



State of Alaska

Enterprise Messaging and Directory Services Phase I Integrated Messaging and Calendaring Final Report

State of Alaska

Document ID: 1100
Title: Enterprise Messaging and Directory Services Phase I Integrated Messaging and Calendaring Final Report
Supersedes:
Status: Final Draft for Review
Version: 0.01.00
Date: 08/07/2007
Author: Russell Kunibe, State of Alaska, ETS
Adam Fazio, Microsoft
Terri Rasmussen, State of Alaska, ETS
Applies to: State Of Alaska Enterprise Messaging System and Enterprise Directory
Scope: Enterprise
Purpose: This document is the project final report as of the project close on August 7th, 2007.

Summary: This document summarizes the progress made in Phase I of the Messaging and Directory Service Project and discusses how the State has progressed towards the Vision established for this project.
--

Table of Contents

Executive Summary 4
Project Deliverables compared with the Project Vision & Scope 4
Delivered Exchange and AD System Overview 6
Other Project Accomplishments 7
Lesson's Learned 8

Executive Summary

Project I of the Directory and Messaging Program has produced a single Exchange system and Active Directory for the Executive Branch of the State of Alaska which supports E-mail, E-mail Archiving, Calendaring and Mobile Devices. The single Exchange and Archiving system replaces five legacy email systems and supports over 14,000 State Employees and another 2,500 shared and role based E-mail accounts. The system employs a securely delegated administration model that allows the autonomous operations of Departments within a single AD Forest.

The initial project production ready or "Go-Live" date of Dec 2006 was revised in Nov of 2006. June 1st 2007 was set as the revised production ready date, and the project finished within 1 day of this target. The calendar migration was completed on time on July 17th 2007. As of August 7th all departments had completed their user transitions and all Executive Branch employees were sending and receiving mail from the new Exchange System.

The total project cost of \$ 6,300 K was within 8% of the 10/2/2006 approved budget of \$ 5,791 K. The 10/2/2006 budget was calculated without ETS personnel services and without the cost of leasing space at Sequestered Solutions in Anchorage.

Project Deliverables compared with the Project Vision & Scope

The project Vision & Scope document was reviewed and approved by the Technical Advisory Group on 4/5/2006 by a 9 to 0 vote. It was passed with revision by the Admin Service Directors on 4/13/2006.

Vision Statement

The State of Alaska will establish a centralized enterprise directory and Email/Collaboration system based on Windows 2003 and Exchange 2003 or successor products for state employees serving within the Executive Branch. Enterprise Technology Services (ETS) will assume responsibility for the maintenance of the enterprise suite of infrastructure services, but ownership and control of the Active Directory objects within the enterprise will remain under agency discretion. This allows the State of Alaska to benefit from a centralized offering and consolidation, without sacrificing the relationships between agency IT Staff and agency end users.

The delivery of Exchange as the first project of this program is consistent with the Vision Statement.

Phased Approach

The proposed deployment of the project was to follow a phased approach by dividing the program into projects.

Project 1. Enterprise Exchange and Initial Active Directory (March 2006 – March 2007) All Departments / All State Employees in a centralized non-dedicated resource forest using a centrally managed Enterprise Exchange and Calendaring System. Directory objects for three to five departments will be substantially migrated to the Enterprise Active Directory, allowing them to deploy file and print services. In June 2006 the detailed design, email archiving and email encryption was added to Project 1 in order to meet several departments' critical business requirements.

Project 1 Enterprise Exchange and Initial Active Directory did create a centralized non-dedicated resource forest using a centrally managed Enterprise Exchange and Calendaring System with a centrally managed email archiving system and e-mail encryption between servers. The migration of directory objects for three to five departments is really the pilot phase of Project 2 the Enterprise Active Directory. This pilot aligns with Project 2 in terms of planning and scope and has been moved to Project 2.

In the Vision and Scope the State identified eight critical objectives for the projects success:

Objectives

- **Single Authentication / Active Directory**

A single Active Directory populated with all State of Alaska employees for authentication was put into production use in order to support Exchange. The common Active Directory needed for Exchange will become the common enterprise operating system that will both force and lead to standardization across departments.

- Framework for Network Operating System Consolidation
 - Less administration, equipment, software etc.
- Ability to deploy enterprise applications
- Ability to deploy enterprise technologies (i.e. SharePoint portal, Live Communication Server etc.)
- Ability to consolidate servers and applications
- Improved security
- Improved utilization of existing network infrastructure
- Framework for additional IT integration projects

- **Single Enterprise Exchange e-mail, calendaring and mobile devices support**

Consolidation of 5 emails and calendaring systems into a single, centrally managed Executive Branch system.

- One system to maintain, upgrade, and administer
- All users, conference rooms etc. on the same calendaring system
- Uniform software across departments
- Increased functionality (for most users)
- Increased collaboration
- Enterprise class solution

- **Support for Enterprise Data Security Requirements**

Throughout the project security concerns were addressed in both the design and implementation. The security office was involved in any design decision that had a security implication. In cases where different departments had different security requirements the most stringent requirement was used.

- **Appropriate Staffing, Training and Responsive Change Management**

Staffing levels are more than the recommended staffing levels received from the Microsoft consultants. Staff received a knowledge gap analysis, training recommendations and training.

A two day training class was developed and presented to the departmental administrative staff as well as a 1 day customized training class on the e-mail archiving system (Zantaz EAS).

Subject Matter Expert training was delivered to over 700 State employees. Several quick reference job aids were produced and made available on line. A training video for the Archive system was developed and distributed on-line. Finally a series of Town Hall meetings were attended by over 850 State Employees.

A Change Management Board Charter was developed along with 3 different work flows for change management. The Change Management Board was convened two weeks before the system's Go-Live date and has been meeting weekly since.

- **Ability to Consolidate/Migrate File and Print Services**

The AD for Exchange was designed to be an Enterprise AD for all users, computers, servers and applications. Testing for the AD design was conducted for an enterprise AD and not just for a resource forest. The administrative model was built around how we would administer AD for the enterprise.

- **Maintain Service Delivery to Remote Locations**

The Project Team spent several weeks on slow link testing for both AD and Exchange. The testing was used during the system design and configuration in order to optimize our service delivery to remote locations. Network connectivity was upgraded to several locations. Tuning of the system will continue to occur when problems are encountered.

- **Responsive Customer Service**

In order to remain responsive to the customer's needs, the Departmental Administrators remained the tier 1 support for the end users. Clear escalations were defined by the TAG. Unicenter Service Desk (USD) is being used to track service requests that are escalated beyond tier 1. Both Microsoft and Zantaz premium support contracts were procured for tier 4 support. A Service Level Agreement (SLA) was developed for both Exchange and for archiving in-order to clearly define our expected service delivery. A monitoring system was put in place to ensure that service delivery is being delivered to the SLAs minimum standard.

- **AD as the State's authoritative Directory Service**

Until AD was put in place the SUN LDAP was the directory service that contained all State Employees. In order to support both our legacy applications that use our SUN LDAP and new applications that will use AD, MIIS has been set up to synchronize data from LDAP to AD and passwords from AD to LDAP. Both LDAP and AD data is mastered in the Payroll System in order to ensure that every State employee has an account. This allows both LDAP and AD to be an authoritative directory service.

Delivered Exchange and AD System Overview

Overview

Four primary locations were designated for Phase I Juneau, Anchorage, Fairbanks, and the Department of Military & Veteran Affairs in Anchorage (DMVA). Although DMVA site was not required to support capacity requirements, it is the State's Natural Disaster and Homeland Security Emergency Operations Center and therefore requires autonomous operations under any conditions. These locations underwent facilities remediation to meet capacity and security requirements.

Active Directory

Initially, the Active Directory deployment exists to support a consolidated Exchange architecture and provide a platform for enhanced communication and collaboration throughout the Executive branch of government. The long-term strategy is for AD to evolve into the State's authoritative directory service and support authentication to consolidated file and print services and enterprise applications.

The resulting Active Directory implementation consists of 10 domain controls located at the four primary locations. These domain controllers are highly redundant, highly available and have ample capacity for future initiatives.

Exchange

The resulting Exchange implementation consists of messaging infrastructure located in the 4 central data centers. The environment was built with availability and security being top priorities, in addition to standard rich collaboration functionality. Each location routes messages via 128-bit SSL TLS encryption, the Front-End services are clustered with auto-fail over capability, and all servers are hardened via self-healing policies to Microsoft recommended standards. All messages sent & received state-wide are journalized to dedicated servers which are then archived nightly. The implemented Email Archiving system serves both as a compliance facilitator as well as aids with data capacity management easing the burden on the user to manage their message data stores.

The completed solution results in the following characteristics:

- High performing authentication, directory, and messaging services
- High availability and resiliency
- Secured operating systems, message routing, and data
- A securely delegated administration model
- Autonomous operations of Departments within a single AD Forest
- Disaster Recovery capabilities and operating procedures to meet or exceed stated SLAs
- Email archiving to meet regulatory and data retention requirements
- A unified email and calendaring system for all State employees
- A unified authentication directory and AD Forest for future consolidation and infrastructure optimization

Other Project Accomplishments

Project I accomplished its primary goal of deploying Exchange for all executive branch employees and in the process there were many other notable accomplishments that were achieved during this project.

- The project was managed following Project Management Methodology
- The project was delivered with all departments participating.
- A project governance and change management model was put in place, refined and tested. This could be used for future Enterprise wide projects.
- Service Level Agreements and a configuration management structure were put in place that was modeled on ITIL standards.
- Moving 14,000 employees from 15 different departments using five different e-mail systems and at least ten different client software configurations to a single e-mail system using a single client software or web access software represented a tremendous work place change. It was a major accomplishment of this project that the effects of this work place change was mitigated through an effective training and communication plan.
- Within the 15 departments there are at least 175 Network Specialists and Network Technicians plus another 50 IT specialists that support their department's network and email systems. It was a major accomplishment of this project to effectively manage the work place and job duty change of these IT specialists through training, communication and the posting of step by step instructions.

-
- The transition from implementation to operations was seamless, and aided by the procurement of a Microsoft Premier Support Contract.
 - The addition of E-mail Archiving to the project in order to control project storage costs was handled with an assessment that recognized the opportunity to address the issues of legal discovery of e-mails and compliance with State records retention regulations.
 - The project management team regularly took a broad view of the project and was able to enlist cooperation across the Enterprise. Examples of this include Personnel's assistance with end user training, DEC providing interim Blackberry hosting and Admin finances cooperation in modifying the state Payroll system.
 - The administrative model developed for the Exchange AD has created new network environment where ETS staff and Departmental IT staff are learning to work within a shared Enterprise environment. This is much different then the previous model where Departments operated in their own independent silos.

Lessons Learned

Top Lessons List

- Project planning is a key to project success.
The high level goals for this project and a project end date were selected prior to the full planning process occurring. This initially set an unrealistic time frame for the completion of a successful project. The planning effort was revisited and produced a revised scope statement, detailed project plan, WBS, approved timeline and resource matrix. These tools guided the project to a successful completion.
- The State of Alaska needs to establish and control the project vision and scope. Contractor feedback can be incorporated, but should be vetted by the project team.
- Be conscious of running the project in a linear fashion. Creative solutions are often needed to resolve problems or solve unplanned issues.
- Simple, easy to read project status reports are an effective communication tool.