# About This Document

## Purpose

The purpose of this document is to describe the *Atlas Archive* project for the Executive Office for US Attorneys.

This includes:

* Defining the purpose, goals and project development elements for the project team.
* Encouraging explicit, up-front discussion of project goals, priorities, and constraints.
* Setting stakeholder expectations.
* Providing the basis for an initial assessment of project risk.
* Defining the members of the team as well as their expected participation and contribution.
* Providing the basis for estimating the level of effort required to design, build and deploy the proposed solution.

This document shall be reviewed by key stakeholders from the contractor management, EOUSA Program Management and the OAS Assistant Director for purpose of agreement and approval on the project definition, scope and execution plan.

This document shall also be available for to any project team member, affected business unit(s), security and client build team.

## Project Vision Statement

Office Automation Support (OAS) will design and develop a Messaging System to support the post- migration1 needs of the Executive Office for U.S. Attorneys (EOUSA) and the United States Attorneys Office (USAO). This solution shall provide high availability (HA) capabilities, equally balanced between the NOC and CEF-DC.

1 EOUSA Mailboxes and their data were migrated to the shared Microsoft Exchange Online tenant in 2019.

# Executive Summary

The existing USAMail 2014 Messaging system was built several years ago and served the USAO community by hosting all mailboxes (email data) as well as transporting all email sent by users, up to point where it entered the DOJ ProofPoint Gateway on the way to the Internet or other DOJ Components; and all email received by users from the Internet or other Components.

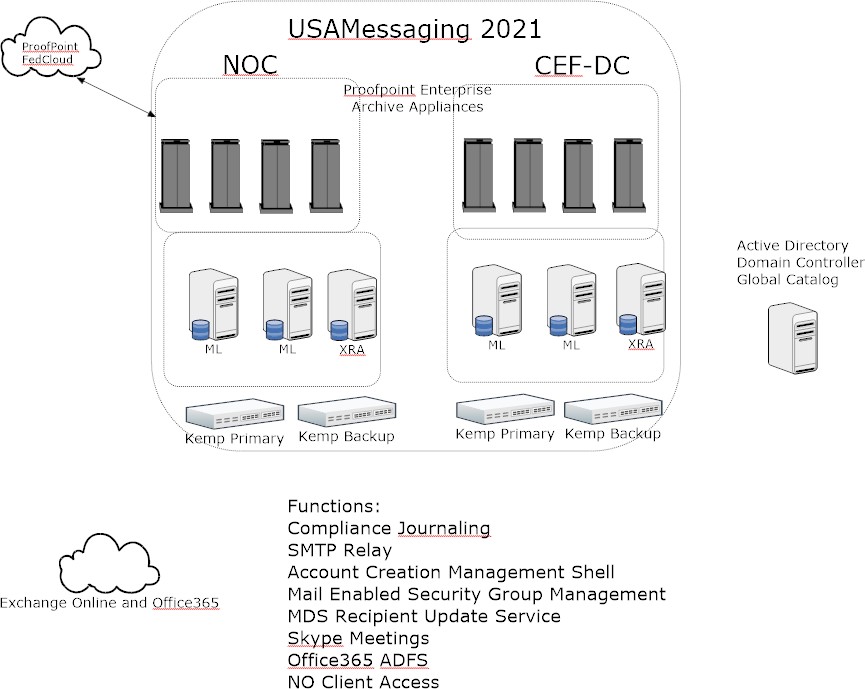
EOUSA decided to take advantage of some of the greater efficiencies and applications of the shared DOJ Office365 Tenant, which hosts a service called Exchange Online. EOUSA migrated all of its mailboxes to Exchange Online in 2019, and used the USAMail 2014 hardware for the following services that remained on premises:

* + Compliance Journaling
  + SMTP Relays for on premises applications
  + Management Shell for provisioning mailboxes and managing memberships of certain types of Distribution Groups
  + Provisioning External Email Addresses (GIAs)
  + Synchronizing Global Address Lists for Components that do not use Exchange Online

EOUSA will continue to fulfill the above requirements in the USAMessaging 2021 project. A full list of USAMessaging 2021 requirements is available in this document (tbd).

There are some requirements of the project other than those bulleted above. The USAMail 2014 hardware (consisting of both servers and hardware load balancers), its Operating System (Windows 2012R2) and Exchange version (Exchange 2013) are all nearing the end of their useful lives. All three of these elements need to be modernized so that the system can remain secure and reliable, and will occupy no more physical space and weight, and consume no more energy, than necessary.

Although the USAMessaging 2021 system will be smaller than the one it’s replacing, it will still be complex, and critically important. Compliance Journaling, which is its primary function, involves receiving and processing hundreds of thousands of messages per week, so that they can be ingested into the ProofPoint archive. Any disruption in the process can delay archive searches and make the results less accurate than they should be. Therefore, all components in the process are redundant and load balanced (but optimized to prevent duplication in search results).



*Figure 1*

The modernized operating system contributes the following advantages:

* Continued support from the vendor. The Microsoft Lifecycle for Servers sets dates for end of life and end of extended support. Windows Server 2016’s end of life is January 11, 2022. Windows Server 2019’s end of life is Jan 9, 2024.

The modernized Server Hardware contributes the following advantages.

* The modernized server hardware will have significantly more processor power, memory, storage space, energy efficiency and economical use of space.

The modernized Exchange version contributes the following advantages:

* Simplified administration as the separate Client Access role has been removed.
* Continued Vendor support. Exchange Server 2013’s support lifecycle ends on April 11, 2023. Exchange Server 2019’s end of life is October 14, 2025.2

The modernized Load Balancers contribute the following advantages:

2 https://docs.microsoft.com/en-us/lifecycle/products/?terms=exchange

* Consolidates Exchange Web Services, Skype for Business Web Services and Office365 ADFS into half as many physical units (four vs. eight).

OAS will provide the necessary engineering and implementation services, overall project management and provide resources and subject matter experts for managing and monitoring the new Messaging system.

Benefits (All Continuing)

* Having a workable Exchange Management Shell to run user provisioning commands.
* Having a reliable SMTP relay
  + Internal
  + External
  + EVOIP Voice Mail Messages
* Having a load balanced Federation System for O365
* Synchronizing existing Mail Enabled Security Groups, and other Mail Enabled Groups nested into them
* Maintaining external addresses by synching information to JMD’s MDS System
* Maintaining usdoj.gov addresses so that they become the user’s Identity for the PIV card system.
* Reliable Skype meetings
* Envelope Journaling that captures the exact content of each sent/received message, including bcc and Group Membership

Risks:

* Lack of specialized vendor sizing tools. Addressed by heavy emphasis on disk space based on lessons learned on current transport-reliant configuration.
* SMTP relays are balanced by DNS so can fail in some circumstances (e.g. with Java programs). Will be addressed by testing new options with the new load balancers.
* Replacement of Exchange Remote Admin system affects certain DADI Team programs. Will be addressed in GI Lab.
* New McAfee Firewall could block necessary services. Will be addressed by simulations without Firewall.

Current Status:

IRB has approved the USAMessaging 2021 Project hardware requirements. The BOM has been finalized. We are expecting to receive the hardware in Q1 FY21. OAS has begun a set of technical whiteboard sessions where conceptual designs were vetted and discussed. Funding for all hardware and software needed to complete project has been procured.

Next Steps:

The project can proceed with project planning and documentation. Jira will be used to move toward project management through use of standard templates and Program Manager and Assistant Director monitoring. Once receipt of hardware deliverables is confirmed, racking the hardware at NOC and CEF- DC shall be prioritized by and aligned with the roadmap defined within the project plan. The various stages (lab development, production implementation, documentation and deliverables, ATT/ATO accreditations, steady state transitions, etc.) of the project plan would be executed as defined in Jira.

The project has the following dependencies:

* ISS ATO approval for Windows Server 2019. The project has the following assumptions:
* Vendor support will be available to confirm advanced configuration options. One such configuration is the Hybrid connector to the Office365 Shared Tenant.

# Project Lifecycle

This section outlines the typical phases and components of a project lifecycle. Specific activities planned or already executed for the USAMessaging 2021 project are noted.

USAMessaging 2021 will use a Jira project template as a mechanism to track activities, resources and the progress toward completion of each phase. Each component listed below maps to a Jira “Release” of the same name. The Jira project (named “USAMessaging 2021” with a Key of “ ”) will provide real- time visibility into what tasks have been done, what tasks are currently “In Progress” and what items are “To Do”.

## Planning

Planning involves communication of the project scope and deliverables. Core and desired capabilities are outlined and the scope of work necessary to bring the vision to reality is defined. This phase results in the creation of this Executive Planning Summary document which is passed between stakeholders for signature approval to proceed as outlined with the USAMessaging 2021 solution.

Key Activities:

|  |  |  |
| --- | --- | --- |
| Activity | Covering | Description |

|  |  |  |
| --- | --- | --- |
| Meeting | Whiteboard Sessions | Project kick-off of internal staff to define  project scope and to discuss and vet conceptual designs/core technologies and identify risk. |
| Document | Executive Planning Summary | Documented overview of the project vision, scope and planned process. |
| Phase Sign-off | Executive Planning Summary Signatures (this document) | Signature by all stakeholders indicates approval to proceed with the project. |

## Requirements

This phase shall identify the constraints and assumptions, detail the interfaces of external components/system, list major enterprise infrastructure dependencies, and functional and operational requirements of the USAMessaging 2021 solution. This phase results in a Requirements document which is passed between stakeholders for signature approval to continue with the USAMessaging 2021 development.

Key Activities:

|  |  |  |
| --- | --- | --- |
| Activity | Covering | Description |
| Requirements Workshop | Requirements | Review the current state/enhancements and identify the constrains and assumptions, detail the interfaces of external components/system, list major enterprise infrastructure dependencies, and functional and operational requirements of the USAMessaging 2021 solution |
| Document | Requirements Summary | Documentation of all requirements |
| Phase Sign- off | Requirements Summary Signatures | Signature by all stakeholders indicates approval to proceed with the project. |
| Document | BOM (Bill of Materials) | Listing of all parts and components required (including quantities for each). |

## Security

Security requirements to achieve compliance and accreditation are an overlay to all phases of the project lifecycle. Security considerations must be included during design, development and testing of the USAMessaging 2021 system. The Security and Privacy Assessments and Authorization (SPA&A) is required for all information systems supporting DOJ. The activities in this section is fluid pending the outcome of the SPA&A Initiation & Planning meeting.

|  |  |  |
| --- | --- | --- |
| Activity | Covering | Description |
| Meeting | SPA&A Initiation & Planning | Determine SPA&A requirements and plan for implementation. |
| Document | System Security Plan Document | Plan outlining results of SPA&A meeting. Includes a template that will be used to track risks and issues. Approval by all stakeholders facilitates an agreement on project compliance to security requirements. |
| Document | Risk Matrix & Issue List Template | Create a template that will be used to track risks and issues. |
| Sign-Off | System Security Plan Document | Signature by all stakeholders indicates approval of the security plan. |
| Vulnerability Scan | Hardware & Application | Performed by ISS identify various levels of system vulnerabilities. |
| Pen Test | Servers & Load Balancers | Penetration Test performed by ISS to evaluate the security of the system by (safely) trying to exploit vulnerabilities. |
| Document | COOP and Disaster Recovery | Documented process for restoration of SQL Farm resources. Application owners are responsible for ensuring their systems are capable of COOP and Disaster Recovery. |
| Sign-Off | COOP and Disaster Recovery | Signature by all stakeholders indicates acceptance of recovery plan. |

## Design

During this project phase the engineering team builds and configures the solution components in a lab environment to validate product and system configurations.

The lab has been built and the solution installed and implemented. The phase spearheads the formulation of the Detailed Design and Implementation Plan documents.

Key Activities:

|  |  |
| --- | --- |
| Activity | Description |
| Design Lab | Determine core components, electrical and space requirements |
| Build Lab | Setup of lab space |
| Solution Installation | Hardware and application installation |
| Configuration | Hardware and application configuration |
| Security STIGs/Hardening | Apply OS/Exchange/Load Balancer security and technical implementation and hardening. Review scan results and remediate/mitigate findings |
| Usawebmail namespace Migration | Migrate the Usawebmail.usa.doj.gov namespace from existing hardware load balancers to new hardware load balancers |
| Journal Database Migration | Migrate the Journal databases from the existing Exchange 2013 Mailbox Servers to the new Exchange 2019 Mailbox Servers |
| SMTP Relay Migration | Gradually build the Exchange 2019 *Receive Connectors* and then one time cutover of the DNS addresses for mr1.usa.doj.gov and mrext1.usa.doj.gov |
| User Provisioning Migration | Build new pathway to Exchange Remote Administration and then cutover the usaxra.usa.doj.gov namespace. |
| Global Address List Syncing Migration | Install MDS Recipient Update service on new server |
| Document | Implementation Plan |
| Document | Detailed Design |

## Testing

OAS shall formulate a test plan to validate system, functional, load & performance, failover and disaster recover testing. Any issues shall be tracked and addressed and risks shall be resolved or mitigated. The team will refine the Detailed Design and Implementation Plan documents during this phase. In addition, this phase also validates project requirements acceptance criteria and refine SLA.

Key Activities:

|  |  |  |
| --- | --- | --- |
| Activity | Covering | Description |
| Document | Test Plan and Results | Produce test result for each item requirement |
| Document | Risk\Issues List (updated) | All issues shall be addressed, and risks minimized |
| Document | Detail Design (final) | Finalized design based on the results of the testing |
| Document | Implementation Plan (final) | Finalized implementation plan based on result of the testing |
| Meeting | Track Closeout | Brief all stakeholders on the completed activities within the track |

## Implementation

During the Implementation stage the solution is rolled into a production environment. The purpose of this Implementation Plan is to identify and describe the processes that must be accomplished in order to deploy and configure the USAMessaging 2021 solution within the United States Attorneys’ enterprise. It also provides information related to start dates, completion dates, milestones, and any prerequisites (such media and a guide to the sequence of accomplishing the procedures) needed to complete the implementation.

Key Activities:

|  |  |
| --- | --- |
| Activity | Description |
| Pre-requisite Checklist | Check and verify Hardware, SAN, Network and Security policy configurations |
| Windows 2019 Server Installation/Configuration | Implement and configure the OS and perform initial cluster build |
| Load Balancer Installation/Configuration | Install and configure Kemp Load Balancers |
| Exchange Installation/Configuration | Install and configure Exchange and Exchange Management Tools |
| Security STIGs/Hardening | Apply OS/SQL security and technical implementation and hardening. Review scan results and remediate/mitigate findings |
| Migration | Migrate the Journal Mailboxes, SMTP relays and Exchange Management namespaces |

## Operations & Maintenance

The Operations and Maintenance phase addresses steady state management, support and monitoring of the solution after it has transitioned to a production environment.

Key Activities:

|  |  |
| --- | --- |
| Activity | Description |
| Operations & Maintenance Plan | Operations & Maintenance Plan document |
| Project Transfer | Steady State transition of maintenance and support to the NOC |
| NSI Spills | The response to spillage of National Security Information (NSI) |

## Documentation Summary

A summary of typical documentation options is listed below.

|  |  |
| --- | --- |
| Document Title | Description |
| Executive Planning Summary | Overview of the project vision, scope and planned development process. |
| Requirements Summary | Statement of requirements to include a traceability matrix featuring a unique feature identifier and category type (server, hardware, compliance, etc.). |
| BOM (Bill of Materials) | Listing of all parts and components required (including quantities for each). |
| System Security Plan Document | Outlines relevant security requirements and approach for, compliance. Includes a template to track risks and issues. |
| Initial Privacy Assessment (IPA) | Identifies potential privacy issues and mitigations for privacy risks. |
| Risk Matrix & Issue List Template | A template used to track risks and issues. |
| Detailed Design | Details of the solution architecture. |
| Test Plan | Plan to assess and assure requirements are being met. |
| Implementation Plan | Instructions guides for solution implementation. |
| Training Plan | Training media for NOC staff, Systems Managers and End Users (as appropriate). |
| Operations & Maintenance Guide | On-going maintenance and support procedures for NOC staff. |
| COOP & Disaster Recovery Guide | Outline process to rebuild, reinstall and restore. |

## Training

A summary of the training and communications materials to be delivered to the Steady State Operations team are listed below.

|  |  |  |
| --- | --- | --- |
| Training Topic | Target | Purpose |
| Transport Performance Monitoring | NOC Mail Team | Provide training to NOC Mail Team on monitoring message transport |
| Patching/Maintenance | NOC Mail Team/Engineers | Provide training to NOC Mail Team on patching and maintenance procedures |
| Backup/Recovery | NOC Mail Team | Provide training to NOC Mail Team on the Journal mailbox database backup/recovery procedures |
| Disaster Recovery | NOC Mail Team | Provide training to NOC Mail Team on site disaster recovery procedure |
| Mailbox Provisioning Monitoring | NOC Mail Team | Provide training to NOC Mail Team on auditing provisioning of mailboxes by the Identity Governance system |

# In Scope

* Mailbox data (Journal Reports) received from the Exchange Online Compliance Journal
* Skype for Business data

# Out of Scope

Operations involving

* Mailbox data that are not Compliance Journal messages.
* Microsoft Teams data

# Project Structure

## Team Roles and Responsibilities

The table below lists the project roles, the responsibility for each role, and the identified staff member(s).

|  |  |  |
| --- | --- | --- |
| Role | Responsibility | Provided by |
| Project Sponsor | Owner of the project | Kevin Shrieves |
| Project Manager | Provides overall guidance for the project team. | David Atkins |
| Program Manager | Provides overall guidance and communicates with the project sponsor. Approve change orders and acceptance requests. | David Atkins |
| Technical Director (BAE System)  Jira Coordination  Deputy Technical Director | Direct teams as they work on the projects and facilitates technology transfer during the projects.  Facilitating Agile- Scrum, Kanban, Analyze the tasks, task estimation, Workflow, scheme in Jira.  Direct teams as they work on the projects and facilitates technology transfer during the projects. | Joaquin Santos  Aynura Mammadova  Leon Ben |
| Information Security | Responsible for the security, integrity, and certification of the systems | Roma Ren James Bishop |
| GI Engineer | Responsible for the overall design of the messaging system | Jonathan Reiser (Lead) |
| Technical Team | Provide UCS, storage and network technical assistance to the project | GI and Network Services Staff |
| Operations Team | Operations staff responsible on-going operations and maintenance | NOC Staff |

## Project Estimated Timeline

The project timeframes identified in the table below are considered high level and subject to change.

|  |  |  |
| --- | --- | --- |
| Project Phase | Timeframe | Comments |
| Planning | Complete by 10/30/2020 |  |
| Requirements | Complete by 11/15/2020 |  |
| Design | Complete by 11/30/2020 |  |
| Testing | Complete by 12/15/2020 |  |
| Implementation | Complete by 12/30/2020 | Pending delivery/rack & stack of equipment |
| Operations & Maintenance and Training | Complete by 1/30/2021 |  |

## Project Sign-Offs

Signatures applied below indicate acceptance of the contents of this document and closure of the Planning project phase. Approval signatures applied below:

11/27/2020

X Joaquin Santos

Joaquin Santos Technical Director Signed by: EOUSA

11/23/2020

X David N. Atkins, Sr.

David Atkins Program Manager

Signed by: DAVID ATKINS

11/23/2020

X Kevin Shrieves

Kevin Shrieves Assistant Director

Signed by: GLENN SHRIEVES