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☛ Details: Proposed Audit: Information Technology Systems Projects in State Agencies

(FORM UPDATED: 08/11/2010)

# WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

## 2005-06

(session year)

## Joint

(Assembly, Senate or Joint)

## Committee on Audit...

### COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**

### INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
- Clearinghouse Rules ... **CRule** (w/Record of Comm. Proceedings)
- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
  - (**ab** = Assembly Bill)                      (**ar** = Assembly Resolution)                      (**ajr** = Assembly Joint Resolution)
  - (**sb** = Senate Bill)                              (**sr** = Senate Resolution)                              (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

\* Contents organized for archiving by: Stefanie Rose (LRB) (September 2012)

## Document/Source/Summary

Email Consolidation Working Group Recommendations for the Consolidated Email Services at the State of Wisconsin

<http://enterprise.state.wi.us/home/tlc/EMail/emailRecommendationfinal.doc>

List of working group participants on page 7. Shows process and timeline for email consolidation evaluation.

Customer Loyalty Survey Final Report Draft– Prepared for Division of Enterprise Technology December 2005 by Gene Kroupa & Associates

Provides insight regarding customer perceptions of Division of Enterprise Technology. DET plans to have meetings with all agencies to validate the information in the draft report before it will be finalized and released.

Shared Information Systems (SIS) IOC (Initiative Oversight Committee) member list

[http://sis.wi.gov/section\\_detail.asp?linkcatid=700&linkid=344&locid=21](http://sis.wi.gov/section_detail.asp?linkcatid=700&linkid=344&locid=21)

SIS Implementation Project Staffing Diagram

<http://sis.wi.gov/docview.asp?docid=1321&locid=21>

Information Technology Director's Council January 21, 2004 Letter to DOA

Input to DOA regarding Server Consolidation

[http://itdirectors.wi.gov/server\\_consolidation\\_input.htm](http://itdirectors.wi.gov/server_consolidation_input.htm)

Provides summary of pertinent issues related to pending server consolidation project. Questions projected cost savings. Suggests review of plan by uninvolved third party.

Highlights of Agency/Committee Comments on Server Consolidation Appraisal Report

<http://serverconsolidation.wi.gov/docview.asp?docid=2972>

Highlights of comments from agencies contained in larger document (below). Comments and DET responses on the following topics: business continuity, chargebacks, conceptual design, cost-benefit, federal money, general, governance, metrics, network consolidation, organization, risk, security, service, staffing,

Agency/Committee Comments on Server Consolidation Appraisal Report

<http://serverconsolidation.wi.gov/docview.asp?docid=2982>

112 pages of detailed comments organized by agency/topic/criticality to success of SIS project as portrayed in Crowe Appraisal Report, which recommends going forward with the project.

Journal Sentinel article – Contractor paid to cut contracts, March 19<sup>th</sup>, 2006

<http://www.jsonline.com/story/index.aspx?id=409418>

Story centers on whether projected cost savings calculations by DOA consultant hired to cut costs (Silver Oaks) are reliable. Mentions DOT internal study that projects cost savings to be only a fraction of the Silver Oaks study. ~~Additional cost savings projections from other agencies were submitted to Karen Aasen and/or Helen MacCain, DOA procurement in late 2004/early 2005.~~

IT Director's Council Agency IT Contacts

[http://itdirectors.wi.gov/agency\\_contacts.htm](http://itdirectors.wi.gov/agency_contacts.htm)

List of IT directors including contact information

Other Sources of Information:

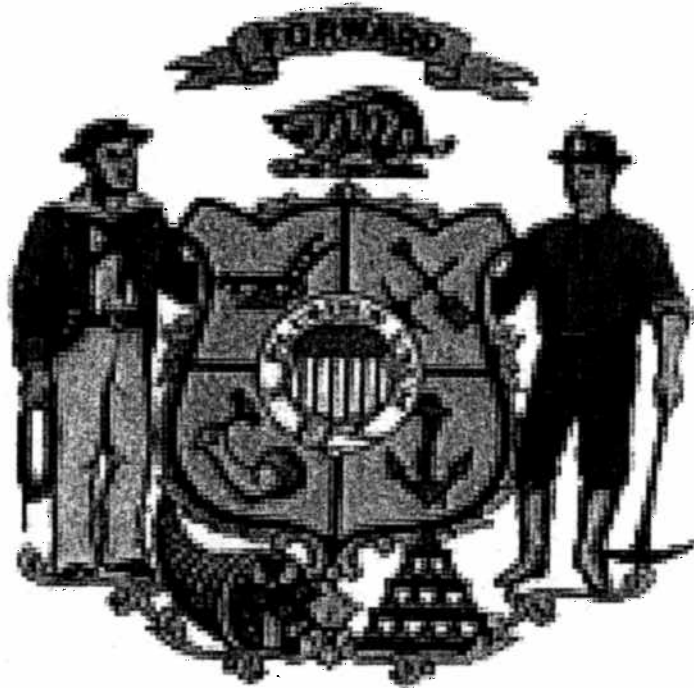
SIS website <http://serverconsolidation.wi.gov/>

TLC website <http://enterprise.state.wi.us/home/tlc/home.htm>

ITDC website: <http://itdirectors.wi.gov/default.htm>



**State of Wisconsin  
Email Consolidation Working Group**



**Recommendations  
for the  
Consolidated Email Services  
at the  
State of Wisconsin**

## Executive Summary

During June 2003, DET identified several IT projects for consideration with the goal of generating lapsable funds to assist with addressing budgetary cuts. The underlying idea was to reduce overall costs of providing server services for the State through efficiencies gained by consolidating to fewer servers and reducing the total number of support staff. Despite the potential high cost of migration, email services consolidation was considered worthy of further investigation by the TLC Server Subcommittee because:

- Email provides “utility like” services to all agencies in a similar manner,
- All agencies have similar functional business requirements of an email service (Appendix A: Functional Email Business Requirements)
- It is a “messaging architecture” which is designed to work over the WAN and should be able to be configured to minimally impact the existing network while matching existing service levels.

The TLC Server Subcommittee formed a work group to further investigate if there would be significant savings, and recommend for or against moving forward as a service DET would offer to the agencies. The overall belief of the server subcommittee was that DET would need to prove they could perform this service *as well as or better than* the agencies and at a lower cost.

The Email Consolidation Working Group membership consisted of representatives from 7 agencies, the Server Subcommittee and DET. The work group held meetings every other week October 1, 2003 through January 2004 and weekly meetings during February. The working group: conducted a survey of the State to determine the current email environment, had 5 vendor TCO/ROI studies performed, and identified functional email business requirements for a consolidated State email service.

On Wed. Feb 4, DET representatives presented a directive to the working group from the State CIO that stated it wasn't a matter of if email consolidation would happen but how; and a small group would be created to move forward with a procurement for email consolidation. The working group was expected to give a recommendation based on this directive to the TLC on Feb. 20. At that time the working group felt there might be some cost avoidance opportunities with email consolidation, but there would not be lapsable cost savings from email consolidation. Little analysis was actually done of the TCO/ROI studies due to the decision of the working group to concentrate on documenting the required recommendations for the future consolidated email service since it was no longer the working group's task to make a recommendation as to if email should be consolidated.

In the data we received from the 13 agencies responding to our survey, the state was only expending \$6,355,069 million over 5 years for 32,655 users. If the number of users was normalized to the 40,000 users we told the vendors to base their calculations on, the state only has a cost of \$7,784,497 for email services over a 5 year time period. None of the vendors had our current operating costs below \$10 Million. This difference in estimation on the vendors' part severely impacts any potential savings that might be gained from a consolidation effort. Additionally, the vendors did not include costs for work that would have be done to the network for email consolidation to be a success.

Since email consolidation will happen per the CIO's directive, the Email Consolidation Working Group is pleased to make these recommendations for the future consolidated email service of the State of Wisconsin in four topic areas:

- Email Service Consolidation Scope Recommendations
- Email Service Business Requirement Recommendations
- Email Service Business Implementation Plan Recommendations
- Email Service Financial Plan Recommendations

**The Email Consolidation Working Group makes the above topic area recommendations after 4.5 months of investigation. While the actual amount of future savings cannot be yet documented, it most likely will not be achieved through decreases in staff. The working group believes that some future hardware/software savings will occur by undertaking this effort, however there will have to be a considerable initial investment particularly if client updates are included in the consolidated effort. This working group also believes that email is a uniquely amenable to consolidation at this time, and that successful consolidation of this service cannot be generalized to other server services. Each server service must be evaluated individually on its merits for consolidation.**

Related topics (network encryption, document content management, records management) were identified that will impact the email services environment. The work group has determined that these topics are far larger than email services alone and cannot be addressed within this working group. It is suggested that these topics be addressed within their respective domain areas. The email team has allowed for these future efforts by identifying a need to integrate with their solutions.

With this recommendation document the Email Consolidation Working Group has fulfilled both phases of its charter. The working group understands there is a desire to move forward by issuing a request for proposal for an in-depth study of email consolidation including development and implementation of a migration plan. This team strongly believes that the working group should actively participate in this RFP effort through reviewing the RFP and evaluating responses. The working group should remain active until their existing knowledge/understanding regarding consolidation of email services for the State has been transferred to the implementation team. This belief is based on the amount of work this team has already done and the level of awareness and familiarity with the issues that the team members possess.

In order to help ensure the effectiveness and reliability of the future states email service, the Email Consolidation Working Group requests the TLC to approve these recommendations to be carried forward into the procurement effort for a State consolidated email service.

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## Introduction

During June 2003, DET identified several possible IT projects for consideration with the goal of generating lapsable funds to assist with addressing budgetary cuts. Two of the papers describing these projects were concerned with consolidation of servers across the State - one with a scope of all servers and one limited to email servers. The underlying idea was to reduce overall costs of providing server services for the State through efficiencies gained by consolidating to fewer servers and reducing the total number of support staff. The TLC Server Subcommittee dismissed the first more general server consolidation paper for several reasons, including:

- The existing network infrastructure would not support such an effort;
- Agency applications are unique to agencies businesses and don't lend themselves to consolidation with other agencies;
- Many existing applications are not designed to work over a WAN environment and would require either additional coding to make them work or actual replacement of the application; and
- The numbers on which the project paper was based were grossly inaccurate causing a highly inflated dollar amount to be claimed as potential savings.

Despite the potential high costs of a migration, the second idea of email services consolidation was considered worthy of further investigation by the TLC Server Subcommittee because:

- Email provides "utility like" services to all agencies in a similar manner,
- All agencies have similar functional business requirements of an email service (Appendix A: Functional Email Business Requirements)
- It is a "messaging architecture" which is designed to work over the WAN and should be able to be configured to minimally impact the existing network while matching existing service levels.

The TLC Server Subcommittee formed a work group to further investigate if there would be significant savings, and recommend for or against moving forward as a service DET would offer to the agencies. The overall belief of the server subcommittee was that DET would need to prove they could perform this service *as well as or better than* the agencies and at a lower cost.

The Email Consolidation Working Group was formed in late September 2003 (see Appendix B: Email Consolidation Work Group Charter). The working group was charged with:

- Identification of business requirements for a State consolidated email service;
- Reduction of IT life cycle costs with regards to email services;
- Improving service levels of email;
- Increasing availability of email services; and
- Minimizing the complexity of the email environment

The work group was instructed to consider product options and services and develop a business and financial model for our recommended solutions. The working group was to proceed with the above criteria in a two-phase manner.

Phase 1: Gather requirements and identify cost savings. Conduct TCO/ROI studies as part of the cost savings identification. Make a recommendation to the Server Subcommittee based on those findings.



Phase 2: Develop a business plan and financial models to support the recommended solutions. The business plan and financial models will include information about the kind/scope of consolidation and the plan on how to proceed.

### **Working Group Staffing**

The Email Consolidation Working Group membership consisted of representatives from 7 agencies, the Server Subcommittee and DET.

Lisa Onken	DOT Working Group Chair
Wendy Fassbender	DOC Agency Representative
Jim Williams	DWD Agency Representative
Tom Foss	DATCP Agency Representative
Laurie Baker	DHFS Agency Representative
Chris Heitmann	DOR Agency Representative
Rudy Molina	DOJ Agency Representative
Mick LeRoy	DOT Agency Representative
Lisa Jorgensen	DET Server Subcommittee member
Werner Gade	DET Enterprise IT representative

### **Working Group Process**

The work group held meetings every other week starting October 1, 2003. The initial meetings generally had two parts. Part one included a presentation from 1 of 5 prospective Email vendors to educate the work group on their product. Presenters were:

- Critical Path – Provider option,
- IBM – Lotus Domino product option,
- Microsoft – Exchange 2003 product option,
- Novell – Groupwise product option and
- Oracle – Collaboration Suite product option.

During part two of the meetings, the team compiled a survey to gain information about the State's email environment for the future TCO/ROI studies to be performed by each of the 5 presenters (see Appendix C: Survey Questionnaire). The survey contained questions from each of the vendors performing the TCO/ROI studies. The survey was sent to the State's Email Administrators distribution list and copied to the Agency IT directors for completion on November 19, 2003.

On a separate track, on November 19, DOA issued an RFP as part of the Enterprise Administrative Services Initiative (EASI) project. RFP 3113- "Implementation Services for Statewide Enterprise Server Consolidation" requests vendors to propose a solution that will implement the consolidation of two components of critical IT infrastructure:

1. Consolidate all servers in the State to a central DOA location and,
2. Consolidate all agency server support staff to DOA.

Because of this RFP, the work group was asked to delay tabulating and sending the survey results for the studies to the vendors until after the RFP response was due on December 10, 2003. The work group moved the survey due date back to December 12<sup>th</sup>. The surveys were tabulated into a summary sheet that was sent to the vendors on January 7, 2004 with a "Vendor Charge" document detailing our expectations in terms of deliverables and TCO scenarios. Vendors had until January 14<sup>th</sup> to pose questions about the survey information and/or the "vendor charge". The work group replied back to the vendors with responses to their questions on January 16<sup>th</sup>. Vendors then had to provide a written report of their TCO on January 28<sup>th</sup>, with presentations by all vendors held on January 30<sup>th</sup>.

Weekly meetings were held after January 30<sup>th</sup> to evaluate and validate the vendors' studies and prepare the group's recommendations. During this time we also sent the functional business requirements document to the State Email Administrators group to validate the requirements to be used as part of the future vendor selection. Finally, the work group wrote this recommendations document to be presented to the Server Subcommittee on February 19 and to the TLC on February 20<sup>th</sup>.

### **Working Group Findings with Regards to Our Current Environment**

Information with regards to our current email system environment were gathered through three mechanisms by the work group:

1. Survey Questionnaire,
2. Functional Email Business Requirements, and
3. Work Group Sharing

#### ***Survey Questionnaire***

The work group conducted a survey of the agencies in an attempt to identify the State's existing email environment. Highlights from the survey responses are bulleted below with the total tabulated results in Appendix D: Survey Results. Based on the data received from the 13 agencies that responded to our survey the State's Email environment consists of at least:

- ▶ 32,655 users of the State's email system.
- ▶ 7,183 of those users are located at remote locations with a critical need for email services regardless of WAN availability.
- ▶ 10 agencies use Exchange 5.5, 1 agency uses Exchange 2000, 1 agency uses Exchange 2003, and 1 agency uses Groupwise as the back-end server.
- ▶ 6 agencies use Outlook 2000, 3 agencies use Outlook 98, 3 agencies use some combination of Outlook 2000, 98 and/or XP and 1 agency uses Groupwise as the front-end client.

- ▶ 10 agencies rated IT, business and organization effectiveness of the existing email environment as “Very Effective” and 3 agencies rated it as “Effective”.
- ▶ There is 2,767 GB of data within our current email system.
- ▶ 13 agencies identified a total 5-year life cycle cost of the current email environment at \$6,355,069.
- ▶ There are 87 servers within the current email environment.
- ▶ There are 9.85 FTE email system administrators at these 13 agencies.

### ***Functional Business Requirements – Email***

The work group identified functional business requirements of an email service (see Appendix A). These requirements have been reviewed by the State email administrators and validated as either “must have” or “want to have” functional business requirements to be provided by our State email service.

### ***Work Group Sharing***

The work group through the process of the bi-weekly meetings and discussion of issues or concerns identified these additional findings:

- Agency policies vary widely regarding maximum mailbox size. In the extremes, some have a maximum mailbox size of 20 Mb, while some agencies with no maximum limits have users with mailboxes over 1 GB.
- Agency policies vary widely regarding the retention and archiving of email messages and their contents.
- Agencies vary widely in the type of access they allow to their messaging system. Most have some sort of browser based client access. Some also have VPN, wireless, Citrix, or dial-up access.
- Agency policies regarding connection of PDAs/Blackberry devices vary from creating a special environment for them; to allowing the devices and not supporting them; to not allowing their connection to the email system.
- Agencies have developed a number of applications that need the ability to integrate with the email system.
- Many agencies have critical applications and receive/respond timeframes associated with their use of the email system.
- Each agency purchases their own anti-virus and, if used, anti-spam solution. There are several different brands of both anti-spam and anti-virus solutions implemented throughout the state.
- There will be very little lapsable staff time recovered by a consolidation of the state email service as almost all positions have additional responsibilities besides email.
- Identification and retention of state records transmitted via email are an ongoing issue for all agencies.
- Agencies have mandated requirements regarding security of the information contained in and transmitted via emails.

- The majority of agencies will be going through some email migration process within the next year.
- Migration to a newer email solution using the current agency by agency process will be more expensive for the State than a coordinated consolidation of the State's email system. This is due largely to each agency planning and implementing its own migration and working out the resolution to any migration issues they encounter. Migration must also occur without impacting interagency email operations or the current Exchange configuration that produces the GAL.

## **Working Group TCO/ROI Studies**

### ***Background Information***

The work group charged the vendors to provide their TCO/ROI studies based on the following scenarios from the Survey Questionnaire and the Vendor Charge document (see Appendix E: Vendor Charge):

1. Consolidation will only be done on the backend portion of email (on the servers)
2. Agencies will retain user email administration and support responsibilities, but not email server administration.
3. There will be at least 36 servers with 7,012 users located at 36 remote facilities due to the critical nature of email usage at those locations. These locations require email services within their locations regardless of the state of WAN connectivity to their location.
4. There are another 14 locations with 171 users that have critical needs for email access, but another option rather than placement of a server at that location for email access might be more cost effective. We would like your opinion on this and how you would address this issue.
5. TCO is over a 5-year fiscal life
6. All existing data contained within the current email systems used by agencies today will be migrated to the new email system.

#### Definitions:

1. Lapsable – refers to the reallocation of time and/or funds to other (non-email) purposes
2. Consolidation – the agency would no longer be providing backend email services.

### ***Observations of TCO/ROI Studies***

After due consideration of the varied needs of the departments and the State email system, the workgroup has the following observations about the vendors' TCO/ROI studies and the State's email system:

- The “savings” identified in each TCO/ROI study cannot be **relied** on for an accurate representation of the savings that might be achieved by consolidating the email services of the State.
- Each vendor needs to do a more in-depth analysis of our current environment to establish the true cost of a consolidation effort and the hard or soft savings, if any, it will generate.
- At least one upgrade and 24x7 premium level tech support should be included in a 5 year life cycle.
- Calendaring should be included in the email consolidation effort and wasn't consistently factored into all of the studies.
- None of the proposed solutions include outsourcing end-user administration or level 1 help desk support
- Strong executive sponsorship is required for statewide email consolidation to succeed. Cost/Benefits for agencies must be shown to convince all to participate.
- Actual agency experience to date has found migration costs are about \$100+ per user.
- Costs associated with staff training and directory integration will be lower if all state agencies use the same messaging system and the same version level of server and client.
- Although each product will work with the Outlook client, consolidation would be an appropriate time to select a client and version to be implemented statewide.

### *Analysis of TCO/ROI Studies*

On Wed. Feb 4, DET representatives presented a directive to the working group from the State CIO that it wasn't a matter of if email consolidation would happen but how and a small group would be created to move forward with a procurement for email consolidation. The working group was expected to give a recommendation based on this directive to the TLC on Feb. 20. The working group discussed this directive and came up with a plan on how to move forward with our effort. At that time the group felt there might be some cost avoidance opportunities with email consolidation, but there would not be lapsable cost savings from email consolidation. However with this directive and the short time line in which to work, the working group decided to concentrate on making recommendations the future consolidated email system needs to incorporate to ensure the email system provided the necessary functionality and service that agencies will require.

Little analysis was actually done of the TCO/ROI studies due to the decision of the working group to concentrate on documenting the required recommendations for a consolidated email service. A minimal amount of analysis was done by various individuals within the group on the data the vendors presented on Jan. 30. It should be noted that all vendors had the state currently operating at costs far above what the state is actually operating at. In the data we received from the 13 agencies responding to our survey, the state was only expending \$6,355,069 million over 5 years for 32,655 users. If this number was normalized for the 40,000 users we told the vendors to base their calculations on this is only a cost of \$7,784,497 for the state. None of the vendors had our current operating costs below \$10 Million. This difference in estimation on the vendors' part of course severely impacts any potential savings that might be gained from a consolidation

effort. Additionally, the vendors did not include costs for work that would have been done to the network for email consolidation to be a success. Further analysis was hampered by the vendors' different methods as to what costs were actually included in their studies versus another vendor method and by the need to finish a recommendation and prepare a presentation.

### **Pros/Cons of Consolidation**

#### Pros of Consolidation:

- Cost Savings
  - Future hardware and software savings may occur
- Cost Avoidance
  - Agencies will avoid cost of individual migration efforts and associated learning curve
- Other Benefits
  - Potential for uniformity
  - Potential for simplified environment
  - Chance to build in robustness (i.e. redundancy/fault tolerance)
  - Potential for implementing standard policies (mailbox size)
- Existing single Exchange Organization
  - An opportunity for an enterprise approach to resolve technical challenges of the existing single Exchange Organization or "GAL"

#### Cons of Consolidation:

- Decrease in email service
  - Turn around on users administration will be increased
  - Turn around for problem resolution will be increased
  - Loss of existing redundancy/fault tolerance levels

#### Costs—Increased communications costs

- Client costs to upgrade to uniform client
- Network upgrade costs for successful consolidation
- Development of accurate rate structure for cost recovery
- Could be more costly to individual agencies in some cases
- Potential loss of single sign could result
- Existing single Exchange Organization
  - The ability to reply to email generated from the existing system may be sacrificed depending upon consolidation approach
  - Agencies' identified name space may be removed
  - Single login may be lost

## **Working Group Recommendations**

Since email consolidation will happen per the directive the working group received, the Email Consolidation Working Group is pleased to make these recommendations for the future consolidated email service of the State of Wisconsin.

### ***Email Service Consolidation Scope Recommendations***

- A. "Consolidation" for the purpose of email should be considered to apply to the backend portion( i.e. servers, location, server administration).
- B. Agencies may retain user administration and support duties and may distribute subsets of these duties to their support staff at various locations as appropriate.
- C. All existing data, including archives, in active use by agencies will be migrated to the new email system.
- D. The ability to reply to both old and new email will remain unaffected by consolidation.
- E. The existing single Exchange organization or "GAL" will be replaced in such a manner as to minimize the impact to agencies.
- F. Remote locations with business requirements that cannot tolerate interruptions of email service due to WAN or Network issues will need to be provided a method(s) to meet established reliability/availability requirements. These methods could be either a server on site or redundant network paths ----whichever fulfills agencies business requirements at an acceptable level.

### ***Email Service Business Requirement Recommendations***

- G. All "must haves" from the Functional Email Business Requirements must be included in the selected solution product or provider.
- H. Anti-virus and anti-spam solutions must be a part of the consolidated email environment. Agencies or program areas will need the ability to opt-out of having the spam filter enforced depending on business requirements.
- I. Retention policies, with necessary RDAs and archiving abilities including an exception process must be established with agency input.
- J. The Email system must be able to integrate with a major vendors document content management system in order to address the states need for RDA requirements.
- K. Agencies existing name space should not be impacted by consolidation.
- L. Agencies should have the ability to shut down email traffic from other agencies or outside sources in the event of virus and/or spam outbreaks while maintaining internal email.
- M. The consolidated email directory should not supersede an agencies' NOS directory.
- N. End-to-end encryption of email should be available for selected use as determined by the agencies, regardless of the client used.
- O. The state requires 24x7 premium level technical support availability with a guaranteed response time to all calls placed by authorized staff.

***Email Service Business Implementation Plan Recommendations***

- P. The Email Consolidation Working Group should remain a functional group to be included in the next steps of this consolidation effort, as they have already done all the work with regards to this effort.
- Q. Implementation of consolidated email services should be performed by a multi-agency project team consisting of those already familiar with the management requirements of a successful, large email system and should include the following team members:
  - a. Manager – large agency representative
  - b. Project Lead – large agency representative
  - c. Technical Lead – large agency representative
  - d. Project Team – 1 DET representative, 1 small agency representative and 2 large agency representatives.
  - e. Agency member – 1-2 representative from each agency while that agency is being migrated to the consolidated system.
- R. The working group, the implementation team and the selected vendor will need to work together closely to plan and implement the chosen solution.
- S. The time between beginning and completing the upgrade to the chosen product / solution should be minimized as much as possible. To that end, State staff will need to be made available to work with vendors on planning and implementation
- T. All agencies will be migrated to the most current production version level of client and server software, with training provided for administrative staff and users.
- U. Agencies will have choices for deploying a thick client and/or/both a web-based client and/or a compatible version of Outlook for email.
- V. Service Level Agreements will be needed to provide each agency with a clear path for problem resolution.
- W. A policy oversight group made up of agencies needs to meet on a quarterly basis to discuss the management of the States email services. This could be the existing workgroup or another sub-group of the server domain.

***Email Service Financial Plan Recommendations***

- X. Criteria for the successful vendor for this consolidation effort should include the ability to show their dedication to email services and its management part of their corporate strategic direction.
- Y. Upgrading to any of the products or the service reviewed should be done quickly, before agencies spend more money on doing their own research and upgrades.
- Z. Agencies should be charged for services used. Specific surcharges should be imposed on mailboxes over a certain size, possibly on a per megabyte basis.
- AA. A small charge per mailbox should be added to ensure funds for updating or upgrading on a regular cycle.
- BB. A rate process most likely based on number of mailboxes per agency and size of data store needs to be established.



## **Conclusion**

**The Email Consolidation Working Group makes the above topic area recommendations after 4.5 months of investigation. While the actual amount of savings cannot be yet documented, it most likely will not be achieved through decreases in staff. The working group believes that some hardware/software savings will occur by undertaking this effort. This working group also believes that email is a uniquely amenable to consolidation at this time, and that successful consolidation of this service cannot be generalized to other server services. Each server service must be evaluated individually on its merits for consolidation.**

Related topics (Network encryption, document content management, records management) were identified that will impact the email services environment. The work group has determined that these topics are far larger than email services alone, and cannot be addressed within this working group. It is suggested that these topics be addressed within their respective domain areas. The email team has allowed for these future efforts by identifying a need to integrate with their solutions.

With this recommendation document the Email Consolidation Working Group has fulfilled both phases of its charter. The working group understands there is a desire to move this effort forward by issuing a request for proposal for an in-depth study of email consolidation including development and implementation of a migration plan. This team strongly believes that the working group should actively participate in this RFP effort through reviewing the RFP and evaluating responses. The working group should remain active until their existing knowledge regarding consolidation of email services for the State has been transferred to the implementation team. This belief is based on the amount of work this team has already done and the level of awareness and familiarity with the issues that the team members possess.

## Appendix A: Functional Email Business Requirements

<i>Messaging Requirements</i>	Degree of necessity:	
	Capabilities must Have	Capabilities would like to have
<b>CUSTOMER SERVICES</b>		
<b>Exchange and view files and messages</b> Provides the ability for state government employees to send, receive, and view files and messages.	X	
<b>Edit/revise exchanged files</b> Files that an employee receives via the messaging architecture can be edited/revised	X	
<b>Single e-mail and network Logon capabilities</b> A single login would be required to access both the LAN and e-mail. For example, one would not need to provide a separate password/authentication for e-mail from the LAN.	X	
<b>Scheduling (Calendaring)</b> Provides the ability to access electronic schedules for people, rooms, and other resources, and to schedule time/appointments for those resources. Needs the ability to check free/busy times.	X	
<b>Integrated Messaging</b> Messages can be stored and distributed regardless of media type (voice, data, graphics, video, fax). A single message can contain more than one media type and messages can be accessed through the same interface.	X	
<b>ENTERPRISE DIRECTORY SERVICES</b>		
<b>Directory synchronization</b> When a person's location/personal information changes, that data can be updated and synchronized to the other enterprise-supported directories without duplication.	X	
<b>User update of directory information</b> The ability to update personal directory information can be limited to administrators or delegated to end users		X
<b>Friendly Names</b> Staff can select mail from a searchable / sortable list of friendly names without needing to know or enter the full email address.	X	
<b>Directory access from applications</b> Messaging directory information can be accessed by other applications (workflow, e-forms, groupware, HSRS, etc.) so that individual directories do not need to be created and managed by each application.	X	
<b>Directory information is secure but viewable</b> Stores additional location/business information (phone, fax, address, professional title, etc.) and allows it to be viewed by users.	X	
<b>Automated updates to mailbox groups</b> Automated method to make changes to all or a selected group of mailboxes. (i.e., change street address for moves, email addresses, etc.	X	
<b>Management distributed to appropriate level</b> Management functions for the enterprise directory can be assigned and secured at the most appropriate level in the organization.	X	

<b>SECURE BOUNDARIES</b>		
<b>Block/monitor unauthorized network access</b> Attempts to access message utility and directory functions without proper security are blocked and monitored.	X	
<b>Detect/block E-mail terrorism</b> Improper messages or attempts to flood the message utility with unwanted messages are blocked.	X	
<b>UCE (Spam) Filtering</b> Identification, logging, blocking and retrieval of messages or attachments based on content and / or file types, both incoming and outgoing. Legitimate messages and files must be able to be found based on sender, recipient, file type, file name, etc., then passed through to the intended recipient. Individual agencies, parts of agencies, or selected individuals can be exempted from all or part of the filtering.	X	
<b>Support for message encryption</b> Messages sent via the message utility must have the ability to be encrypted end to end to prevent unauthorized access.	X	
<b>Virus protection</b> Computer viruses are detected and prevented from being transported on the message utility(from both external and internal sources)	X	
<b>Digital signature support</b> Digital signatures can be attached to messages/documents.	X	
<b>EXCELLENT RELIABILITY</b>		
<b>Backup and recovery</b> Backup and recovery tools and procedures are in place to ensure quick return to normal use in the event of a disaster or other unexpected outage. Specific timeframes to be defined in SLA.	X	
<b>Mailbox level backup and recovery</b> Mailboxes must be able to be backed up and recovered individually, without the need to recover additional mailboxes.	X	
<b>24 X 7 availability</b> The messaging utility and directory services are available 24 hours a day 365 days a year. Both vendor and staff support will be available 24 hours a day, 365 days a year.	X	
<b>Maintenance</b> Maintenance can be accomplished on off-hours with minimal service disruption to people using the messaging architecture. Need to have fail-over capabilities.	X	
<b>Problem diagnosis and resolution</b> Monitoring/diagnostic tools and procedures exist to support management decisions and resolve problems.	X	
<b>Delivery/error notification</b> Message sender can request and receive confirmation of delivery / read / non-delivery.	X	
<b>ACCESS BY EMPLOYEES, CUSTOMERS, VENDORS</b>		
<b>Secure Remote Access</b> Authorized state government employees, customers, and vendors can access message utility and directory functions for which they have proper security from remote locations. Must have the ability to transport over a secured network layer medium.	X	

<b>Secure Browser (Internet) Access</b> Authorized access to the message utility and directory functions is available via the Internet to persons with proper security based on agency policy. Must have the ability to transport over a secured network layer medium.	X	
<b>Secure Mobile Access</b> Authorized state government employees need secure access to the messaging utility from mobile devices such as PDA's, cellular phones and Blackberry-like devices. These devices need to have the ability to transport over a secured network layer medium.	X	
<b>INTEGRATION WITH OTHER APPLICATIONS</b>		
<b>Common user interface</b> The interface between applications and the messaging utility is consistent for all applications.		X
<b>Programming interfaces</b> Applications that are developed/acquired to meet program objectives can be provided with an interface to the messaging utility to send messages or exchange documents without exiting the application. (interchange standards)	X	
<b>EFFECTIVE AND EFFICIENT MANAGEMENT AND ADMINISTRATION OF MESSAGING ARCHITECTURE</b>		
<b>E-mail administration tools and performance tools</b> . Availability of good e-mail administration tools (new accounts, backups, recoveries, replications, etc.) and good monitoring tools (thresholds, connections, message tracking, transaction logs, conversion process, etc.)	X	
<b>Integration of new technologies</b> The messaging architecture should be designed to make incorporation of new technologies and business requirements as easy as possible.	X	
<b>Migration</b> Needs to have a documented migration.path from the solutions the state is currently using, including, but not limited to, Microsoft Exchange versions 5.5, 2000, and 2003, Novell Groupwise, and Lotus Notes.	X	
<b>Exclusion</b> The ability to exclude Internet Mail for select staff, individually and by groups	X	
<b>Scalability</b> The ability to grow to the number of users and quantity of dataif other entities wish to join the state messaging system	X	
<b>Security</b> Secure messaging (i.e. SMIME for things such as HIPAA compliance.	X	
<b>Document Management</b> The Email system must be able to integrate with a major vendors document content management system in order to address the states need for RDA requirements.	X	
<b>Ability to Restrict Mailbox Size</b> Mailbox size restrictions can be applied individually or by groups. At a selectable size, automatic warnings must be sent to the user.	X	

<b>Shared Folders</b> The ability to make shared messages and files available to authorized groups of users, with distinctions on the ability to read, write, edit, delete able to be assigned or unassigned individually	X	
<b>Protocol Support</b> Protocols must be supported in accordance with industry standards (i.e. IMAP, SMTP, LDAP)	X	
<b>Distribution Lists</b> Distribution Lists must be able to be created and shared to all staff or selected agencies or parts of agencies. Management of the distribution list must be able to be delegated to one or more individuals or logical groups.	X	
<b>Message Size Limits</b> Message size limits must be able to be set on a global and a logical group basis. Limits should be able to be changed without a service outage	X	
<b>Message Recipient Limits</b> Limits on the number of recipients in a message must set on a global and on a logical group basis. This should be able to be changed without a service outage. Distribution Lists must be able to be exempted from this limit.	X	
<b>Restrict Senders</b> Administrators must be able to restrict by logical groups and by individuals, who is able to send mail to accounts or distribution lists	X	
<b>Delegation of Authority (proxy)</b> Users may grant delegate rights to their mailboxes or portions of their mailboxes to appropriate people	X	

## Appendix B: Email Consolidation Work Group Charter

### *Name*

TLC E-mail Consolidation Working Group

### *Purpose*

The TLC E-mail Consolidation Working Group was formed by the Technology Leadership Council Server Platform Subcommittee to document and communicate the recommendations for and against an enterprise consolidated e-mail service, and business/financial plans to support those recommendations.

### *Areas of Responsibility*

The working group is responsible for recommending the State's strategic direction for enterprise e-mail services. In this capacity the working group will need to determine whether or not an enterprise consolidated email service would benefit the state enterprise. Members will need to be knowledgeable about enterprise and agency business requirements. The working group will document and communicate the recommendations for and against an enterprise consolidated e-mail service.

Some of the business justifications for e-mail consolidation that should be considered are: Reducing IT costs, improving service levels and availability and minimizing complexity.

The working group will need to:

- identify requirements of a state consolidated e-mail service,
- consider product options and services available to the enterprise such as Microsoft Exchange, Oracle Collaboration Suite and the UW-Madison's My UW e-mail and calendar application.
- consider provider options for services.
- develop a business and financial model for recommended solutions.

The working group will proceed with the above criteria in a two-phase manner.

Phase 1 will be the gathering of requirements and cost savings identification. ROI/TCO studies will be conducted during this phase as part of the cost savings identification. At the conclusion of this phase, a recommendations document will be delivered to the TLC Server Subcommittee (and possibly the TLC) for vote. A vote accepting the recommendations will move the working group into the second phase of this assignment.

Phase Two will develop a business plan and financial models to support the recommended solutions. The business plan and financial models will include information as to what kind/scope of consolidation should be undertaken and the plan on how to proceed.

During the requirement gathering stage, several requirements should be explored specifically:

- Security
- Browse capabilities

- Standards (space limits, etc.)
- Should the service be offered to other government entities such as counties and school districts
- Cost (both one time and on-going)
- Savings
- Functionality
- Ease of administration
- Central versus delegated administration
- LDAP
- How much training would be required for both users and administrators
- The impact of Administrative Rule #12 pertaining to electronic records
- The Risk of Consolidation

The working group should explore the above items but not limit themselves to this list. If there are other items to explore, they should be added to the list and documented.

***Scope of Decision Making Authority***

The TLC E-mail Consolidation Working Group is responsible for recommending a strategic direction to the TLC Server Subcommittee regarding an enterprise consolidated e-mail service. The working group may resolve most issues without involvement of the TLC Server Subcommittee. However, significant issues affecting the likely strategic direction for enterprise consolidated e-mail service should be taken to the TLC Server Subcommittee for a formal vote.

***Working Group Structure***

Membership – Recommended membership size is five (5) to eight (8) representatives in addition to the chair. The working group is made up of:

1. The Working Group Chair – The TLC E-mail Consolidation Working Group chair is appointed by the TLC Server Subcommittee. The chair of the working group will serve in this capacity for the duration of the group's charter or until replaced by the TLC Server Subcommittee.
2. Agency representatives - The TLC Server Subcommittee chooses which agencies should be represented on the working group. These agencies designate an individual to be their representative. Representatives should:
  - Be knowledgeable about their agency's e-mail strategy
  - Be empowered to make decisions on behalf of their agency
3. Enterprise IT representative – The division of DOA responsible for enterprise E-mail Services will designate an individual to be the enterprise IT representative on the TLC E-mail consolidation Working Group.

Roles – Working group members will perform the following roles:

1. Working Group Chair – The working group chair is responsible for:
  - Setting meeting agendas, and facilitating meetings of the working group

- Keeping the working group informed of TLC Server Subcommittee activities and bringing issues or assignments from the TLC Server Subcommittee to the working group for action
  - Representing the working group at TLC Server Subcommittee meetings and keeping the TLC Server Subcommittee informed of working group activities
  - Taking issues to the TLC Server Subcommittee for a vote.
2. Agency representatives – Agency representatives on the working group are responsible for:
- Communicating their agency requirements to the working group and communicating working group activities back to their agency.
  - When contacted about e-mail related issues/concerns by an agency that is not represented on the working group, bring those issues/concerns to the attention of the working group chair for placement on the working group agenda.
  - Communicating enterprise requirements back to their agency.
3. Enterprise IT representative – The enterprise IT representative is responsible for:
- Communicating enterprise requirements and strategies to the working group.
  - Communicating working group activities to all areas responsible for delivery of enterprise IT services

***Work Processes and Meeting Schedule***

**Meetings** - Meetings are called by the chair of the working group based on the expressed needs of State agencies and enterprise IT.

- Working group members are to send a designated backup in the event that the primary member cannot attend or participate via teleconference.

**Process for working group acting on issues** – The working group will maintain a task/activities list of work to be completed by the working group. When an issue is brought to the working group, the chair will determine whether it is within the scope of the working group's charter to incorporate the issue in its strategy considerations. Issues outside the scope of the working group's charter will be documented and reported back to the TLC Server Subcommittee by the working group chair at the conclusion of the working group's tenure.

***Duration***

The TLC E-mail Consolidation Working Group is a limited-term topical working group of the TLC Server Subcommittee. The TLC Server Subcommittee will review the recommendations from the working group at the February 2004 meeting and will carry a recommendation to the Technology Leadership Council. At that time, the TLC may choose to extend the charter of the working group.

***Changes to the Charter***

Changes to the TLC E-mail consolidation Working Group Charter may be initiated by working group members or by the TLC Server Subcommittee. Any such changes should be requested after the initial meeting of the working group. Changes initiated by working group members require a 2/3 majority vote of the membership and approval of the TLC Server Subcommittee. Changes initiated by the TLC Server Subcommittee must be approved by TLC Server Subcommittee but do not require approval of the working group.



## Appendix C: Survey Questionnaire

The purpose of this survey is to assist the E-mail Consolidation Workgroup chartered by the Server Subcommittee of the TLC with gathering baseline information regarding the State of Wisconsin's email system. This information will be used by a variety of email vendors during the month of December 2003 to perform total cost of ownership (TCO) studies.

To facilitate the completion of this survey, the team decided that a few key points needed to be defined to serve as a basis of interpretation for some of the survey questions.

**Assumptions:** These are the core assumptions the team is currently making with regards to what a future consolidated email environment might look like.

7. Consolidation will only be done on the backend portion of email (on the servers)
8. Agencies will retain user administration and support responsibilities, but not email server administration.

**Definitions:**

3. Lapsable – refers to the reallocation of time and/or funds to other (non-email) purposes
4. Consolidation – the agency would no longer be providing backend email services.

### Email System Survey

I am filling out this survey on behalf of agency:

#### Current Environment

1. Where is your primary data center?
2. Do you have remote locations? YES  NO
3. Is it critical that your remote locations have email capabilities regardless of the status of WAN connectivity? YES  NO
4. If yes, how many locations meet this critical requirement?
5. How many email users are at these critical remote locations?
6. What messaging or email applications (please specify version) are you currently running - Server?
7. What messaging or email applications (please specify version) are you currently running - Client?
8. What is your time frame of your next planned messaging upgrade?
9. What operating system does your current messaging system run on?

10. How many users (non-shared) in your organization require/use your messaging solution?
11. How many public folders are in use in your organization?
12. How many “shared” mailboxes are in use in your organization?
13. List all access methods for remote users to access email (VPN, Web, MAPI, etc.)
14. What percentage of your users access messaging via a web browser if any?
15. Is web access a desired feature? YES  NO
16. How many messages does the average user view per day via the browser?
17. How many web pages do you expect to serve (for email) during each peak hour?
18. What percentage of your users access messaging via a wireless device if any?
19. Is wireless access a desired feature?
20. Rate IT, business and organization effectiveness of existing environment (e.g. very effective, effective, not effective.)

### ***Migration and Upgrade Costs***

1. How many mailboxes are in your current system that will be migrated to your next messaging platform/product?
2. How many of these mailboxes are “shared”?
3. What is the average mailbox size as it pertains to your environment?
4. What is the size of your data store that will need to be migrated to the next messaging platform/product?
5. Will you need to upgrade your current messaging servers (hardware) in the next five years? YES  NO
6. What will your agency expend in the next 5 years for maintenance, backups, email software/hardware upgrades, anti-virus protection, anti-SPAM protection, personnel costs, directory related costs, etc.?

### ***Maintenance Costs***

1. What is the number of messaging servers in your environment?
2. What is the make/model for production servers as they pertain to your messaging environment?
3. What are the utilization rates for production servers as they pertain to your messaging environment?
4. What are annual support costs per server per year in regards to software and hardware maintenance and warranties?
5. What are the annualized server hardware replacement costs over a 5 year period?

### ***Administrative Costs***

1. What is the number of email system administrators at your agency (FTE Only)?  
(NOTE: Questions 2-5 should equal 1)
2. What percentage of time for the email system administrators is dedicated to email server administration?
3. What percentage of time for the email system administrators is dedicated to email user administration and support?
4. What percentage of time for the email system administrators is dedicated to troubleshooting/problem solving?
5. What percentage of time for the email system administrators is dedicated to policy creation, migrations, security patches, etc.?
6. What percentage of time in Question 1 above would no longer be required to be performed by your email system administrators if email is consolidated?
7. Could the time no longer required be lapsable? YES  NO
8. What is the average annual salary (including benefits) of your email system administrators?
9. What is the number of desktop support employees (FTE only)?
10. What is the percentage of time (% is based on the number in #9) desktop support employees dedicate to email support in your environment?

11. What percentage of time in Question 10 would no longer be required to be performed by desktop support if email is consolidated?
12. Could the time no longer required be lapsable? YES  NO
13. What is the average annual salary (including benefits) of your desktop support employees?
14. What is the number of help desk employees (FTE only)?
15. What is the percentage of time (% is based on the number in #14) help desk employees dedicate to email support in your environment?
16. What percentage of time in Question 15 would no longer be required to be performed by help desk employees if email is consolidated?
17. Could the time no longer required be lapsable? YES  NO
18. What is the average annual salary (including benefits) of your help desk support employees?
19. What is your number of file system administrators as it relates to email (FTE only)?
20. What is the percentage of time (% is based on the FTE number in Question 19) do file system administrators dedicate to managing email files in your environment?
21. What percentage of time in Question 20 would no longer be required to be performed by file system administrators if email is consolidated?
22. Could the time no longer required be lapsable? YES  NO
23. What is the average annual salary (including benefits) of the file system administrators?
24. What is the annual cost for contractors providing email system administration, desktop support, help desk support and/or file system administration for your organization?
25. What amount of the contractor costs could be lapsable?

### ***Storage Costs***

1. How much storage (GB) is required to support your messaging application?

2. What is the sum total of all your information/data stores?
3. If it applies, what is the factor of single instance store in your environment? 1 to
4. What RAID level do you need on your messaging disk storage?
5. Will you implement/use a storage area network (SAN) for email?
6. What is your annual average user growth rate in GB?
7. What is your annual average storage growth rate for your messaging application?
8. What is the average size mailbox per user you require (in MB)?

### ***Training Costs***

1. Approximately how much does your organization pay per year to train messaging support staff?

### ***Downtime Costs***

1. Will your messaging application suffer a complete failure or only partial performance decline if any one of your production servers fails?
2. Approximately how many scheduled messaging outages does your organization face per year?

### ***Acquisition Costs***

1. Will you size your servers for your initial needs or account for all of your expected growth?
2. How many total users do you have in your enterprise?
3. How many workstations are in your enterprise?
4. Do you currently run an LDAP compliant directory?
5. Do you have a project in process to architect directory services in your organization?

### **Installation and Configuration**

1. Will you deploy email using a clustered infrastructure? YES  NO

**Appendix D: Survey Results**  
**See Attached Excel Spreadsheet**

**Appendix E: Vendor Charge**

**Vendor Charge**

*Replace with vendor name,*

You have received this document and the data in the attached spreadsheet due to previous indications to the Email Consolidation Workgroup of your interest to participate in performing a TCO/ROI study on the consolidation of email across agencies for the State of Wisconsin. The primary purpose is to identify if a consolidation effort will result in lapsable funds or savings to the state.

The attached spreadsheet contains the survey questions posed by the Email Consolidation Workgroup and each agency's response. This data will be the primary information to use to conduct the TCO/ROI study. The remainder of this document has been provided to all vendors as some additional information vendors will need to perform their analysis and provide information back to us in a manner the Email Consolidation Workgroup has decided upon.

**Vendor Information to Use as Part of Analysis**

This first group of information is provided such that it might help vendors understand the directions provided to agencies on completing the survey. Below is the information and definitions included with the survey solicitation to the agencies to assist them with completion of their surveys:

“The purpose of this survey is to assist the Email Consolidation Workgroup chartered by the Server Subcommittee of the TLC with gathering baseline information regarding the State of Wisconsin's email system. This information will be used by a variety of email vendors during the month of December 2003 to perform total cost of ownership (TCO) studies.

To facilitate the completion of this survey, the team decided that a few key points needed to be defined to serve as a basis of interpretation for some of the survey questions.

Assumptions: These are the core assumptions the team is currently making with regards to what a future consolidated email environment might look like.

9. Consolidation will only be done on the backend portion of email (on the servers)
10. Agencies will retain user administration and support responsibilities, but not email server administration.

Definitions:

5. Lapsable – refers to the reallocation of time and/or funds to other (non-email) purposes.

6. Consolidation – the agency would no longer be providing backend email services.“

Additionally, each vendor needs to take the following information into consideration with their analysis:

- There will be at least 36 servers with 7,012 users located at 36 remote facilities due to the critical nature of emails' use at those locations. These locations require email services within their locations regardless of the state of WAN / Internet connectivity to their location.
- There are another 14 locations with 171 users that have critical needs for email access, but another option rather than placement of a server at that location for email access might be more cost effective. We would like your opinion on this and how you would address this issue.
- TCO is over a 5 year fiscal life (States fiscal year is July – June)
- All existing data contained within the current email systems used by agencies today will be migrated to the new email system.

#### **Email Consolidation Workgroup Expectations of the Vendors**

The Email Consolidation Workgroup expects the vendors to provide the below bulleted information as part of their written report. Each vendor will have the opportunity to submit questions on the data provided to Lisa Onken at the DOT ([lisa.onken@dot.state.wi.us](mailto:lisa.onken@dot.state.wi.us)) until Jan. 14, 2004 at 3pm. Answers will be provided to all questions to all vendors within 48 hours or by Jan 16 at 3pm. The written report is due (3 weeks) Jan. 28, 2004. Each vendor will have the opportunity to present their findings to the Email Workgroup and interested parties of the Server Subcommittee on Jan. 30 2004.

- Report should outline two scenarios with all corresponding information: centralized user administration vs. decentralized user administration by agencies. This is different then what was originally stated to the agencies (see above), but is a reflection of potential impact of changes beyond the Workgroups role.
- Within a written report, identify all decision criteria, assumptions and calculation methods used within the report.
- All components for the solution should be identified including costs (component examples are: management tools, migration tools required/needed, directory requirements, etc.)
- Solution should clearly identify savings (if any) as either hard or soft or percentage of both with regards to how savings will realistically produce actual dollars that can be removed from budgets.
- All off-shore development/support for their products should be identified.