Ferris Research

The Cost of Migrating From Exchange 5.5 to Exchange 2003

July 2004. Report #416

Ferris Research White Paper

Sponsored by

Microsoft

Ferris Research, Inc.
408 Columbus Ave., Suite 1
San Francisco, Calif. 94133, USA
Phone: +1 (415) 986-1414
Fax: +1 (415) 986-5994
www ferris.com

Recent Reports From Ferris Research

Exchange Server Reliability
Electronic Privacy and Security Regulations
A Survey of Exchange Installations: Key Statistics
CIO Messaging Concerns and Priorities
Recent Innovations in Macintosh Collaboration
FrontBridge TrueProtect Email Boundary Security Service
Cloudmark's Spam "Immune System": Fighting Spam with Genetic Algorithms
The State of Email Denial-of-Service Attacks
Instant Messaging: Current Status, Key Trends
How Not To Be a Spammer – Updates
The Growing Threat of Questionable Patents
Bayesian Filters for Spam Control
Another Alternative to Exchange Servers at Branch Sites
Lotusphere 2004
TCP/IP Bandwidth Shaping as an Anti-Spam Measure
URL-Based Spam Filtering
Reputation and Spam Control
Are Spam Laws Working?
Microsoft's Caller ID for Email Proposal
LinuxWorld NY 2004: A Messaging Perspective
Update on IBM/Lotus Workplace
TotalBlock: New Challenge/Response Anti-Spam Technology
Microsoft Exchange Edge Services
Exchange 5.5 Migrations: Issues and Best Practices
How Not To Be Seen as a Spammer
Notes/Domino 4/5 to 6 Migrations: Issues and Best Practices
Email Migration Costs
The Time Overhead of Email
Email Archiving Trends
Enterprise Requirements for Anti-Spam Solutions
The Case for Managed Anti-Spam Services
The Cost of Spam False Positives
Wireless Access to Messaging and Collaboration: Tutorial
Cross-Organizational Calendaring and Scheduling: Tutorial
Regulations and Email Archiving
Cross-Organizational Calendaring and Scheduling: Key Trends
Encrypted Email

Ferris Research White Paper. Report #416. July 2004.

Table of Contents

Table of Figures

Executive Summary

This report discusses what it costs to upgrade messaging systems from Microsoft Exchange Server version 5.5 to Exchange Server 2003. The typical organization can expect to spend about $150 to $250 per user mailbox to complete an upgrade from Exchange Server 5.5 to Exchange Server 2003. For example:

- An international software publisher upgraded 400 Exchange 5.5 users to Exchange 2003. Of these users, 300 were in their headquarters location with the remaining 100 distributed between remote workers and three international offices. The total cost to upgrade was just under $140 per user mailbox.
- A global consulting firm is in the process of moving 4,500 users from Exchange 5.5 to Exchange 2003. With more than 60 local offices and approximately 40% remote users, the firm has documented costs of $190 per user mailbox.
- A specialty manufacturer completed an upgrade for approximately 300 users from Exchange 5.5 to Exchange 2003 at a cost of approximately $265 per user mailbox.

The average cost per user mailbox of upgrading Exchange 5.5 to Exchange 2003 has decreased by as much as 50% when compared to the average cost to upgrade Exchange 5.5 to Exchange 2000. Although several other vendors have put forth alternatives to Microsoft's upgrade, only the very lowest-cost migration strategies are likely to be competitive, given that the average messaging migration (as opposed to an upgrade) costs between $125 and $500 per user mailbox.

Most organizations have tended to implement Active Directory (AD) as an integral part of an Exchange upgrade project. Due to the difficulty in specifically segregating AD-related cost components, they have not been isolated or identified in this report. Average Exchange upgrade costs presented generally include Active Directory.

Our analysis is based on data gathered from eight organizations that had either already completed their Exchange 5.5 to Exchange 2003 upgrade or had moved a significant quantity of user mailboxes. The organizations ranged in size from 23 to 5,000 user mailboxes. Data about these upgrades was gathered through a combination of individual interviews and review of financial and project data provided directly from the organizations themselves.

Because costs for upgrade and migration projects tend to vary rather widely, Ferris Research has developed a standard approach for categorizing and presenting these costs using ranges. This standard approach has been applied in this analysis in a manner consistent with other upgrade and migration research we have conducted in the past.

Based on the sizes of organizations in our sample, the typical figures above are best applied to medium-sized organizations — those with between 250 and 2,499 users as defined below. Generally speaking, however, the upgrade cost per user mailbox tends to be less dependent upon overall organization size than it is on other factors such as complexity, skill and availability of existing internal resources, or customization requirements.

At the low and high ends of the spectrum, costs to upgrade to Exchange 2003 can range from as little as $30 per user mailbox to over $900. Consider the following examples:

- A global manufacturer upgraded 400 Exchange 5.5 users to Exchange 2003 in 20 locations. Heavy travel requirements, extremely limited internal resources, and a very complex legacy environment resulted in extremely high upgrade costs of $910 per user mailbox.
- A U.S. municipal government moved 600 users from Exchange 5.5 to Exchange 2003 at a total cost of less than $35 per user mailbox. A highly consolidated infrastructure, adherence to standards, and efficient management practices all contributed to this exceptionally low figure.

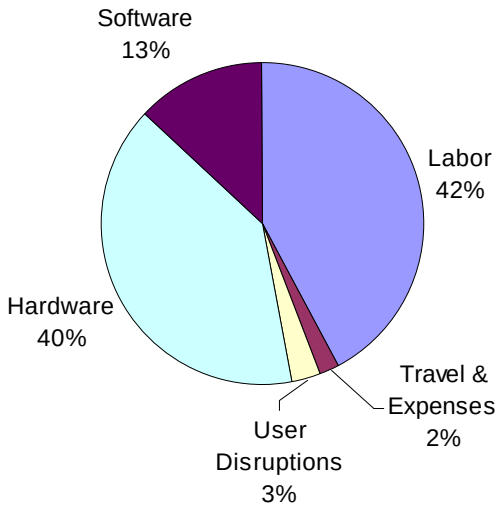
This report includes examples of upgrade tasks and associated costs, allowing readers to predict their own experiences with those of others. It includes a spreadsheet calculator and several illustrative financial models that readers can use to develop customized cost estimates for their own Exchange upgrade.

Ferris Research White Paper. Report #416. July 2004.

Main Cost Elements

There are a number of cost elements that are common to Exchange 5.5 to Exchange 2003 upgrades. Figure 1 illustrates a typical cost breakdown.

FIGURE 1 TYPICAL EXCHANGE 2003 UPGRADE COSTS



At over 42%, labor represents the largest single cost element of the typical Exchange 2003 upgrade.

Labor

Labor represents one of the biggest expenses in any Exchange 2003 upgrade. It can be further segregated into the following subcategories: research, evaluation, design, testing, training, implementation and application conversion. We will discuss these in detail in the next section.

Hardware

Except in very rare instances, an Exchange 2003 upgrade includes the acquisition of new server hardware. While not always a requirement of the upgrade process itself, generally Exchange 5.5 servers will be nearing end-of-life, and a software upgrade presents an opportune time for a hardware refresh. This hardware can include front-end and/or back-end servers, storage, and in some cases, specialized equipment for security or other functionality.

Software

The purchase of software licenses generally accounts for a comparatively small portion of the total cost of an Exchange 2003 upgrade. Given the many arrangements under which Microsoft software can be licensed, these costs can be extremely difficult to calculate accurately.

Travel and Expenses

In environments where users and/or Exchange servers are distributed across multiple locations, some travel and other expenses are almost always incurred to support the upgrade effort.

User Disruptions

The cost of user disruptions can be difficult to quantify, but does represent a very real element of the expense of upgrading Exchange. While the impact on productivity cannot always be easily measured, it should be recognized and factored into the cost model to accurately represent the total cost of the upgrade.

Assumptions and Terminology

In this paper, we make various general assumptions relating to the cost of labor. We now detail what these are, and explain some terminology. In some cases, the assumptions will be invalid. Readers will need to adjust their calculations in such cases.

Cost of Internal Labor

Where internal labor costs were part of the data provided by the organizations interviewed (for example, in implementation, training, or user disruptions), they were calculated according to that organization's own cost models. Ferris Research made no effort to normalize or validate the basis of these costs.

All Figures in U.S. Dollars

In this paper, all costs are figured in U.S. dollars.

Organization Sizes

This report uses the terms "small," "medium-sized," and "large" organizations. A small organization is one with less than 250 employees. A medium-sized organization is one that has between 250 and 2,499 employees, and a large organization is one that has 2,500 or more employees.

Comparisons Between Upgrades and Migrations

Our research indicates that a major upgrade project, such as that from Exchange 5.5 to Exchange 2003, is very similar in structure and cost to a platform migration. In this paper, we cite work Ferris Research has previously published with regard to Exchange 5.5 to Exchange 2000 and general messaging migrations to provide some basis for comparison and contrast.

Labor Costs

We now consider the different types of labor costs of upgrading Exchange 5.5 email systems to Exchange 2003. In each case, we cite illustrative examples of such costs based on supporting research.

Research

This is the effort required to conduct research and data gathering prior to the start of the upgrade.

Tasks Involved

The main tasks involved are:

- Discovering and assessing the existing Exchange 5.5 environment.
- Creating or updating mail, global catalog, and gateway server inventories.
- Measuring network bandwidth and data storage currently utilized for Exchange.
- Validating physical user distribution and logical groupings.
- Identifying Exchange-dependent applications and services and assessing upgrade impact.

Several factors directly affect research costs. First and foremost are the size and complexity of the customer's existing environment. Another factor is the level of detail and accuracy of documentation about this environment. While external consultants may assist with research activities, most of the background information required to begin planning a migration must come from within the organization.

Discussion

Large organizations typically spend some five to 10 days on research, with small and medium-sized organizations spending on the order of one to two days in the research process.

Assuming that senior system administrators and operations personnel do most of this work, with minimal outside involvement, the following costs can be expected:

- $4,500 to $6,500 for large organizations.
- $500 to $1,500 for small and medium-sized organizations.

Put in per-user-mailbox terms, research labor costs range from $.05 to $5 per user mailbox, with $1 or $2 per user mailbox being typical. The cost is trivial. Research costs being largely independent of the number of mailboxes involved, we present this category as a fixed cost in our models.

Examples

- A global logistics firm upgraded 200 users from Exchange 5.5 to Exchange 2003 The messaging manager spent two weeks working with Microsoft Consulting to gather configuration information and measure the usage of the existing environment.
- A global consulting firm is in the process of migrating 4,000 users from Microsoft Exchange 5.5 to Exchange 2003. The firm spent $6,400 in research over a period of two weeks with two internal resources.
- An international software publisher spent $1,200 in researching the upgrade of its 400 users to Exchange 2003.
- Several small and even medium-sized organizations included in the study reported they had no labor costs associated with Exchange upgrade research.

Evaluation

This is the effort required to evaluate features or functions of Exchange 2003 that may impact design choices or determine areas in which testing might be required.

Tasks Involved

The main tasks involved are:

- Determining and documenting business requirements for Exchange 2003, such as Outlook Web Access, distribution lists, archiving, and calendar delegation.
- Verifying that Exchange 2003 meets these business requirements by performing any necessary “proof-of-concept” activities or conducting user focus groups.
- Establishing Exchange 5.5 coexistence and Exchange/Outlook data migration needs.
- Performing reference checks, reviewing benchmarks, and sizing data.
- Conducting JAD (joint application development) sessions for Exchange-dependent applications or processes that must be modified or replaced as part of the upgrade.

Discussion

The scope and costs of evaluation labor required in an Exchange 2003 upgrade are similar to those required for research. Large organizations typically spend five to 10 business days in this way, and small and medium-sized organizations some one to two days.

Again assuming this task is performed by a combination of internal and external resources, this translates to typical costs of:

- $4,500 to $6,500 for large organizations.
- $500 to $1,500 for medium-sized organizations.

This type of work is sometimes performed by Microsoft or its partners on a fixed-price basis, or even at no cost where this is seen as an investment in the customer relationship. Similar to the research subcategory, we also represent evaluation costs as fixed rather than calculated on a per-user-mailbox basis.

Examples

- A national retail chain in the United States with 4,000 users spent two weeks evaluating its upgrade from Microsoft Exchange 5.5 to Exchange 2003 at a projected cost of $4,000 using external consultants.
- An international software publisher spent $2,400 in research when upgrading its 400 users to Exchange 2003.
- As was true of the research subcategory, several small and medium-sized organizations reported they incurred no labor costs associated with evaluation in their upgrade process.

Design

Design labor covers producing detailed design, specifications, and implementation plans for Exchange 2003.

Tasks Involved

The main tasks involved are:

- Detailing the sizing of components such as servers, storage, and network circuits.
- Defining the overall Exchange architecture, including distribution of servers (topology), communications, and connectivity plan.
- Determining supported clients, features to be activated, initial settings, and preferences.
- Addressing technical integration issues such as directory synchronization, remote access, and enterprise security.

- Documenting the naming conventions and configuration standards.
- Defining usage standards, operating procedures, security, and retention policies.

Discussion

Design labor is where costs begin to vary more proportionally to the number of mailboxes and the complexity of the messaging system.

Small organizations with the least demanding Exchange environments may again spend as few as one to two person-days in the design phase. Examples of this type of environment would include organizations not upgrading Outlook clients, or those that can perform an "in-place" Exchange upgrade. The latter case is one in which new server software can be installed on existing hardware, and where data stored on the Exchange server is converted accordingly. In contrast, organizations with many legacy Exchange 5.5 environments or very complex client configurations could spend more than 10 times that effort in this area.

Exchange 2003 design labor ranges from about $8 to $15 per user mailbox, with $11 being typical. The less expensive design work is typically in environments with few existing Exchange 5.5 servers.

The soundness of system design greatly affects overall success of the upgrade. In the past, organizations had almost exclusively engaged consultants to help them with Exchange upgrades because of the newness of the technology. Internal staff typically lacked the necessary skills and/or the experience of completing prior upgrade projects. With the improvements in tools and availability in best practices and partners, this is less often the case.

Examples

- An application service provider (ASP) based in the Asia-Pacific region spent two days designing an Exchange 2003 upgrade for its 200-user community.
- A global consulting firm spent just under $25 per user mailbox in the design phase of its upgrade from Exchange 5.5 to Exchange 2003 for 4,000 users worldwide.

Testing

This is work required to complete all Exchange 2003 validation activities prior to the actual upgrade.

Tasks Involved

The main tasks involved are:

- Controlled deployment of all central infrastructure components (Exchange servers, Active Directory servers, etc.) required for testing and pilot activities.
- Throughput and fidelity testing of mechanisms used to convert data to Exchange 2003.
- Load and fidelity testing of coexistence with Exchange 5.5.
- User acceptance testing of any changes to configurations, preferences, or preexisting customizations.
- Planning, execution, and review of pilot user deployments.

Discussion

Testing labor has somewhat less variability than design. There is a limited set of testing activities applicable in messaging upgrades, regardless of the size or complexity of the environment. Most organizations will spend between 10 and 15 person-days in testing, including categories such as lab/load testing and user pilots, although highly customized Exchange environments can spend many weeks or even months in testing.

The cost of testing for most Exchange upgrades ranges from about $2 to $20 per user mailbox, with $10 being typical. The higher figure would apply to, for example, a firm with many custom-developed public-folder applications, or an environment supporting many internal and external mail domains. The duration and structure of user pilots are determined more by corporate culture, such as adaptability and receptiveness to change, than by specific technical considerations.

Examples

- A global consulting firm spent about $80,000 extensively testing its Exchange 5.5 to Exchange 2003 upgrade for 4,000 users. The process spanned three months and required four resources.
- A global logistics firm spent $4,500 testing its Exchange 2003 upgrade for 200 users over a period of approximately two weeks.

Implementation

Implementation labor is generally the largest single subcategory of labor in an Exchange 5.5 to Exchange 2003 upgrade. It includes all efforts required to install and configure Exchange servers and Outlook client software into production.

Tasks Involved

The main tasks involved are:

- Deploying remaining Exchange infrastructure components beyond pilot phase.
- Distributing new Outlook client software or updates to all user workstations if desired or required.
- Converting and migrating all legacy Exchange and Outlook data to the new environment.
- Completing administrative and support transition, including implementing new operating procedures for Exchange 2003.
- Decommissioning of the legacy Exchange 5.5 environment.

Discussion

Implementation labor is the most variable of all labor cost categories in an Exchange 2003 upgrade. This is due to many factors, such as Outlook client software installation, level of management control, and business and functional requirements.

Because implementation labor is directly proportional to the size of the migrating organization, offering a range of days typically spent is not generally useful. Further complicating matters is the array of strategies that organizations can apply in implementation—ranging from phased coexistence to the so-called "big bang."

Perhaps more useful are some general guidelines regarding the implementation phase of an Exchange upgrade:

- In phased-coexistence upgrades, normally between 125 and 500 users are upgraded per week.
- The level of process automation and the requirement for and/or style of end-user training delivered establish the pace of a phased-coexistence upgrade.
- "Big bang" upgrades can move larger quantities of users to Exchange 2003 much more quickly. However, they also require greater care in research, evaluation, design, and testing to mitigate the higher risks in this approach.
- Upgrades that eliminate or reduce the requirement to install or update the Outlook client software on PCs are much less costly and time-consuming.

Overall, implementation labor costs range broadly from some $20 to over $200 per user mailbox, with a typical figure of around $35 per user mailbox. Upgrades that can be performed "in place" and require no Outlook client software changes will be at the low end of this range. Upgrades that require both a new server infrastructure and client updates will be at the higher end of the range, with a combination of attributes falling somewhere in between.

Examples

- A small professional association with 23 Exchange 5.5 users spent just over $50 per user mailbox in implementation labor to upgrade to Exchange 2003.
- A global manufacturer spent $260 per user mailbox in implementation labor to upgrade 400 Exchange 5.5 users to Exchange 2003.
- A global consulting firm spent just less than $19 per user mailbox in implementation, or approximately $84,000, to upgrade 4,500 users from Exchange 5.5 to Exchange 2003

Training

Training includes labor that is required to train system administrators, operations staff, and users on Exchange 2003 and Outlook 2003.

Tasks Involved

The main tasks involved are:

- Training systems administrators.
- Training help-desk personnel to address both upgrade-related and ongoing support issues.
- Training end users on differences in the new Exchange and Outlook environment.

Discussion

There are two main types of training: for system administrators/operations staff and for end users. The greatest effect on Exchange upgrade training costs is the type of training organizations provide to end users.

Virtually every organization that undertakes an Exchange upgrade has to incur some training costs to prepare administrative personnel to maintain and support Exchange 2003. Varying degrees of training are incorporated into migration plans, ranging from the minimal day-to-day operations training of one administrator to full vendor or industry certification of internal staff.

Training costs do not tend to have a significant effect on the *overall* cost of a messaging upgrade. Fortunately for organizations upgrading Exchange, the Microsoft Outlook client is extremely pervasive and has been updated in a rather evolutionary manner. For these reasons, many organizations choose to provide only very minimal user training, often consisting of a basic “leave behind” documentation or instructions delivered via the corporate intranet.

Organizations that opt to spend more time with each user in training (such as in traditional instructor-led education) effectively decrease the speed at which they can upgrade. Far fewer users can be trained per day in a classroom format than can be trained online.

An implementation with more time-consuming training will thus stretch over a longer period and consume more days of internal or external resources to provide end-user support and project management. As pressure mounts to decrease IT costs, customers are cutting back on the most expensive training, such as classroom instruction. They are turning to lower-cost alternatives such as Web-based or online learning. Some are even opting to eliminate formal end-user training altogether.

Most organizations that upgrade from Exchange 5.5 to Exchange 2003 will observe training costs of $3 to $10 per user mailbox, with $8 being typical.

Examples

- A regional ASP reported just over $10 per user mailbox in training labor costs in upgrading its 200 Exchange 5.5 users to Exchange 2003.
- An international software publisher invested just over $2,000 in training during its upgrade of 400 users from Exchange 5.5 to Exchange 2003.

Application Analysis

A category of labor costs that varies enormously is that of application analysis. Not every Exchange 2003 upgrade will require this task. A standard task in planning an Exchange upgrade is to identify any Exchange-dependent applications that are in use and plan for their testing to determine if any remediation or replacement is required.

This cost generally only affects organizations that use Exchange to build elaborate workflow or collaborative applications. In the case of an organization with just a few Exchange public-folder applications, or applications that send simple notifications via email, the cost of application analysis will be minimal.

The variability in application types and testing costs makes it difficult to present meaningful cost ranges. We therefore exclude application analysis costs in the Total Upgrade Cost cases presented later in this document. We have incorporated a “placeholder” row into the associated spreadsheet to allow for inclusion of these costs where necessary.

Nonlabor Costs

We now consider the nonlabor costs of migrating email systems.

Hardware and Software

Direct comparison of hardware costs across Exchange 2003 upgrades of varying sizes and types is extremely difficult. As discussed earlier, with regard to implementation labor, many factors impact the cost of Exchange hardware. The most important factor tends to be the availability (and cost) of network bandwidth necessary to support consolidation. Exchange 2003 servers that scale infinitely provide no tangible total cost of ownership (TCO) benefit if the bandwidth necessary to consolidate users is prohibitively expensive, outweighing the lower cost of operating fewer centralized Exchange servers.

The only accurate way to compare upgrade hardware costs is to use benchmarks or measurements from installed reference sites. With both approaches, great care must be taken to ensure that the benchmark data or reference sites are similar enough in key dimensions (bandwidth, user distribution, usage characteristics, and so on) to provide a meaningful comparison.

Exchange software costs are somewhat more directly comparable than hardware costs because a "per-user-mailbox" cost is relatively consistent in most vendors' licensing models. This said, the number of messaging servers and their distribution frequently affect the software costs in an upgrade. This is particularly true in the Microsoft Exchange product line, which offers multiple tiers of server software. For example, the Standard and Enterprise versions of Exchange have different capabilities and prices.

As is true when comparing hardware costs, organizations making Exchange software cost comparisons must ensure that the scenarios being compared and considered are in fact cost-effective in their environment.

In view of the preceding comments, we urge caution in the use of the following cost comparisons. In our sample, hardware and software costs for upgrades range from $30 to $267 per user mailbox.

Examples

- A national retail chain spent just over $460,000, or $92 per user mailbox, in hardware and software to upgrade 5,000 users from Exchange 5.5 to Exchange 2003.

- A global manufacturer purchased $70,000 worth of hardware and software to support its Exchange 5.5 to Exchange 2003 upgrade for 400 users, resulting in a per-user-mailbox cost of $175.
- A municipal government in the United States invested just over $17,000 in hardware and software during the upgrade of its 600 users to Exchange 2003.

Travel and Expenses

The impact of travel and expenses on Exchange 2003 upgrades is almost entirely a function of the distribution of servers and users among physical sites. As with hardware and software, direct comparisons of travel and expenses between upgrade projects rarely provide much insight.

Generally speaking, upgrade designs and projects that provide the greatest ability to centralize, and require the least interaction with client PCs (particularly mobile and remote users), incur the lowest travel and expense costs.

User Disruptions

User disruption costs have consistently proven the most difficult aspect of software upgrades to quantify and track. IT staff frequently make projections as to how an upgrade project will impact user productivity. However, the *actual* impacts are almost never measured.

It is reasonable to assume, though, that there is a disruption aspect to almost any change in IT service that is visible to the end user. It is also reasonable to assume that the impact of this disruption increases with the magnitude of the change. Exchange upgrades that are planned to occur "seamlessly" and reduce or eliminate changes or inconsistencies exposed to the user will inherently make for less disruption and preserve user productivity. The specific task that is primarily responsible for user disruption is the upgrading or reconfiguring of the Outlook client software.

The cost of user disruption created by an Exchange 2003 upgrade ranges from about $15 to $65 per user mailbox, with about $40 being typical. In environments with many highly skilled professionals (such as law firms and health-care organizations), disruption costs will be on the higher end of the scale. Conversely, organizations with a higher proportion of administrative or clerical personnel will be on the lower end of the range.

However, the costs of user disruptions can sometimes be much higher. For example, consider the case of remote salespeople or other mobile users who must ship their notebook computers into a head office for reconfiguration and upgrading. Here, disruption costs can increase to as much as $100 to $200 or more per user mailbox as indicated by a few participants in our study.

Note that an Exchange upgrade is often seen as on opportune time to make changes to policies or practices, such as lowering mail quotas. While this is certainly true, such changes can contribute to higher user disruption costs, and should be given careful consideration.

Using the Spreadsheet To Project Upgrade Costs

Readers can use the spreadsheet associated with this report at http://www.ferris.com/rep/200407416/ExchMigrCosts.xls to develop a customized analysis of their own likely Exchange 5.5 to Exchange 2003 costs.

The spreadsheet has a simple and intuitive structure. Simply input the number of users and the number of locations where indicated in cells B4 and B5 on the tab entitled "Upgrade Costs." The cost ranges discussed in this report will be applied to present "Low," "Typical," and "High" migration costs broken down by category. The pie charts presenting the percentage of the total that each category represents for each scenario will automatically be updated on the three tabs entitled "Low % Costs," "Typical % Costs," or "High % Costs."

We now project the total costs to upgrade Exchange 5.5 to Exchange 2003 for several hypothetical scenarios using the associated spreadsheet.

Example: High-Cost Upgrade

Our first scenario is a 3,500-user organization with 10 locations. The organization has relatively high upgrade costs:

- The organization has extensive design and testing requirements based on a large number of very customized public-folder applications.
- Implementation costs will be high because the organization will need to physically visit every desktop PC to manually install Outlook 2003.
- Hardware costs will also be relatively high because the environment is one in which complete centralization is not feasible or desirable.
- Finally, the example organization has decided to make online training for Outlook 2003 available to all 3,500 users, making training a significant investment.

A good example of this type of case might be a large law firm, health-care provider, or other professional organization.

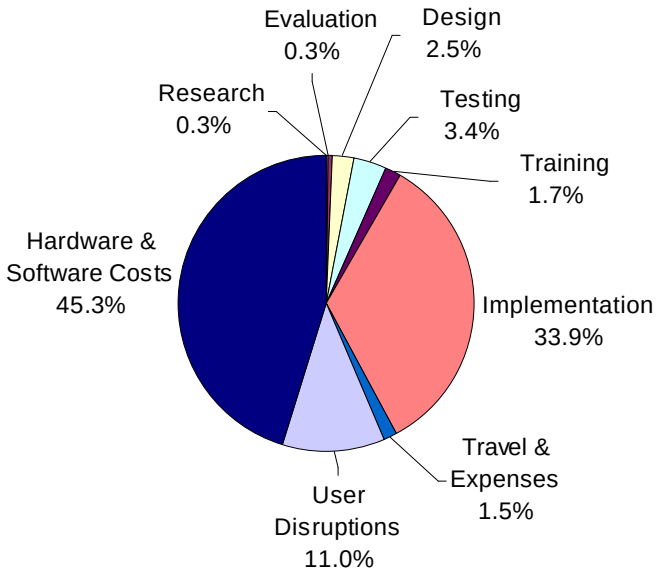
The total projected cost to upgrade the email system is just over $2 million (Figures 2 and 3).

FIGURE 2 HIGH-COST MODEL – DETAILED COST BREAKDOWN

Cost Category	
Research Labor	$6,500
Evaluation Labor	$6,500
Design Labor	$52,500
Testing Labor	$70,000
Training Labor	$35,000
Implementation Labor	$700,000
Travel & Expenses	$31,500
User Disruptions	$227,500
Hardware & Software	$934,500
Total	**$2,064,000**
Approx. Cost per User Mailbox	***$590***

Summary of the high-cost upgrade model.

FIGURE 3 HIGH-COST MODEL – PERCENT OF COSTS



Implementation labor represents the second largest cost category in an upgrade.

Example: Low-Cost Upgrade

Our second scenario is a 200-user organization with a single location. This organization has relatively low upgrade costs:

- The organization will use Exchange 2003 in an out-of-the-box fashion.
- Only very minimal testing will be required based on the generic nature of the existing Exchange 5.5 environment.
- Hardware and implementation costs will also be relatively low based on a completely centralized design, and a high level of standardization and consistency in workstation configurations.
- No training will be provided to the majority of users.

A good example of this type of case might be a small high-tech manufacturer or other environment with relatively proficient users.

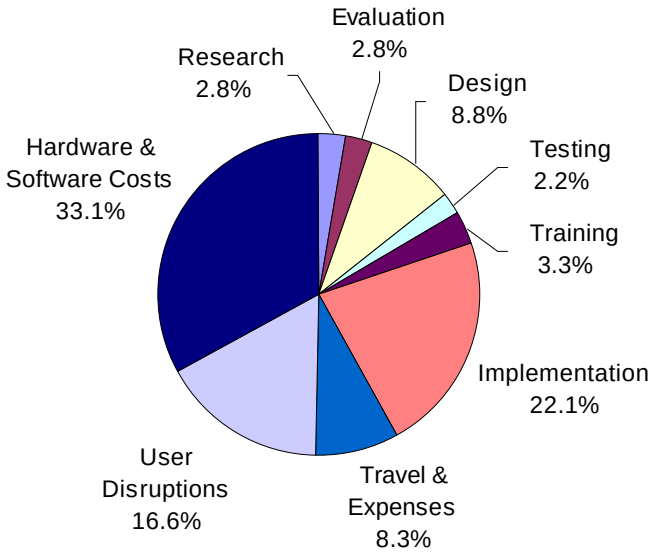
The total projected cost is just over $18,000, broken down as shown in Figures 4 and 5.

FIGURE 4 LOW-COST MODEL – DETAILED COST BREAKDOWN

Cost Category	
Research Labor	$500
Evaluation Labor	$500
Design Labor	$1,600
Testing Labor	$400
Training Labor	$600
Implementation Labor	$4,000
Travel & Expenses	$1,500
User Disruptions	$3,000
Hardware & Software	$6,000
Total	**$81,100**
Approx. Cost per User Mailbox	***$91***

Summary of the low-cost upgrade model.

FIGURE 5 LOW-COST MODEL – PERCENT OF COSTS



Breakdown on a percentage basis remains largely consistent whether the upgrade has comparatively high or low costs.

Example: Typical-Cost Upgrade

Our final scenario is a 1,000-user organization with five locations. The costs are fairly typical:

- The organization will require some customizations in the Exchange installation and configuration process, but they will not be extensive.
- There are a few Exchange-dependent applications installed, but they are relatively simple in design.
- Hardware and implementation costs will also be average with a largely centralized design.
- A variety of training strategies will be applied, including Web-based and printed reference materials.

A good example of this type of case might be a large insurance or financial services company.

The total projected cost to upgrade the email system is just over $200,000 (Figures 6 and 7).

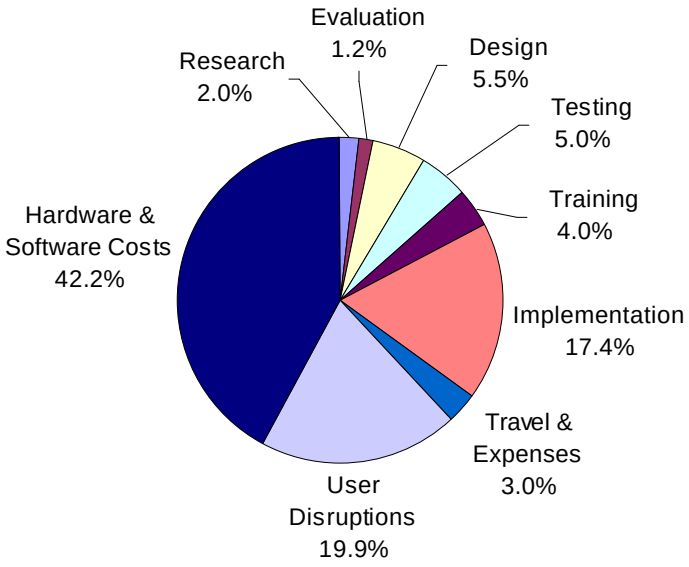
Ferris Research White Paper. Report #416. July 2004.

FIGURE 6 TYPICAL-COST MODEL – DETAILED COST BREAKDOWN

Cost Category	
Research Labor	$4,000
Evaluation Labor	$2,500
Design Labor	$11,000
Testing Labor	$10,000
Training Labor	$8,000
Implementation Labor	$35,000
Travel & Expenses	$6,000
User Disruptions	$40,000
Hardware & Software	$85,000
Total	**$201,500**
Approx. Cost per User Mailbox	***$202***

Summary of the typical-cost upgrade model.

FIGURE 7 TYPICAL-COST MODEL – PERCENT OF COSTS



Proportionally, upgrade projects spend more on hardware and software and less on implementation.

Ferris Research White Paper. Report #416. July 2004.

Conclusions and Observations

We now present a number of conclusions about the costs of upgrading from Exchange 5.5 to Exchange 2003

Upgrades About $200 per User Mailbox

The typical cost to migrate from Exchange 5.5 to Exchange 2003 is roughly $200 per user mailbox. The most significant variable elements that make up this cost include implementation labor (Outlook client installation, server deployment) and the quantity of hardware required based on the size and scope of the organization

Typical Cost of Upgrades Has Decreased by 50%

An April 2002 Ferris Research study of the costs to upgrade from Exchange 5.5 to Exchange 2000 found the typical cost to be roughly $400 per user mailbox. We attribute this significant decrease in cost to several factors:

- *Upgrade knowledge is more widely available.* Given the greater maturity of key technologies such as Active Directory, the information necessary to perform an Exchange upgrade is much more accessible now that just two years ago. Prescriptive guidance and documentation from Microsoft and other sources enable IT organizations to do more work internally and rely less on external consultants.
- *Upgrade tools have improved.* With the advent of such features as scheduling in the Mailbox Migration Wizard and continuous enhancements to the upgrade utilities, less engineering and customization is required for most organizations to complete their Exchange upgrade. This area of functionality continues to improve with the recent release of additional tool enhancements as part of Exchange Service Pack 1. Improvements in the tools used to deploy and manage supporting technologies such as Active Directory and Windows Server 2003 also facilitate easier upgrades of Exchange infrastructure.
- *Larger installed base has reduced potential risks.* As the number of installations that have upgraded from Exchange 5.5 has increased, so has information about compatibility and best practices. Activities that were once required to mitigate risks, such as research, evaluation, and testing, have become much less time-consuming and costly.

Exchange Upgrades Less Costly Than Most Migrations

A number of vendors have targeted the Exchange 5.5 installed base with upgrade alternatives to Exchange 2000 and Exchange 2003. Analysis conducted within the last year by Ferris Research indicates that migration alternatives costs between $125 and $500 per user mailbox, with a typical migration costing about $300. All things being equal, only the least costly migration alternatives can hope to be cost-competitive with a typical upgrade from Exchange 5.5 to Exchange 2003.

Microsoft/Partner Investments Can Reduce Upgrade Costs

With a keen interest in upgrading the Exchange base, Microsoft and its partners have demonstrated a willingness to invest in helping their customers upgrade to Exchange 2003. These investments often take the form of services provided at no charge in categories such as research, evaluation, design, and testing. Several organizations interviewed for this report indicated they had benefited from such investments, and customers considering upgrading should be aware of these opportunities.

Investment in Some Labor Categories Is Falling to $0

Several (generally small and medium-sized) organizations we spoke with indicated that they felt little or no effort was required in areas such as research, evaluation, or even testing. This indication, and the successful upgrades these organizations have completed, reflect positively on the confidence Exchange customers have in recent product releases. Customers who have avoided customization and adhered carefully to Microsoft's implementation guidelines in the past increase their probability of success without expenditures in these areas.

Active Directory/Outlook Have Significant Cost Impact

Organizations that upgrade to Exchange 2003 with a preexisting Active Directory implementation and do not concurrently upgrade their Outlook clients tend to have the lowest overall upgrade costs. Those organizations without Active Directory that upgrade Outlook on their PCs tend to have the highest overall costs. While many factors are part of the total upgrade cost, the efforts required to deploy Active Directory and install software on desktop computers continue to be closely associated with Exchange operating costs.

Author: David Via
Editor: David Ferris

Microsoft

Microsoft is the developer and publisher of the Exchange Server 2003 and Outlook 2003 client software. Both are part of the Microsoft Office System. Exchange server is used to provide messaging, collaboration, and communication services to organizations of all sizes. Its main features are email, calendaring and group scheduling, and support for applications such as routable forms and shared folders.

Exchange 2003 is the server component of a client-server email platform. Supported email clients include Outlook (both 2003 and older versions), standards-based IMAP and POP3 clients, web browsers, PDAs and smart phones. The Exchange Server provides message storage, routing, and directory services to the clients as well as free-busy time lookups, and ability to schedule access to resources such as conference rooms and equipment. Management tools, gateways, and business applications interface with the Exchange Server to access these communication services.

Exchange 2003 is the fifth major release of the email server software. Its main new features are:

- Scalability, reliability, and management capabilities designed to support many thousands of users
- Integrated server-based synchronization for PDAs and mobile devices
- Flexible remote access via Outlook Web Access (OWA) and full Outlook RPC access over the ubiquitous HTTP protocol.
- Cached mode communications, which senses the speed of remote connections and intelligently synchronizes local message stores with the server for mobile users
- Built-in spam filtering through the Intelligent Message Filter feature

There are a large number of add-ons and enhancements to Exchange Server available directly from Microsoft as well as a multitude of third-party vendors. The instant messaging, presence awareness, and conferencing features of Microsoft's Live Communication server are particularly well integrated with Exchange Server 2003.

For more information visit www.microsoft.com/exchange, or call +1 800 426 9400 or +1 425 882 8080.

Ferris Research

Ferris Research is a market research firm specializing in messaging and collaborative technologies. We provide business, market, and technical intelligence to vendors and corporate IT managers worldwide with analysts located in North America, Europe, and Asia/Pacific.

To help clients track the technology and spot important developments, Ferris publishes reports, white papers, bulletins, and a news wire; organizes conferences and surveys; and provides customized consulting. In business since 1991, we enjoy an international reputation as the leading firm in our field, and have by far the largest and most experienced research team covering messaging and collaboration.

Ferris Research is located at 408 Columbus Ave., Suite 1, San Francisco, Calif. 94133, USA. For more information, visit www.ferris.com or call +1 (415) 986-1414.

The Ferris Research User Panel

The User Panel consists of IT professionals who work with messaging and collaborative technologies, providing services to staff of their organization. People join to share experiences with other people like themselves, learn from each other, and keep current on news and trends.

If you provide technical support for an email system, and you are not a member of the User Panel, you can join and learn more about the User Panel at http://www.ferris.com/url/userpanel.html. There is no charge to join.