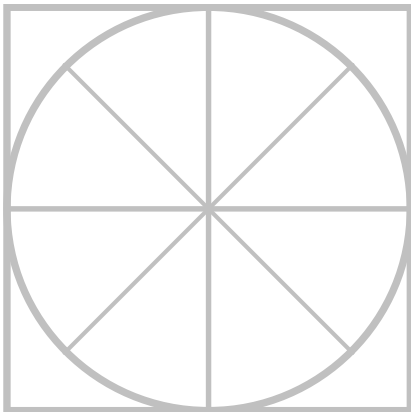
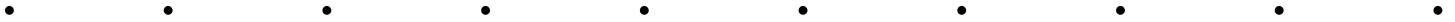




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Sun Java Communications Suite Total Cost of Ownership, 2005



A White Paper
www.radicati.com

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Sun Java Communications Suite Total Cost of Ownership

An Assessment of the Acquisition and Operational Costs of Sun Java Communications Suite in Enterprise Environments

1.0 Scope

This analysis of the Total Cost of Ownership (TCO) of Sun Java Communications Suite was conducted by The Radicati Group, Inc. in the first half of 2005. The study provides extensive information on acquisition costs, administration costs, downtime, staffing requirements and much more.

A total of 5 organizations were surveyed as part of this study.

In addition, the study also compares and contrasts the TCO of Sun Java Communications Suite with Microsoft Exchange 2003. The TCO information on Microsoft Exchange 2003 is based on an earlier study conducted by The Radicati Group, Inc., titled “Microsoft Exchange 2003 Total Cost of Ownership.” Key highlights from that study are re-printed here for ease of comparison between the two environments.

For simplicity’s sake, this study uses the terms “Messaging” and “Messaging and Collaboration” interchangeably. The TCO study includes only costs for the email and calendaring components of the Sun Java Communications Suite—the Sun Java System Messaging Server and the Sun Java System Calendar Server—in order to facilitate comparison with Microsoft Exchange. Costs of other components of the Sun Java Communication Suite—Sun Java System Instant Messaging, Sun Studio Enterprise and Sun Studio Creator—were not included in the study. Where referenced in this report, the email and calendar components of the Suite will be referred to jointly as Sun Java System Messaging and Calendar Servers.

Sponsorship of the Study

This study was sponsored by Sun Microsystems.

2.0 Methodology

The data and analysis in this report is based on primary research conducted by analysts of The Radicati Group, Inc. in the form of a specially designed questionnaire administered by phone, e-mail or in person. Respondents interviewed were largely senior managers, high level administrators, telecommunications managers, and IT managers knowledgeable about messaging and collaboration within each of the Enterprise organizations surveyed. A description of the survey population is provided in the Survey Profile section of this study. The full questionnaire used is included in Appendix A of this study.

All financial information presented in this study is in US\$.

3.0 Executive Summary

- Sun Java Communications Suite constitutes a highly scalable messaging and collaboration solution designed for enterprises and service providers.
- For this study, we surveyed 5 organizations which were provided as customer references by Sun. These respondents represented the following vertical industries:
 - Education (60%)
 - Government (20%)
 - Energy (20%)
- This study differentiates between:
 - i. Messaging and Collaboration TCO - which can be used to compare the cost-efficiency of different messaging and collaboration products in terms of client/server software.
 - ii. Loaded Messaging and Collaboration TCO – which includes Platform and Infrastructure (server hardware) costs, and can be used by companies to benchmark operating costs and understand the financial impact of platforms and the full infrastructure typically required for each product.
- The following table shows the Messaging and Collaboration TCO of the Sun Java Communications Suite over a 3-year period.

Sun Java Communications Suite Annual Messaging and Collaboration TCO per User	Year 1	Year 2	Year 3
Messaging & Collaboration Acquisition Cost per User	\$19.50	N/A	N/A
Messaging & Collaboration Maintenance Cost per User	N/A	\$3.90	\$3.90
Administration Cost per User	\$3.78	\$3.78	\$3.78
Migration & Upgrades Cost per User	\$0.14	\$0.14	\$0.14
Storage Cost per User	\$1.70	\$1.70	\$1.70
Downtime Cost per User	\$15.79	\$15.79	\$15.79
Training Cost per User	\$0.05	\$0.05	\$0.05
Messaging and Collaboration Annual TCO per User	\$40.96	\$25.36	\$25.36
3-Year Average Messaging and Collaboration TCO per User/ Year			\$30.56

Table 1: Sun Java Communications Suite – Annual Messaging and Collaboration TCO per User

- The study also compares and contrasts the TCO of Sun Java Communications Suite to our December 2003 TCO Study, “Microsoft Exchange 2003 Total Cost of Ownership.” Both studies were conducted using the same methodology and similar sample sizes.

- This Total Cost of Ownership study shows that the Sun Java Communications Suite offers significant cost benefits when compared to Microsoft Exchange 2003.
- This study shows that the Sun Java Communications Suite offers a lower TCO than earlier versions of the Sun messaging platform, as reported in previous studies. This improvement is due to performance and scalability improvements resulting from architectural changes in the newer versions used by the surveyed customers.
- The 3-year Average Messaging and Collaboration TCO of Sun Java Communications Suite is 71% less than Microsoft Exchange 2003.
- When server and client hardware costs are considered, the Loaded Messaging and Collaboration TCO of Sun Java Communications Suite provides a 77% benefit over Microsoft Exchange 2003.
- The figure below compares the 3-Year Average Loaded Messaging and Collaboration TCO per User/Year of Sun Java Communications Suite with that of Microsoft Exchange 2003.

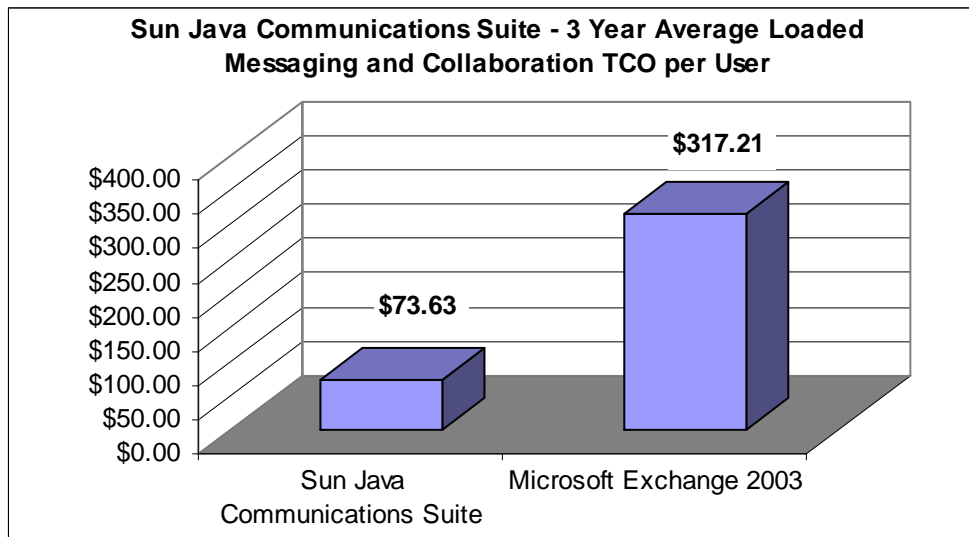


Figure 1: Sun Java Communications Suite vs. Microsoft Exchange 2003 – 3 Year Average Annual Messaging and Collaboration TCO per User

4.0 Survey Sample

- The enterprise survey sample for Sun Java Communications Suite consists of 5 organizations which were provided as customer references by Sun. It consists of:
 - Educational Institutions
 - Government Institutions
 - Global Corporations
- The organizations surveyed represent the following vertical industries:
 - Education (60%)
 - Government (20%)
 - Energy (20%)

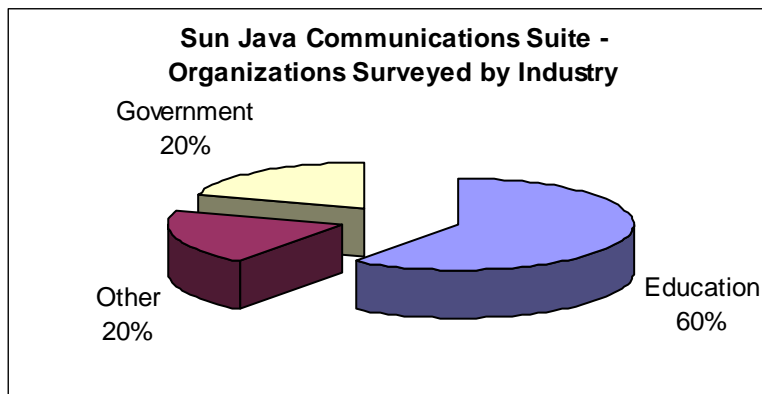


Figure 2: Sun Java Communications Suite – Organizations Surveyed by Industry

- In terms of company size, the breakdown of the organizations surveyed is as follows:
 - 40% had over 50,000 e-mail users.
 - 40% had between 10,000 to 50,000 e-mail users.
 - 20% had less than 10,000 e-mail users.

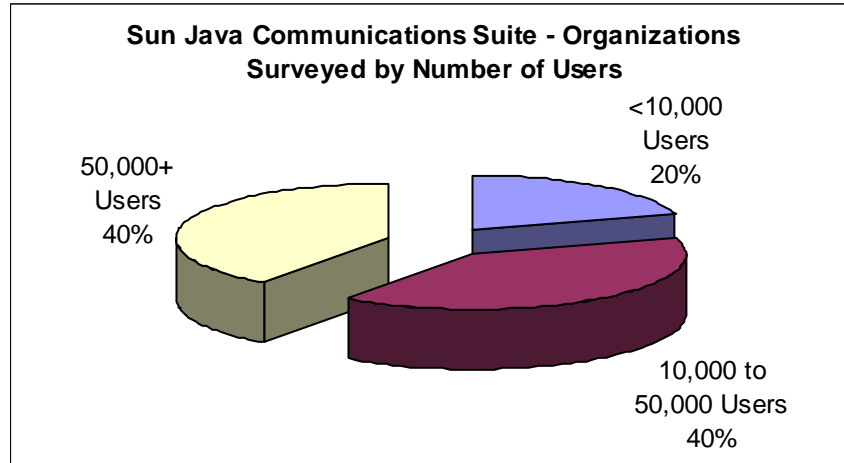


Figure 3: Sun Java Communications Suite – Organizations Surveyed by Number of Users

- In terms of geographic distribution, 80% of the organizations were from North America, 20% were from the Rest of World (ROW).

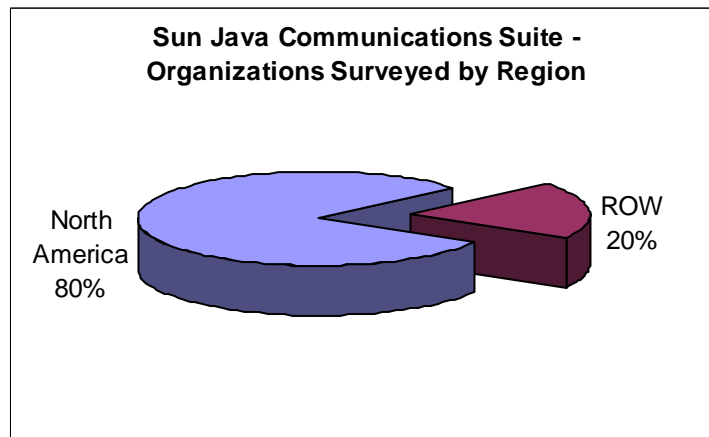


Figure 4: Sun Java Communications Suite – Organizations Surveyed by Region

4.1 Survey Sample of Microsoft Exchange 2003

- This study compares and contrasts the TCO of Sun Java Communications Suite to that of Microsoft Exchange 2003. To that effect, we briefly summarize here the make-up of the Exchange 2003 survey sample used in that study.
- The Exchange 2003 survey sample from The Radicati Group, Inc.’s “Microsoft Exchange 2003 Total Cost of Ownership” study, consisted of 2 educational institutions, 1 Global 1000 organization, and 1 Government organization, which were provided as customer references by Microsoft Corporation.

- The 4 organizations surveyed represented the following vertical industries:
 - Education (50%)
 - Government (25%)
 - Travel and hospitality (25%).
- In terms of company size, the 4 organizations surveyed were as follows:
- 25% of the organizations surveyed are large e-mail deployments with more than 10,000 e-mail users.
- 75% of the organizations surveyed have between 5,000 and 10,000 e-mail users.

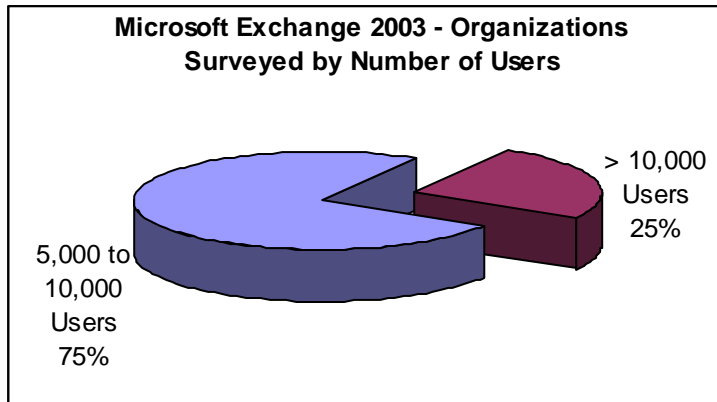


Figure 5: Microsoft Exchange 2003 – Organizations Surveyed by Number of Users

- In terms of geographic distribution, the 75% of the organizations surveyed were from North America and 25% were from Western Europe.

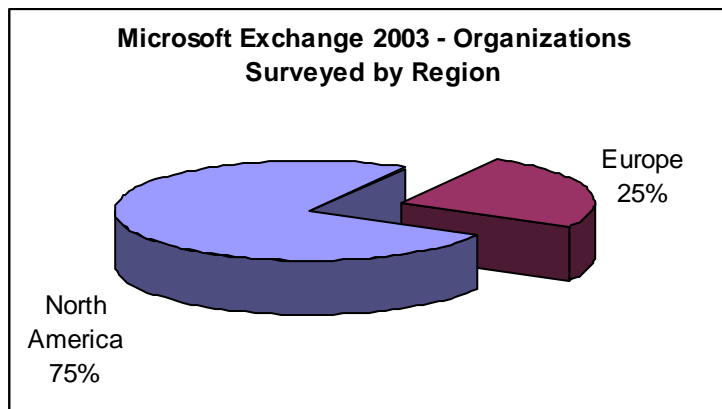


Figure 6: Microsoft Exchange 2003 – Organizations Surveyed by Region

5.0 Sun Java Communications Suite Customer Feedback

- The 5 customers with the Sun Java Communications Suite migrated from a variety of previous versions of Sun's email offering, including:
 - Versions of iPlanet Messaging Server
 - Versions of Sun ONE Messaging Server

- Sun customers indicated the following as reasons for deploying the Sun Java Communications Suite:
 - Reliability,
 - Scalability,
 - Ability to consolidate messaging environment,
 - Natural upgrade progression,
 - Cost,
 - Support for open standards.

- Other key benefits that respondents noted for the Sun Java Communications Suite include:
 - Ability to support a diverse user population,
 - Ease of administration,
 - Support for a variety of e-mail clients,
 - Ability to integrate with other IT systems,
 - Comprehensive webmail capabilities.

6.0 The Enterprise TCO Model

The Radicati Group's Messaging and Collaboration Total Cost of Ownership Model for Enterprises has been built to assist organizations in assessing the effectiveness of their systems, reduce costs and make better decisions on how to invest time and money.

The Enterprise TCO model used in this study is exactly the same as that used in our previous studies, including the study "Microsoft Exchange 2003 Total Cost of Ownership".

The model looks at the following key components of cost:

- **Acquisition Costs** - Acquisition Costs refer to the costs of purchasing all the hardware and software which makes up the Messaging and Collaboration Environment. In measuring acquisition costs within enterprise environments, we look at costs along two lines:
 - *Messaging and Collaboration Software Acquisition Costs* - which allows us to compare product costs
 - *Platform and Messaging Infrastructure Acquisition Costs* - which gives an idea of what organizations are actually spending to provide messaging and collaboration to their employees.
- **Maintenance Costs** - These comprise the cost of yearly support contracts for all hardware and software components. Similarly to Acquisition Costs, Maintenance Costs can be looked at along two dimensions:
 - *Messaging and Collaboration Software Maintenance.*
 - *Platform and Messaging Infrastructure Maintenance.*
- **Administration Costs** - These include a series of tasks, on-going as well as corrective, performed by Messaging Administrators to ensure the efficient update and operation of the messaging system.
- **Migration and Upgrade Costs** - Migration and upgrades represent a major cost component in most enterprise organizations. For the purpose of this model, we are assuming 1 major upgrade a year, and 2 minor upgrades a year. This is in line with what most organizations have told us in this survey, as well as many other corporate surveys which we have undertaken in the past two years.
- **Storage Costs** - Storage Costs represent the cost of e-mail storage per user per year. This can vary greatly among organizations, and even within the same organization, with different tiers of users being allotted different amounts of

storage space.

- **Downtime Costs** - These include any lost productivity caused by failure (i.e. downtime) of the messaging systems. These include both scheduled and unscheduled downtime.
- **Training Costs** - These include training costs for Messaging Administrators, and Help Desk Staff.

6.1 General Assumptions

All financial information shown in this study is in US\$, unless explicitly noted.

The TCO model used in this study makes the following assumptions regarding salaries:

- \$60/hour for Full-Time Messaging Administrators fully loaded (i.e. includes overhead, benefits, taxes etc.), or \$124,800/year.
- \$60/hour for Part-Time Messaging Administrators fully loaded (i.e. includes overhead, benefits, taxes etc.), or \$124,800/year.

Note: Often, the salary of a Part-Time Messaging Administrator is lower than that of a Full-Time Messaging Administrator, but for simplicity's sake, our model assumes that they have the same salary.

- \$30/hour for Help Desk Staff fully loaded (i.e. includes overhead, benefits, taxes etc.), or \$62,400/per year.
- \$35/hour for Messaging Users fully loaded (i.e. includes overhead, benefits, taxes etc.), or \$72,800/per year.

7.0 Sun Java Communications Suite TCO

The Sun environments analyzed in this study are running the Sun Java Communications Suite, or more specifically the Sun Java System Messaging Server and the Sun Java System Calendar Server, on Solaris 8 or 9.

Sun deployments have an average of 38,300 messaging users, deployed over an average of 3 servers. This yields an average 13,679 users per server. The average maximum number of users per server was 16,830.

Microsoft Exchange 2003 deployments had an average of 21,930 users, but only supported about 498 users per server. The average maximum number of users per server was 3,684.

	Sun Java Communications Suite	Microsoft Exchange 2003
Average Number of Users	38,300	21,930
Average Users per Server	13,679	498
Average # of Servers	3	44
Average Maximum Users/Server	16,830	3,684

Table 2: Sun Java Communications Suite vs. Microsoft Exchange 2003 - Scalability

On average, enterprises deploying the Sun Java Communications Suite have 1.15 full time messaging administrators, 0.42 part-time administrators and 3.64 help desk staff.

Sun Java Communications Suite	
Messaging & Collaboration Staff	
FT Administrators	1.15
PT Administrators (50% of time or less)	0.42
Help Desk Staff	3.64

Table 3: Sun Java Communications Suite Staffing Chart

The following table compares the Messaging and Collaboration staffing of the Sun Java Communications Suite with that of Microsoft Exchange 2003.

Sun vs. Microsoft - Staffing Chart		
	Sun	Microsoft
FT Administrators	1.15	1.88
PT Administrators (50% of time or less)	0.42	1.75
Help Desk Staff	3.64	9.75

Table 2: Sun vs. Microsoft – Staffing Chart

7.1 Acquisition Costs

Sun's Messaging and Collaboration software includes several components:

- Sun Java System Messaging Server
- Sun Java System Calendar Server
- Sun Java System Instant Messaging
- Sun Java System Connector for Microsoft Outlook
- Sun Java System Communications Sync

Most of these components can be purchased individually, or as part of Sun's comprehensive enterprise software and services package called Sun Java Enterprise System. Sun Java Communications Suite is a subset of the Java Enterprise System designed to address more specific business needs or IT projects. Both the Java Enterprise System and the Java System Communications Suite can be purchased as an annual subscription.

Sun Java System Connector for Microsoft Outlook and Sun Java System Communications Sync are included with purchase of Sun Java System Messaging and Calendar Servers, with the Communications Suite, and with the Java Enterprise System as a whole. Other products required for the use of the Sun Java Communications Suite, such as Sun Java System Directory Server, Access Manager and Web Server, are included at no additional cost for use only with the email, calendar or instant messaging applications.

The Sun Java Communications Suite is designed for medium and large-sized organizations as well as service providers. It is available on Solaris SPARC and x86, Windows, HP-UX and Linux.

Users can access their email and calendars through a variety of clients, including MS Outlook and Ximian Evolution via connectors, and their email through standards-based desktop clients such as Eudora or Mozilla clients. Sun also offers out-of-the-box a web-based client that provides users with integrated access to email, calendars, tasks and address book functionality. Organizations can also integrate the Sun web client into a broad portal infrastructure.

The Sun Java Enterprise System is currently priced at \$140, per employee, per year. The Sun Java Communications Suite is priced at \$50, per employee, per year. Point pricing for individual components ranges from \$0.95 to \$20 per user for Sun Java System Messaging Server, and from \$0.95 to \$30 each per user for Sun Java System Calendar Server and Sun Java System Instant Messaging. Pricing depends on the volume of seats purchased.

To obtain a full understanding of the total cost of messaging and collaboration for organizations, we also looked at the Loaded Messaging and Collaboration Acquisition costs, which include the following cost components:

- The cost of the computing platform (both hardware and software) used for messaging and collaboration.
- The share of the client desktop platform (both hardware and software) attributed to messaging and collaboration.
- The cost of any additional network infrastructure, such as: network bandwidth, firewalls, supplies of media, including all labor required to support these, etc.

The average cost of the client desktop PC in the surveyed Sun customer environments was \$2,270.

In this study, we look at Acquisition Costs along 2 lines:

1. Messaging and Collaboration Acquisition Costs, which allow us to compare different messaging and collaboration products. The Messaging and Collaboration Acquisition Cost per User for Sun Java Communications Suite is \$19.50.
2. Platform and Infrastructure Acquisition Costs, which gives an idea of the total amount that organizations are spending to provide messaging and collaboration to their employees. The Platform and Infrastructure Acquisition Cost per User for Sun Java Communications Suite is \$32.30.

Acquisition Costs for the Sun Java Communications Suite in the environments we surveyed are as follows:

<i>Acquisition Costs</i>	<i>Quantity</i>	<i>Price</i>	<i>Cost</i>
Number of Users	38,300		
Number of Servers	3		
<i>Messaging and Collaboration Software Costs</i>			
Messaging and Collaboration Server Software:			\$746,850.00
Messaging and Collaboration Client Software:			N/A
Total			\$746,850.00
Messaging and Collaboration Software Acquisition Cost/User			\$19.50
<i>Platform and Infrastructure Acquisition Costs</i>			
Total Messaging Server Platform Cost (Hardware and OS)	3	\$175,000.00	\$492,800.00
Client Desktop Platform (Hardware and OS)	38,300	\$2,269.50	\$86,921,850.00
% Attributed to Messaging	4%	\$79.43	\$3,042,264.75
Any Additional Infrastructure			
Total			\$3,535,064.75
Platform and Infrastructure Acquisition Cost/User			\$92.30

Table 4: Sun Java Communications Suite Acquisition Costs

Note: All prices assume volume discounts.

Figures 7 and 8 compare the Acquisition Costs of the Sun Java Communications Suite to Exchange 2003. The Messaging and Collaboration and Platform and Infrastructure acquisition costs of Sun Java Communications Suite are significantly less than that of Microsoft Exchange 2003. The low TCO per user is a result of the high scalability of Sun's platform, which enables hardware and software platform costs to be amortized over a large number of users.

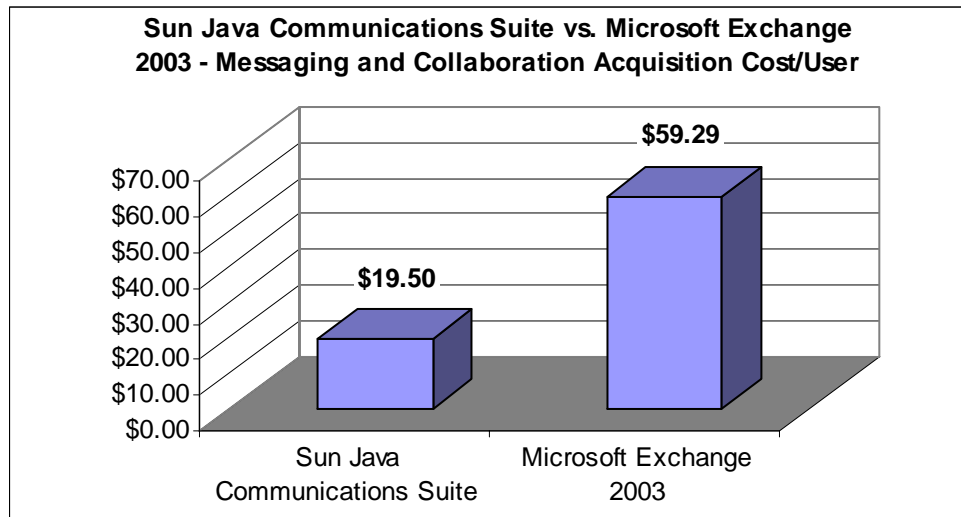


Figure 7: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Messaging and Collaboration Acquisition Cost/User

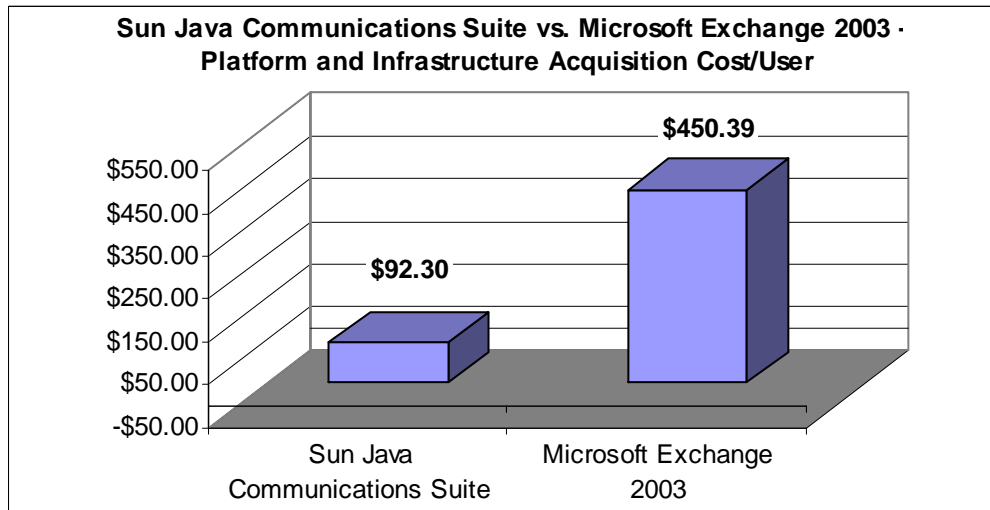


Figure 8: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Platform and Infrastructure Acquisition Cost/User

7.2 Maintenance Costs

Maintenance costs for messaging and collaboration for the Sun Java Communications Suite are based on the following cost components:

- Maintenance of the Messaging and Collaboration Software, which for the Sun Java Communications Suite is \$3.90 per user per year, and includes MOS updates and phone/e-mail support.
- Platform and Infrastructure Maintenance, which for the Sun Java Communications Suite is \$18.46 per user per year.

Maintenance Costs for the Sun Java Communications Suite per user per year are as follows:

<i>Maintenance Costs</i>	<i>Quantity</i>	<i>Price</i>	<i>Cost</i>
Messaging and Collaboration Maintenance			
Server Software Maintenance	20%	\$149,370.00	\$149,370.00
Client Software Maintenance	20%	N/A	N/A
Total			\$149,370
Messaging and Collaboration Maintenance Cost/User			\$3.90
Platform and Infrastructure Maintenance			
Messaging Server Platform Maintenance (HW and OS)	20%	\$492,800	\$98,560
Client Desktop Platform Maintenance (HW and OS)	20%	\$3,042,265	\$608,453
Additional Infrastructure Maintenance	20%		
Total			\$707,013
Platform and Infrastructure Maintenance Cost/User			\$18.46

Table 5: Sun Java Communications Suite – Maintenance Costs

The following figures compare the Maintenance Costs of the Sun Java Communications Suite to Exchange 2003. The high maintenance cost of Microsoft Exchange 2003 is a direct result of the high messaging and collaboration and platform and infrastructure cost of the solution.

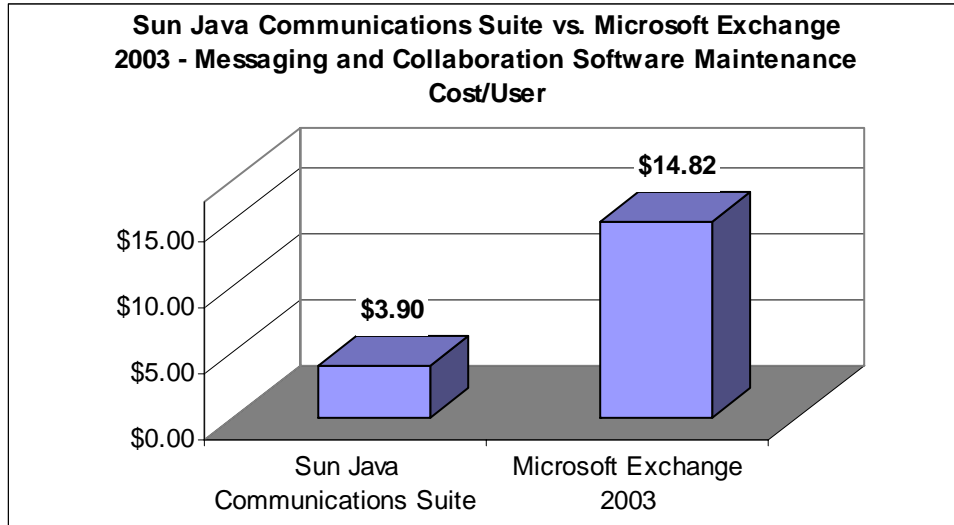


Figure 9: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Messaging and Collaboration Software Maintenance Cost/User

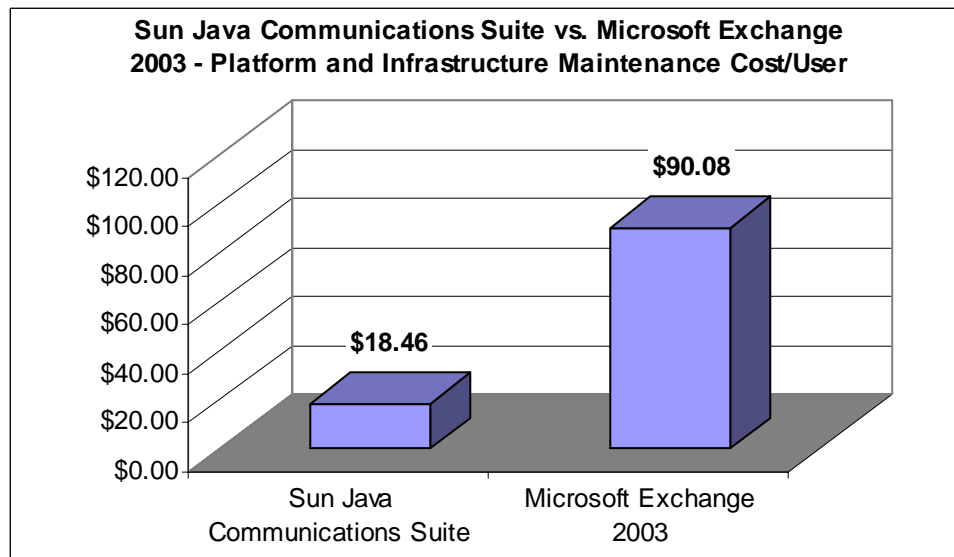


Figure 10: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Platform and Infrastructure Maintenance Cost/User

7.3 Administration Costs

Administration Costs for the Sun Java Communications Suite are \$3.78 per user per year. Many of the Sun customers we surveyed used an enterprise-wide provisioning system that reduced the administration tasks performed directly on the Sun Java Communications Suite. Educational institutions in particular, tended to perform user adds, deletions and modifications from a centralized student management console, rather than directly on the messaging server.

Administration Cost Components	Number of Administrators	Total Hours/Week for All Admins	Salary per Hour	# of Weeks	Total Cost
adding/deleting users	1.36	1.00	\$60.00	52	\$4,243.20
managing distribution lists	1.36	0.60	\$60.00	52	\$2,545.92
managing access controls	1.36	1.40	\$60.00	52	\$5,940.48
managing user passwords	1.36	0.20	\$60.00	52	\$848.64
performing backup and restores	1.36	4.10	\$60.00	52	\$17,397.12
administering web-access mail	1.36	0.80	\$60.00	52	\$3,394.56
administering rich clients	1.36	2.00	\$60.00	52	\$8,486.40
administering security features	1.36	1.40	\$60.00	52	\$5,940.48
administering rules and filters	1.36	1.80	\$60.00	52	\$7,637.76
directory management	1.36	1.80	\$60.00	52	\$7,637.76
administrating remote client access	1.36	0.42	\$60.00	52	\$1,768.00
managing messaging-based applications	1.36	1.63	\$60.00	52	\$6,930.56
end-user support issues	1.36	9.00	\$60.00	52	\$38,188.80
adding/deleting vacation messages or other tasks for end users	1.36	4.67	\$60.00	52	\$19,801.60
administering anti-virus controls	1.36	0.70	\$60.00	52	\$2,970.24
administering anti-spam controls	1.36	2.60	\$60.00	52	\$11,032.32
Total		34.12			\$144,763.84
Administration Cost per User					\$3.78

Table 6: Sun Java Communications Suite – Administration Costs

Note: The 1.36 administrators comprises all 1.15 of the Full-Time Messaging Administrators, and 50% of the 0.42 Part-Time Messaging Administrators, which yields $1.15 + 0.21 = 1.36$ total Messaging Administrators.

The following figure compares the Administration Cost of the Sun Java Communications Suite to Exchange 2003.

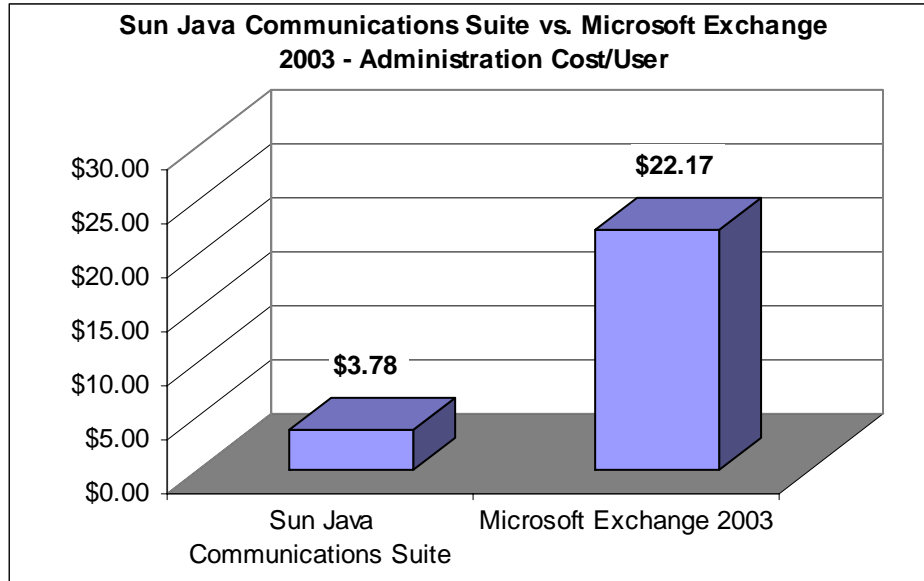


Figure 11: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Administration Cost/User

7.4 Migration and Upgrade Costs

In this study, we assume 1 major upgrade and 2 minor upgrades per year. Upgrade expenses include mainly the time of administrators to install, test and reconfigure various aspects of their environments.

It is worth noting that the administrators which we interviewed had a slightly different interpretation of migration and upgrades than vendors do. Essentially while vendors anticipate the need for migration when there is a new major or minor software release, administrators in our survey used the term “migration and upgrade” to denote any type of transition in their current environments. This accounts for the fact that even administrators using products whose latest upgrades were released some time ago or were only recently released indicated they were spending a great deal of their time on migration and upgrades.

The key issue we were striving to measure was not how often upgrades take place, but rather how long it takes to carry out upgrades. How long it takes to carry out upgrades is a reflection of the messaging environment’s flexibility, and how well designed the administrative tools are.

Also, the high scalability of the Sun Java Communications Suite enables migration and upgrade costs to be amortized among a large number of users.

Migration and Upgrade Costs for the Sun Java Communications Suite are \$0.14 per user per year, as follows:

Migration & Upgrade Costs	Number of Administrators	Total Hours/Year for All Administrators	Quantity Affected	Salary per Hour	Total Cost
Major Upgrades (HW and SW)	1.36	38	1	\$60.00	\$3,101
Minor Upgrades (HW and SW)	1.36	15	2	\$60.00	\$2,448
Total					\$5,549
Migration & Upgrade Cost/User					\$0.14

Table 7: Sun Java Communications Suite – Migration and Upgrade Costs

Figure 12, next page, compares the Migration and Upgrade Cost of the Sun Java Communications Suite to Exchange 2003.

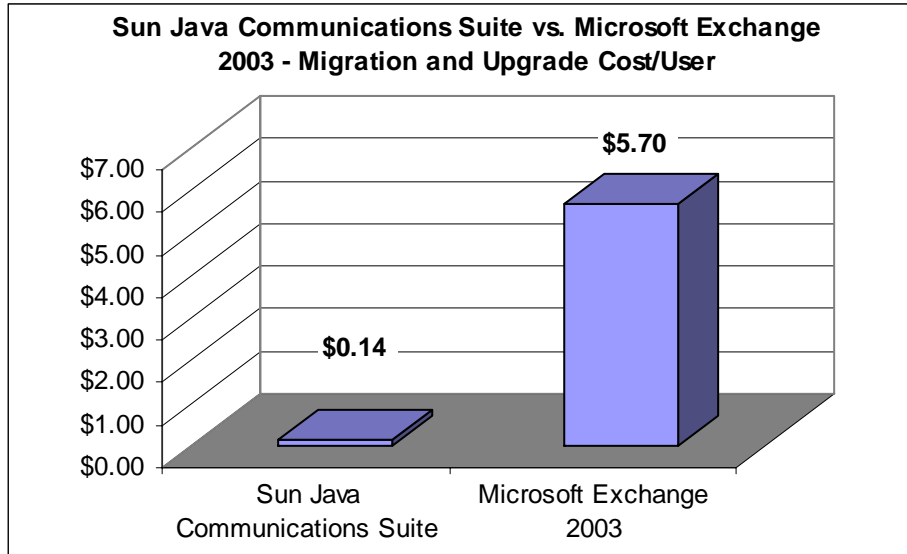


Figure 12: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Migration and Upgrade Cost/User

7.5 Storage Costs

The Sun Java Communications Suite customers surveyed indicated they are spending an average of \$0.06/MB for storage. In order to provide a fair comparison, we assumed an equal amount of storage per user (i.e. 30MB) for all the environments surveyed, but we varied the cost of storage based on the cost per MB which was provided by the customers we surveyed.

The Storage Costs of the Sun Java Communications Suite are \$1.70 per user per year, as follows:

Storage Costs	Storage/ User (MB)	Cost/MB	Total Cost
Storage allocated/user (MB)	123.75	\$0.06	\$7.01
Storage Cost/User Assuming 30MB Allocated/User			\$1.70

Table 8: Sun Java Communications Suite – Storage Costs

The following figure compares the Storage Cost of the Sun Java Communications Suite to Exchange 2003.

The cost of storage for the Sun Java Communications Suite is generally low, since Sun deployments are typically very large.

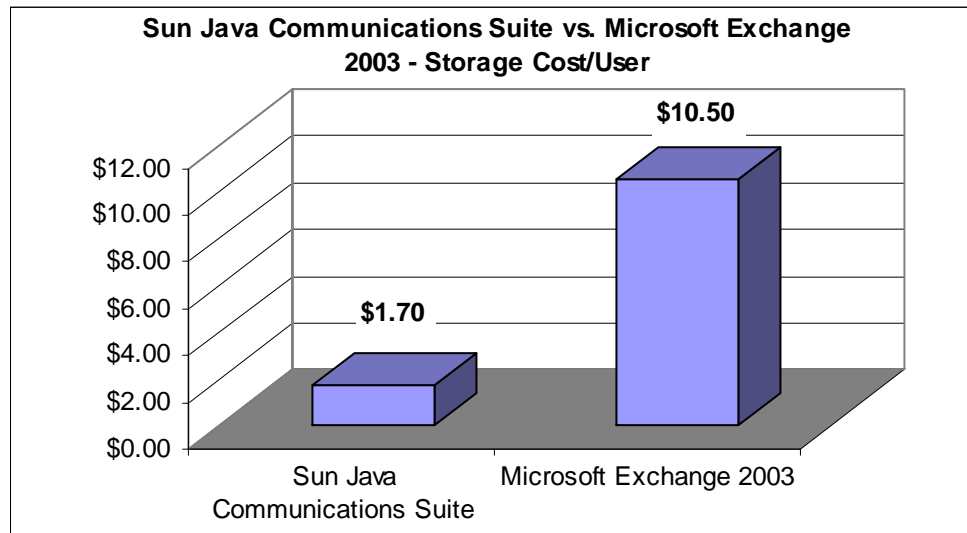


Figure 13: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Storage Cost/User

7.6 Downtime Costs

Downtime is a reflection of the level of on-going maintenance required by each product (i.e. scheduled downtime), as well as the robustness of each product (i.e. un-scheduled

downtime). Downtime Costs also include any lost productivity caused by failure of the messaging systems.

Two key factors contribute the most to the level of downtime:

- The relative newness of a product or release, which of course makes it more prone to failures and maintenance in the early months of production deployment.
- The number of users in the environments surveyed, since our TCO model assumes that un-scheduled downtime affects 25% of the total user population, the larger the population size the greater the financial impact of any un-scheduled downtime.

The Downtime Costs of the Sun Java Communications Suite are \$15.79 per user per year, as follows:

Downtime Costs	Avg. Hours/ Month	Affected Personnel	No. of Months	Hourly Salary	Total Cost
Un-scheduled Downtime	0.2	9,575	12	\$35.00	\$603,225
Scheduled Downtime	1.4	1.36	12	\$60.00	\$1,371
Total					\$604,596
Downtime Cost/User					\$15.79

Table 9: Sun Java Communications Suite – Downtime Costs

Figure 14, next page, compares the Downtime Costs of Sun Java Communications Suite to Exchange 2003. Despite the large user populations potentially affected in the Sun environments, the cost of downtime was significantly less for Sun Java Communications Suite than for Exchange 2003.

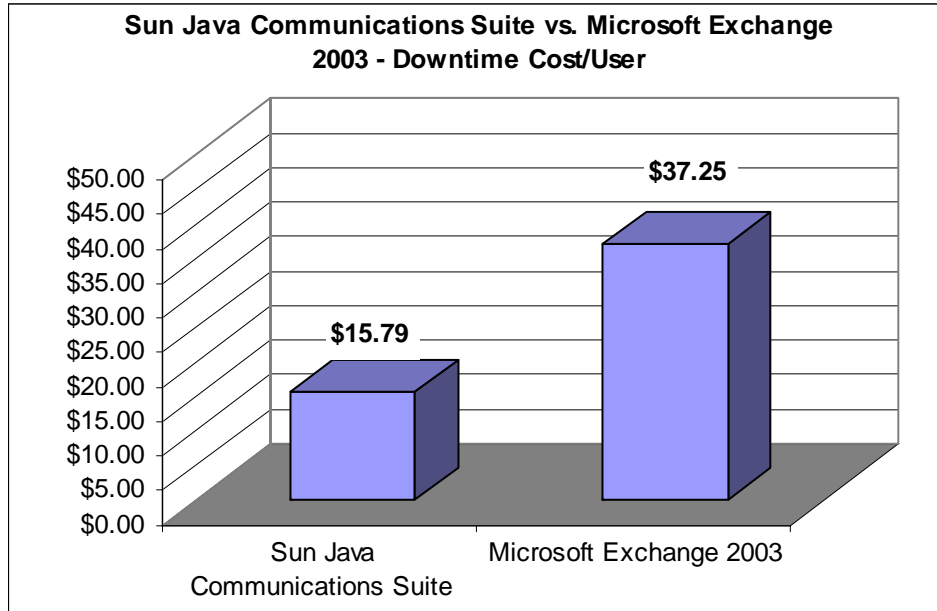


Figure 14: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Downtime Cost/User

7.7 Training Costs

Training costs include training for all Messaging Administrators and Help Desk Staff.

Training Costs for the Sun Java Communications Suite are \$0.05 per user per year, as follows:

Training Costs	Avg. Hours/Year	Affected Personnel	Hourly Salary	Total Cost
Messaging Administrators	14.8	1.36	\$60.00	\$1,208
Help Desk Staff	2.0	9.75	\$30.00	\$585
Total				\$1,793
Training Cost/User				\$0.05

Table 10: Sun Java Communications Suite – Training Costs

Figure 15, below, compares the Training Costs of the Sun Java Communications Suite to Exchange 2003. Training costs serve to gauge how easy the system is for administrators to learn and become proficient in.

The training costs of the Sun Java Communications Suite tend to be very low due to fewer administrators and help desk employees. In the current survey, many respondents had been Sun (or Netscape) customers for many years, making additional training unnecessary

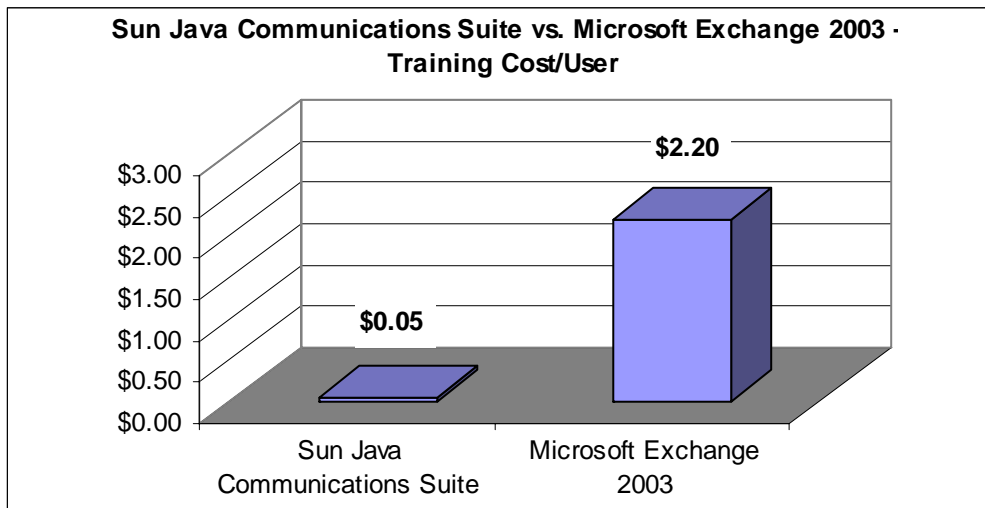


Figure 15: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Training Cost/User

7.8 Sun Java Communications Suite Total Cost of Ownership

The Sun Java Communications Suite's Messaging and Collaboration TCO over a 3-year period is as follows:

Sun Java Communications Suite Annual Messaging and Collaboration TCO per User	Year 1	Year 2	Year 3
Messaging & Collaboration Acquisition Cost per User	\$19.50	N/A	N/A
Messaging & Collaboration Maintenance Cost per User	N/A	\$3.90	\$3.90
Administration Cost per User	\$3.78	\$3.78	\$3.78
Migration & Upgrades Cost per User	\$0.14	\$0.14	\$0.14
Storage Cost per User	\$1.70	\$1.70	\$1.70
Downtime Cost per User	\$15.79	\$15.79	\$15.79
Training Cost per User	\$0.05	\$0.05	\$0.05
Messaging and Collaboration Annual TCO per User	\$40.96	\$25.36	\$25.36
3-Year Average Messaging and Collaboration TCO per User/ Year			\$30.56

Table 11: Sun Java Communications Suite – Annual Messaging and Collaboration TCO per User

The 3-Year Messaging and Collaboration TCO of the Sun Java Communications Suite comes to an average of \$30.56 per user per year for an organization of 38,300 users.

Figures 16 and 17, next page, show the Year 1 Messaging and Collaboration TCO per User/Year, and the 3-Year Average Messaging and Collaboration TCO per User/Year of the Sun Java Communications Suite versus Microsoft Exchange 2003.

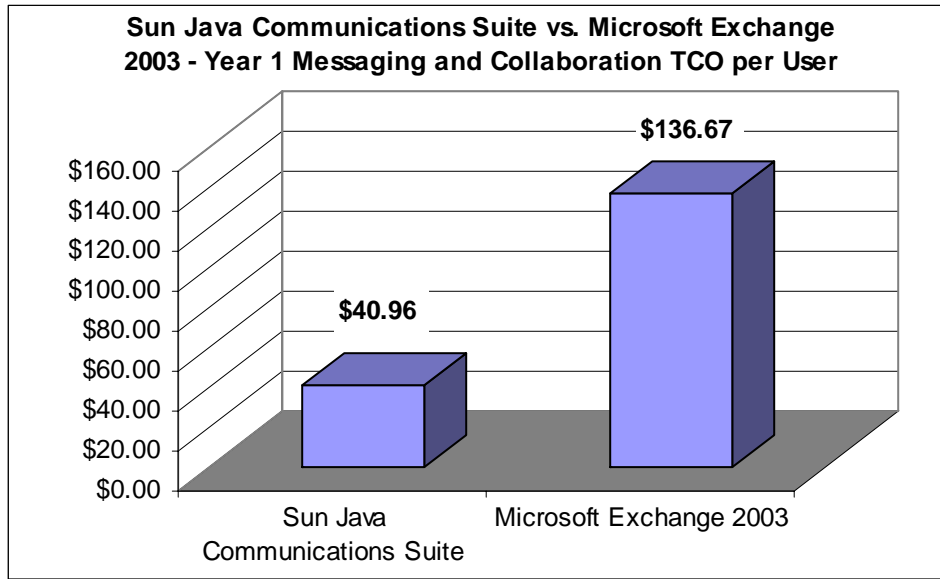


Figure 16: Sun Java Communications Suite vs. Microsoft Exchange 2003 – Year 1 Messaging and Collaboration TCO per User

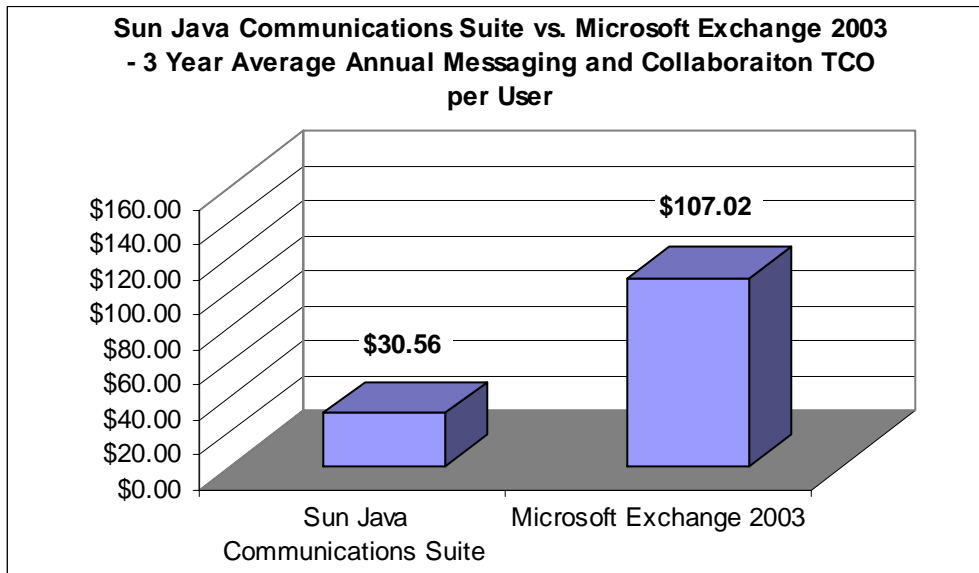


Figure 17: Sun Java Communications Suite vs. Microsoft Exchange 2003 – 3 Year Average Annual Messaging and Collaboration TCO per User

We also attempt to estimate the Loaded Messaging and Collaboration TCO, taking into account all platform and infrastructure costs. This number can vary greatly due to hardware, client software and implementation decisions. The average 3-Year Platform and Infrastructure cost per user in Sun Environments amounts to \$43.07 per user, as shown in the following table:

Sun Java Communications Suite Platform and Infrastructure Cost/User	Year 1	Year 2	Year 3
Platform and Infrastructure Acquisition Cost/User	\$92.30	N/A	N/A
Platform and Infrastructure Maintenance Cost/User	N/A	\$18.46	\$18.46
Platform and Infrastructure TCO per User/Year	\$92.30	\$18.46	\$18.46
3-Year Average Platform and Infrastructure TCO per User/ Year			\$43.07

Table 12: Sun Java Communications Suite – Annual Platform and Infrastructure TCO per User

Adding the messaging and collaboration software, and the computing platform and infrastructure costs per user, we find that the average 3-Year Loaded Cost of Ownership per Year for the Sun Java Communications Suite is \$73.63 per user, as shown in the following table:

Sun Java Communications Suite Loaded Messaging and Collaboration TCO per User	Year 1	Year 2	Year 3
Messaging and Collaboration TCO per User/Year	\$40.96	\$25.36	\$25.36
Platform and Infrastructure TCO per User/Year	\$92.30	\$18.46	\$18.46
Loaded Messaging and Collaboration TCO per User/Year	\$133.26	\$43.82	\$43.82
3-Year Average Loaded Messaging and Collaboration TCO per User/Year			\$73.63

Table 13: Sun Java Communications Suite – Annual Loaded Messaging and Collaboration TCO per User

The following figure shows the 3-Year Average Loaded Messaging and Collaboration TCO per User/Year of the Sun Java Communications Suite, comparing it to Exchange 2003.

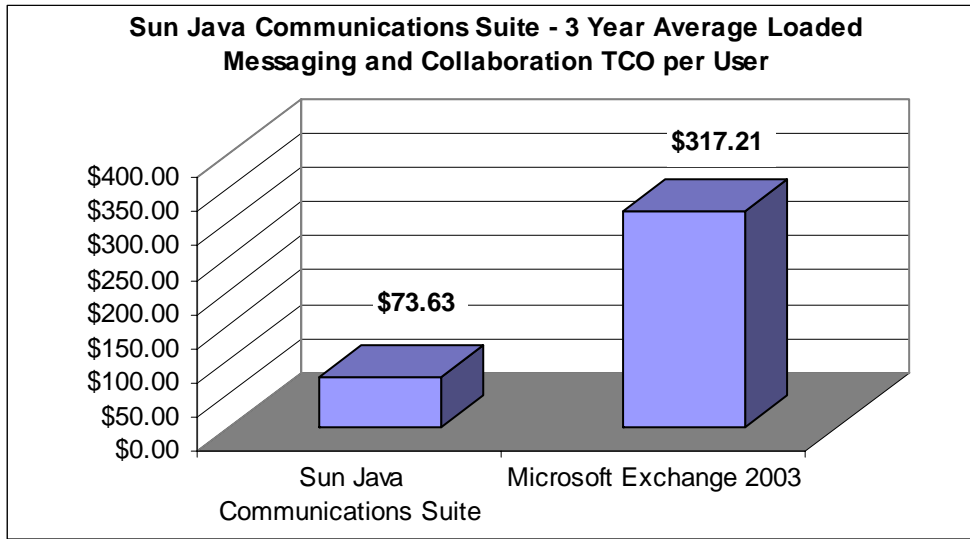


Figure 18: Sun Java Communications Suite – 3 Year Average Loaded Messaging and Collaboration TCO per User

7.9 Comparison Summary

The table below compares the TCO of the Sun Java Communications Suite to Microsoft Exchange 2003, on a component-by-component basis.

Sun Java Communications Suite Annual TCO per User	Year 1	Year 2	Year 3	3 Year Average
Messaging & Collaboration Acquisition Cost per User	\$19.50	N/A	N/A	
Messaging & Collaboration Maintenance Cost per User	N/A	\$3.90	\$3.90	
Administration Cost per User	\$3.78	\$3.78	\$3.78	
Migration & Upgrades Cost per User	\$0.14	\$0.14	\$0.14	
Storage Cost per User	\$1.70	\$1.70	\$1.70	
Downtime Cost per User	\$15.79	\$15.79	\$15.79	
Training Cost per User	\$0.05	\$0.05	\$0.05	
Messaging and Collaboration Annual TCO per User	\$40.96	\$25.36	\$25.36	\$30.56
Platform and Infrastructure TCO per User/Year	\$92.30	\$18.46	\$18.46	\$43.07
3-Year Average Loaded Messaging/Collab TCO per User/Year	\$133.26	\$43.82	\$43.82	\$73.63
Microsoft Exchange 2003 Annual TCO per User	Year 1	Year 2	Year 3	3 Year Average
Messaging & Collaboration Acquisition Cost per User	\$59.29	N/A	N/A	
Messaging & Collaboration Maintenance Cost per User	N/A	\$14.82	\$14.82	
Administration Cost per User	\$22.17	\$22.17	\$22.17	
Migration & Upgrades Cost per User	\$5.70	\$5.70	\$5.70	
Storage Cost per User	\$10.50	\$10.50	\$10.50	
Downtime Cost per User	\$37.25	\$37.25	\$37.25	
Training Cost per User	\$2.20	\$2.20	\$2.20	
Messaging and Collaboration Annual TCO per User	\$137.11	\$92.64	\$92.64	\$107.02
Platform and Infrastructure TCO per User/Year	\$450.39	\$90.08	\$90.08	\$210.18
3-Year Average Loaded Messaging/Collab TCO per User/Year	\$587.50	\$182.72	\$182.72	\$317.21

Table 14: Sun Java Communications Suite vs. Microsoft Exchange 2003 TCO

8.0 Anti-Virus, Anti-Spam Use

Anti-Virus Software

A variety of anti-virus solutions can be deployed with the Sun Java Communications Suite. Of the five companies we surveyed, two were using a combination of Symantec and Sophos anti-virus software, and two were using only Symantec anti-virus software. One respondent did not provide information about anti-virus software.

On average it took administrators 5.5 hours to install anti-virus software, and 3.1 hours to administer the anti-virus solution on a weekly basis.

Anti-Spam Software

Of the organizations we surveyed, three were using Symantec Brightmail anti-spam software, while one was using the open source SpamAssassin anti-spam solution. One respondent did not provide information about their anti-spam software.

On average, anti-spam software took the respondents 5.5 hours to install, and 7.4 hours per week to administer.

Sun Java Communications Suite	
Anti-Virus	
Product(s) in Use	Symantec, Sophos
Avg. Person Hours for Installation	5.5
Avg. Person Hours for Administration	7.4
Anti-Spam	
Product(s) in Use	Brightmail, SpamAssassin
Avg. Person Hours for Installation	5.5
Avg. Person Hours for Administration	3.1

Table 15: Sun Java Communications Suite – Summary of Other Applications and Third Party Software

9.0 Conclusions

This TCO study clearly indicates that the Sun Java Communications Suite offers substantial cost of ownership benefits.

The scalability of the Sun Java Communications Suite is a key asset. On average, a Sun server can support over 26 times more users than an Exchange 2003 server. This enables organizations to dramatically consolidate their messaging and collaboration infrastructure with Sun, thereby reducing acquisition, maintenance and administration costs substantially.

The Sun Java Communications Suite is highly flexible, enabling organizations to integrate the platform with other provisioning and administration systems. Most of the organizations that we surveyed integrated the Sun Java Communications Suite into a central provisioning system, resulting in sharp reductions in administration costs.

Sun also provides users with a versatile web-based messaging and collaboration client that combines basic webmail functionality with advanced collaboration features like calendaring, task management, address books and more. Organizations can also integrate the Sun Java Communications Suite with portal software, providing users with single sign-on access to a broad range of data. This makes the Sun platform ideal for a variety of end users, including information workers, remote workers, students, faculty, and others.

This study shows that the Sun Java Communications Suite offers a lower TCO than earlier versions of the Sun messaging platform, as reported in previous studies. This improvement is due to performance and scalability improvements resulting from architectural changes in the newer versions used by the surveyed customers.

The 3-Year average Messaging and Collaboration TCO of the Sun Java Communications Suite was \$30.56 per user, compared to \$107.02 per user for Microsoft Exchange Server 2003.

The 3-Year average loaded Messaging and Collaboration TCO of the Sun Java Communications Suite, which takes into account server and client hardware costs, was \$73.63 per user, compared to \$317.21 per user for Exchange 2003.

Going forward, Sun plans to add new advanced collaboration functionality to the Sun Java Communications Suite platform. These features will enable organizations to combine messaging, calendaring, scheduling and groupware features with voice. Other enhancements will be made to improve server administration and client access.

10.0 Appendix A

**Sun Java Communications Suite
(Sun Java System Messaging and Calendar Servers)
Total Cost of Ownership Survey**

Site Profile:

Company Name _____

Respondent's Name _____

Address _____

City _____ **State** ____ **Zip** _____

Phone Number _____

E-mail _____

Number of Employees: _____

Industry: _____

A. ENVIRONMENT

1. How many email users are there in your organization? _____
 - a) Of these, how many are on:
 - i. **Sun Java System Messaging Server & Calendar Server** _____
 - ii. Previous versions of Sun Messaging _____
2. How many **Sun Java System Messaging Servers & Calendar Servers** are there in your organization? _____
3. What is the Production Server Configuration for **Sun Java System Messaging Server & Calendar Server**?
 - a) Hardware Server Model _____ Version _____
 - b) Software O/S _____ Version _____
 - c) Are you using clustered servers? _____ Yes _____ No
 - i. If yes, how many servers are there in a cluster? _____

- ii. Of these, how many servers in the cluster are active? _____
 - iii. How many servers in the cluster are passive? (i.e. meaning they only act as “spare tires” in the event of a failure) _____
4. What is the average maximum number of users per **Sun Java System Messaging Server & Calendar Server** in your organization? _____
5. What is the total number of **Full-Time Messaging Administrators** in your organization? _____
- a) Of these, how many are responsible for **Sun Java System Messaging Server & Calendar Server**? _____
 - b) What percentage (%) of their time is spent on **Sun Java System Messaging Server & Calendar Server**? _____
6. What is the total number of **Part-Time Messaging Administrators** in your organization? _____
- a) Of these, how many are responsible for **Sun Java System Messaging Server & Calendar Server**? _____
 - b) What percentage (%) of their time is spent on **Sun Java System Messaging Server & Calendar Server**? _____
7. What is the total number of **Help-Desk Staff** in your organization? _____
- a) Of these, how many are responsible for **Sun Java System Messaging Server & Calendar Server**? _____
 - b) What percentage (%) of their time is spent on **Sun Java System Messaging Server & Calendar Server**? _____
8. How many Internet Gateway servers are used with **Sun Java System Messaging Server & Calendar Server**? _____
9. What is the percentage (%) of users who connect remotely on **Sun Java System Messaging Server & Calendar Server**? _____
10. What messaging-related security products are in use with **Sun Java System Messaging Server & Calendar Server**? _____

11. What types of desktop clients are used in your organization with **Sun Java System Messaging Server & Calendar Server**? (i.e. Web mail, Outlook etc.) Please specify client type and % used by users in your organization.

- a) Client Type 1 _____ % Used _____
- b) Client Type 2 _____ % Used _____
- c) Client Type 3 _____ % Used _____

B. ADMINISTRATION

Please answer the following questions only for Sun Java System Messaging Server & Calendar Server.

Please give total time per week in hours for ALL administrators

12. How many hours are spent during an average week on the following tasks:

- a) Adding/deleting users _____
- b) Managing distribution lists _____
- c) Managing access controls _____
- d) Managing user passwords _____
- e) Performing backups/restores _____
- f) Administering web-mail access _____
- g) Administering rich clients _____
- h) Administering security features _____
- i) Administering rules and filters _____
- j) Directory Management _____
- k) Administration of remote access clients _____
- l) Managing messaging-based applications _____
- m) End-user support issues _____
- n) Adding/deleting vacation messages or other tasks for end users _____
- o) Administration of anti-virus controls _____
- p) Administration of anti-spam controls _____

C. MIGRATION AND UPGRADES

Please answer the following questions only for Sun Java System Messaging Server & Calendar Server.

13. How many administrator hours were spent per year to migrate to **Sun Java System Messaging Server & Calendar Server**? (both hardware and software)?

14. How many administrator hours are spent per year on **Sun Java System Messaging Server & Calendar Server** minor upgrades (both hardware and software)?

D. PLATFORM COSTS

15. Share of Desktop Computing Platform in conjunction with **Sun Java System Messaging Server & Calendar Server**: _____

a) What is the estimated total cost per **Sun Java System Messaging Server & Calendar Server** user of their desktop computing platform, including: PCs, LAN/WAN, systems, storage hardware, OS and support and administration etc.
Cost \$: _____

b) What % of that can be attributed to messaging and collaboration?

16. Share of Server Computing Platform in conjunction with **Sun Java System Messaging Server & Calendar Server**: _____

a) What is the estimated total cost per **Sun Java System Messaging Server & Calendar Server** user of their server computing platform, including: Servers, LAN/WAN, systems, storage hardware, OS and support and administration etc.
Cost \$: _____

b) What % of that can be attributed to messaging and collaboration?

E. STORAGE COSTS

17. Storage costs in conjunction with **Sun Java System Messaging Server & Calendar Server**:

a) How much storage in MBs is normally allocated per **Sun Java System Messaging Server & Calendar Server** user? _____

b) What is your estimated cost per MB? _____

F. DOWNTIME

*Please answer the following questions only for **Sun Java System Messaging Server & Calendar Server**.*

18. What is the number of hours of *un-scheduled* downtime of **Sun Java System Messaging Server & Calendar Server** per month? _____

19. What is the number of hours of *scheduled* downtime of **Sun Java System Messaging Server & Calendar Server** per month? _____

G. TRAINING

Please answer the following questions only for Sun Java System Messaging Server & Calendar Server.

20. How many total hours were spent on **Sun Java System Messaging Server & Calendar Server** administrator training per year? _____

21. How many hours were spent on **Sun Java System Messaging Server & Calendar Server** help desk training per year? _____

I. OTHER APPLICATIONS AND THRID PARTY SOFTWARE

(Note: these questions are being included for general information purpose only, the information collected will not be included in the TCO numbers for messaging and collaboration.)

Instant Messaging Software

- a) What Instant Messaging product do you use? _____
- b) How many dedicated Instant Messaging servers are in use within your service?

- c) How many person months were required to customize the look and feel of the Instant Messaging software? _____
- d) How many person/hours are required to install Instant Messaging software on a new server? _____
- e) How many person/hours are required to administer Instant Messaging software on a weekly basis? _____

*Please answer the following questions **only** in conjunction with Sun Java System Messaging Server & Calendar Server.*

Anti-Spam Software

- a) What product do you use? _____

- b) How many person/hours are required to install Anti-spam software on a new Messaging Server? _____
- c) How many person/hours are required to administer Anti-spam software on a weekly basis? _____

Anti-Virus Software

- a) What product do you use? _____
- b) How many person/hours are required to install Virus software on a new Messaging Server? _____
- c) How many person/hours are required to administer Virus software on a weekly basis? _____