrently with Windows NT® users, groups and organizational units

Reduce Exchange application downtime.

- continually monitor critical Exchange metrics, such as MTA, system attendant and directory services
- notify the appropriate Exchange administrator before systems performance is affected

Reduce Exchange total cost of ownership.

- analyze mailbox and public folder space utilization, usage, and retention limits
- discover the Top 10 Exchange Server and user disk space abusers
- assist in Exchange Server load balancing to eliminate additional purchases

Documentation for creation and enforcement of Exchange configuration and security policies.

- report on release, service pack, hot fix and Exchange executable versions
- baseline mailbox and public folder permissions to discover any changes
- search mailboxes and public folders for any viruses and inappropriate content
- report mailboxes and accounts not accessed in 30, 60, 90 days

Increase performance levels.

- deliver statistics on the number of messages delivered from the Internet
- discover high traffic mailboxes and sites
- monitor Exchange response times and alert when conditions are unacceptable

Assist Exchange 2000 migrations in upcoming releases.

- migrating Exchange 5.5 objects into Windows 2000 Active Directory
- updating Windows 2000 resource permissions on Exchange mailboxes, distribution lists and public folders
- real-time event monitoring of Exchange 2000 services, event logs, response times and performance counters

COMPREHENSIVE APPROACH

The chart listed below provides a quick overview of the key features of BindView's offerings and how they can meet the needs of Exchange environments through a complete solutions approach. The BindView approach combines query-based analysis, real-time monitoring and administration and migration capabilities.

Features	Benefits
Exchange Configuration Management	Allows administrators to view the current state of their Exchange environment and compare with previous periods. Provides comprehensive reporting on Private Information Store, Public Folders, Directory, Exchange Server Configuration and Tracking Logs.
Analysis of the Message Tracking Logs	Analyzes the volume of messages and the sender/receiver identity that are published when Message Tracking Logs are enabled.
Enforcement of Corporate Policy	Provides the ability to search mailboxes and public folders to identify language or attachments that may be in violation of corporate policies.
"Ready to Go" Reports	bv-Control comes with several pre-configured query reports that help identify Private and Public Store utilization, server integrity, security and message tracking. There are additional packaged reports for viewing alert information generated through real-time monitoring.
Query-Based Analysis	Full-featured query-based capabilities allow Exchange administrators to easily build custom queries for specialized reporting.
Availability and Performance Management	Intelligent, packaged scripts provide 24x7 real-time monitoring of the Exchange environment at the operating system and application layers. Administrators find out about problems before users are impacted.
Administration and Co-management	Provides capabilities for controlling access to Exchange resources such as mailboxes, distribution lists, containers and recipients, including viewing and establishing owners, permissions and properties. Can perform administrative duties simultaneously with Windows administration.
Custom Monitoring	Provides customization through a wizard interface that requires no programming. Create new alerts, alter exception levels, or change notification method.
Advanced Administration Tools	Enables moving mailboxes (even across sites and between containers) with a simple drag-and-drop procedure. Also allows for automatic creation of server distribution lists, which contain all Exchange mailboxes on that server.

EVALUATING SAVINGS
FROM BINDVIEW
SOLUTIONS

The benefits resulting from bv-Control and bv-Admin in Exchange environments extend beyond the features of the individual products. Specifically, their benefits can be translated to Exchange administrators, Help Desk personnel and Exchange users through a reduction in costs. Eight specific areas where BindView's products have a positive financial impact are listed as follows:

- Increased efficiency of Exchange administrators

- Decreased ramp-up of Exchange administrators

- Increased efficiency of Help Desk personnel

- Fewer administrators needed to support growth

- Decreased user peer-to-peer support

- Decreased downtime (productivity impact)

- Decreased downtime (revenue impact)

- Decreased downtime (resolution impact)

Each of these areas is examined in the following sections. A summary of the cost calculations and savings are then given for each area, along with example annual savings for a mid-sized Exchange environment.

Increased Efficiency of Exchange Administrators

All of the products included in BindView's Exchange solutions work to increase the efficiency of Exchange administrators. By providing the tools for administrators to use in performing Exchange daily administrative tasks, such as creating, renaming, updating, moving and deleting mailboxes, distribution lists, containers and recipients, the time spent on these routine tasks can be decreased. Also, by providing reporting and alerting on critical metrics within the Exchange environment, bv-Control allows administrators to address potential problems before they become critical. One method for determining administrator efficiency is to measure the number of users that one administrator can support. BindView's solutions can increase the number of users supported per administrator by one-third, which translates into an estimated personnel savings of $28,000 per Exchange administrator annually (calculation chart #1).

Decreased Ramp-Up of Exchange Administrators

The average time for a new Exchange administrator to ramp-up to full proficiency in managing Microsoft Exchange Server is reported as 38.6 days [8]. BindView's solutions, with bv-Control for Microsoft Exchange, ship with over 100 packaged reports for immediate benefits and productivity upon product installation. These reports provide analysis on critical Exchange areas including core services not running, disk space utilization and public folder permissions. In addition, the product ships with packaged scripts for monitoring the key metrics found in performance counters, event logs and services that can impact availability and performance. With this base of Exchange "best practices" knowledge built into the products, administrators can be proficient in less time, and information doesn't leave when people transfer or retire. By reducing the ramp-up time for Exchange administrators by 20%, BindView's solutions could achieve a savings of $16,800 annually per new administrator (calculation chart #2).

Increased Efficiency of Help Desk Personnel

Improvements in the ability ofcompanies to respond quickly to problems and to actually eliminate problems before they occur, are felt by the Help Desk as well as Exchange administrators. Similar to administrators, the efficiency of Help Desk personnel, or full-time equivalents (FTEs), is measured by the number of users they can support. By reducing the number of problems that evolve out of the Exchange environment, through reports on Exchange versions and traffic statistics, or alerting when excessive memory paging occurs, the load on the Help Desk staff is also cut. In particular, the capabilities of bv-Control monitoring are very beneficial because the right individual can be automatically notified immediately in order to address problems. Through a one-quarter increase in the number of users that each Help Desk FTE can support, an estimated annual savings of $13,822 can be realized with BindView's offerings (calculation chart #3).

Fewer Administrators Needed to Support Growth

The growth of Exchange is evident as businesses move from using e-mail strictly as a form of communication to a platform for conducting critical business activities such as order entry, verification and fulfillment. With Exchange administrators in short supply and high demand, companies want to expand their Exchange environments without adding more and more people to support these systems. With the co-management capabilities of bv-Admin for administering Windows and Exchange, plus the powerful query and analysis features of bv-Control for producing configuration and security reports across mailboxes, servers, and sites throughout a distributed Exchange organization, administrators can better handle the increased volume. One way to quantify this ability to handle e-mail growth is to convert the additional volume of messages into Exchange users. Doing so can result in an annual savings of $9,240 per administrator (calculation chart #4) when using BindView products, and when compared to the load (number of users) administrators can handle without these tools.

Decreased User Peer-to-Peer Support

In their published studies on Exchange management [9], Creative Networks, Inc. (CNI) found that Exchange administrators and Help Desk personnel were not the only individuals involved when administrative tasks were required or when configuration, security and availability problems surfaced. Exchange users themselves spent a considerable amount of time in troubleshooting and problem resolution, both on their own systems and also in helping their co-workers. This "peer-to-peer" support is a drain on productivity. With advanced administrative tools for co-management of directories, query-based analysis and real-time monitoring and alerting capabilities across the enterprise, BindView can help reduce the time spent in peer-to-peer support. Assuming a reduction of just 1% in the amount of support time, the annual savings could be a very sizable $11.92 per Exchange user. In an organization of 3,000 users, this is a total savings of $35,775 each year (calculation chart #5).

Decreased Downtime (Productivity Impact)

One of the truly major areas of cost justification for Microsoft Exchange Server management solutions is in the area of decreased downtime. Also known as increased availability, this is important because the impact of Exchange downtime is felt in three ways: lost user productivity, lost revenues, and increased resolution time [8]. In each of these areas, BindView's solutions can help achieve positive results. For monitoring, the IntelliPACS in bv-Control utilize a distributed architecture to collect ongoing information on critical parameters in the Windows and Exchange layers. Without deploying technology on each system, the Exchange servers are monitored and exceptions to steady state are delivered immediately to administrators.

Lost user productivity is the impact of downtime on the workload of Exchange users. When they rely on Exchange for business purposes, not having it available means productive time is lost. Even when factoring CNI percentages that 38.9% of users are affected by any particular outage, and that their productivity is reduced by 26.2% [8], BindView's solutions can result in savings of $17.84 per user. For a 3,000-user organization, a 25% reduction in downtime equates to $53,507 annually (calculation chart #6).

Decreased Downtime (Revenue Impact)

In addition to the productivity loss for Exchange users, there is a corresponding revenue impact. This impact is best expressed in terms of the ratio of amount of revenue generated per user. CNI has determined this ratio to be 2.8 [8]. Therefore, the $53,507 annual savings in employee productivity gains from BindView's solutions also translates into a $149,820 annual savings for an organization with 3,000 users (calculation chart #7). This savings is $49.94 per user.

Decreased Downtime (Resolution Impact)

Another area of impact due to Exchange downtime is in the time it takes to resolve the problem and get the Exchange system back up. This impact is tied directly to the productivity of Exchange administrators. The less time that administrators have to spend in resolving the problems is more time for other tasks. By decreasing the frequency and length of downtime, a savings of 25% may be realized. This represents an annual savings of $21,000 per administrator (calculation chart #8).

Summary of Savings with BindView's Exchange Solutions

Savings Area	Annual Savings	Unit of Measure
Increased Efficiency of Exchange Administrators	$28,000	per administrator
Decreased Ramp-Up of Exchange Administrator	$16,800	per administrator
Increased Efficiency of Help Desk Personnel	$13,822	per Help Desk FTE
Fewer Administrators Needed to Support Growth	$9,240	per administrator
Decreased User Peer-to-Peer Support	$11.92	per Exchange user
Decreased Downtime (Productivity Impact)	$17.84	per Exchange user
Decreased Downtime (Revenue Impact)	$49.94	per Exchange user
Decreased Downtime (Resolution Impact)	$21,000	per administrator

Assuming an Exchange environment with 3,000 users, 2 administrators (one experienced and one new) and 2 dedicated help desk individuals:

Total Annual Savings with BindView = $400,000

Savings Calculations with BindView's Exchange Solutions

Exchange Administrators

Fully burdened annual salary [8]	$84,000
Users supported per administrator [8]	519
Ramp-up time for proficiency [9]	38.6 days

#1 Increased Efficiency of Exchange Administrators

No. of Users Supported without BindView	No. of Users Supported with BindView	Savings Measurement	Annual Cost Savings
519	690	1/3 of an Administrator	$28,000

#2 Decreased Ramp-Up of Exchange Administrators

Ramp-Up Time without BindView	Ramp-Up Time with BindView	Savings Measurement	Annual Cost Savings
38.6 days	30.9 days	1/5 of an Administrator	$16,800

Help Desk Personnel

Fully burdened annual salary [8]	$55,290
Users supported per individual [8]	445

#3 Increased Efficiency of Help Desk Personnel

No. of Users Supported without BindView	No. of Users Supported with BindView	Savings Measurement	Annual Cost Savings
445	556	1/4 of Help Desk FTE	$13,822

Exchange User

Fully burdened annual salary [8]	$50,000
Ratio of revenue generation to salary [8]	2.8
Daily average number of messages sent [9]	22
Daily average number of messages received [9]	44
Monthly time spent in peer-to-peer support [9]	229 minutes
Hours per work year	2000

#4 Fewer Administrators Needed to handle Exchange Growth

No. of Users Supported with BindView	No. of Daily Messages	Annual Growth in Daily Messages	FTE New Users
690	45,540	15,939	242
No. of Admins. Needed without BindView	No. of Admins. Needed with BindView	Savings Metric	Annual Cost Savings
.46	.35	.11 Admins	$9,240

#5 Decreased User Peer-to-Peer Support

No. of Exchange Users in Average Site	Annual Time Spent in Peer-to-Peer Support	Time Savings in Peer-to-Peer Support with BindView	Annual Cost Savings
3,000	143,100 hours	1,431 hours	$35,775

Downtime Metrics

Monthly number of downtime incidents [8]	1.63
Average length of downtime per incident [8]	86 minutes
Percentage of users affected by downtime [8]	38.9%
Productivity reduction during downtime [8]	26.2%
Administrative involvement in resolving [8]	5.46 man-hours/incident
Hours per work year	2000

#6 Decreased Downtime (Productivity Impact)

No. of Exchange Users in Typical Site	Annual Productivity Loss without BindView	Annual Productivity Loss with BindView	Annual Cost Savings
3,000	28 hours	21 hours	$53,507

#7 Decreased Downtime (Revenue Impact)

No. of Exchange Users in Typical Site	Annual Productivity Loss without BindView	Annual Productivity Loss with BindView	Annual Cost Savings (Revenue Avoidance)
3,000	28 hours	21 hours	$149,820

#8 Decreased Downtime (Resolution Impact)

Annual Time Spent on Resolution without BindView	Annual Time Spent on Resolution with BindView	Savings Measurement	Annual Cost Savings
107 hours	80 hours	1/4 of an administrator	$21,000

The total cost of ownership of any software product is more than just its purchase cost. It also includes up-front and back-end costs, and ongoing maintenance. An evaluation of the return on an investment in BindView's Exchange Solutions requires an understanding of its total life cycle cost.

Purchase Cost

BindView software licensing is product-specific and is based on managed servers, mailboxes or users. BindView does not charge extra for multiple domains or any other directory objects. Anyone within the licensed user population with appropriate rights can use the BindView solutions. All utilities provided with the products or written by the customer can be freely used by anyone within the licensed user population. There is no expensive license control or awkward calculations based on changing enterprise configuration.

Implementation Cost

BindView products are extremely simple to install and implement. Unless noted in the installation guides, these products do not require installation of other software; the exception being the IntelliPACS, which requires SQL Server for its data repository. Members of the Exchange and System Administration groups can be immediately productive because of the packaged queries and reports that ship with the products, providing a set of "best practices." Unlike competing products, BindView's Exchange solutions do not require the use of agent software on servers. Software can be installed and run remotely in a distributed system without adding to the load on Exchange servers.

Unlike some competing products, BindView products use Microsoft terminology and standards. This means that there are minimal training costs associated with these solutions. Because BindView supports Microsoft standards, custom scripts and programs can be created with familiar programming languages that are already in use, providing immediate productivity. BindView solutions include dozens of sample scripts for immediate use or quick modification for unique tasks. In the case of the IntelliPACS, easy-to-use wizards are provided for modification of scripts and alerts, so no programming is required at all.

Management Cost

BindView provides regular upgrades to customers on maintenance contracts. BindView believes that it is in the best interest of the customer to purchase ongoing support for all products. Maintenance is purchased as a percentage of the license price and can cover one or several years, with renewals afterward.

End of Life Cost

The replacement cost of a distributed management product can be significant. In some cases, organizations are virtually held hostage to proprietary third-party software that maintains essential management configurations, without which, use of the information systems would be impossible. Replacement of such a system can mean a complete manual re-creation of the entire user base.

BindView, by maintaining compatibility with Microsoft's evolving standards, prevents vendor lock-in. Uninstalling the products is simple and causes no change in standard operating system configuration or capabilities. For example, the scripts and utilities written for the bv-Admin ADSI implementation will not only continue to work on Windows 2000, but can also be easily adapted to support Microsoft Exchange.

Management frameworks, metadirectories, and proprietary delegation products have significant implementation costs and daunting end-of-life costs. They represent a high risk because

they are difficult to remove, placing customers at the mercy of changes in product plans or philosophies. BindView's solutions are very low-risk because they always maintain maximum compatibility with Microsoft operating systems and applications.

CONCLUSION

Focusing on the critical elements of the corporate IT infrastructure, BindView's award-winning products enable corporate IT professionals to protect and leverage their information technology investments to achieve their organization's business goals. The BindView suite of products allows companies to easily administer and secure the enterprise, enforce security policies, and manage the computing environment.

BindView delivers cost-effective ways for businesses to manage the risks threatening the safety, integrity and availability of the e-business infrastructure.

Maintaining minimum downtime, maximum performance, and maximum manageability for Microsoft Exchange Server is crucial to the continued success of our customers. BindView offers the only single-source solution for comprehensive administration of the Microsoft Exchange distributed enterprise. The BindView product suite further extends and enhances the efficiencies of the Windows 2000 and NT operating systems, their associated directory services, and applications that run on them, to ensure maximum investment protection, risk avoidance, cost effectiveness, and user productivity. Product enhancements in development will expand BindView's unparalleled functional range to include full support for Windows 2000 and Exchange 2000, deeper product integration and broader interoperability, and greater ease of use.

"We are pleased to see BindView delivering a comprehensive solution for managing the Exchange environment. Our customers are asking for real-time, proactive solutions and BindView is geared to provide them with an answer to their needs."

Dave Malcolm, group product manager for Exchange Server at Microsoft.

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