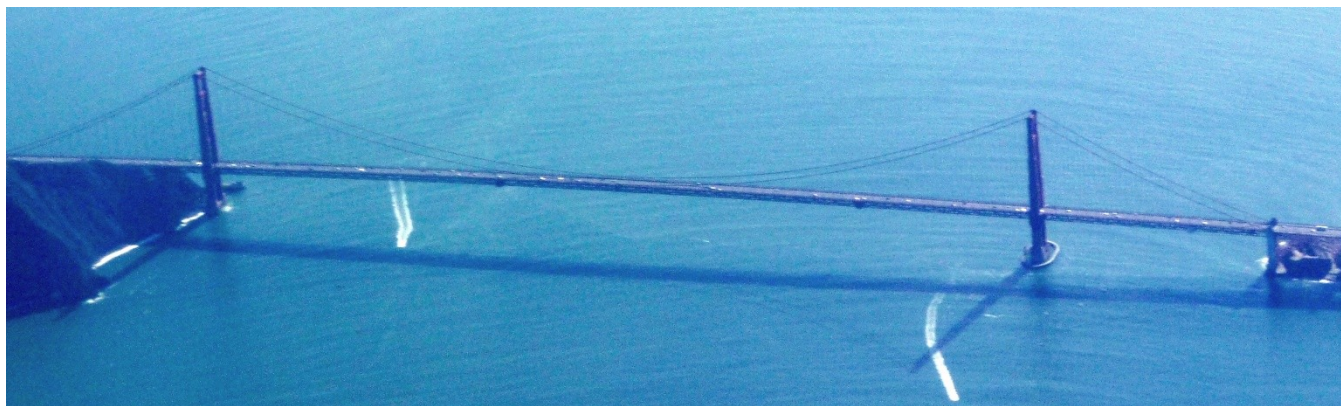# AEMS
Authorization-Enhanced Mail System

Abstract

AEMS helps organizations take control of email through the use of advanced authorization mechanism User-Managed Access (UMA). Each email consists of resources (message and attachments) stored in an UMA Mailbox, protected by the UMA protocol. This architecture increases the robustness and performance of the existing mail system. From the user's point of view, AEMS looks like a standard mail system. People can use AEMS to store and exchange messages, documents, images, audios and videos.

Introduction

The main components of the mail system have been designed between 1971 and 1992 by many inventors. In the course of time, email has become the most commonly used application of the Internet. Nowadays email is the only truly decentralized communication system of the Internet and the email infrastructure forms the backbone of the worldwide digital identity.

Problem

Despite the importance of email infrastructure, the whole ecosystem still relies on over 40 year-old architecture and protocol design. There are spam and attachment issues from the very beginning. The mail system, while conceptually sound as a communication means, is structurally obsolete and functionally deficient.

Solution

Given that the mail system is lagging behind modern communication and collaboration tools, AEMS uses an OAuth-based access control management and consequently a new data exchange channel for the email ecosystem.

Motivation

At the core of the AEMS mission is an effort to improve the usability of email – not only as an interpersonal communication tool, but also as the default choice to send and store files.

Comparison with Current Mail System

AEMS has many advantages over the standard mail system. The AEMS architecture increases the robustness and performance of the existing mail system. Below are highlighted the benefits of AEMS compared to the current mail system.

1. Security and Privacy:

User correspondence takes place between UMA Mailboxes. The mailbox of the current email system becomes redundant and is only used for system (verification, authorization, ...) emails. This architecture guarantees more control over potential security and privacy issues such as leakage of intellectual property or loss of confidential content and makes the system compatible with enterprise security policies.

2. Usability:

To separate official, business, personal and healthcare correspondence, AEMS provides the flexibility for storing emails according to various criteria with an appropriate AEMS provider. The ability of the UMA protocol to use multiple autonomous resource servers allows a user with a single email address to use simultaneously multiple UMA Mailboxes.

3. Platform:

With the capability to store, locate, send and receive any content including documents, images, audios and videos, the proposed solution can be considered a promising platform for Content Services.

4. Integrations:

AEMS provides a standardized Restful/GraphQL application interface to ease the integrations with external marketing, sales, Enterprise Content Management (ECM) or Customer Relationship Management (CRM) systems.

Tagline

Cargomail.

Numeronym

f7r

Use Cases

1. Basic use case – centralized content repository, store and exchange digital assets in the form of electronic records; plan, execute and track (business) activities.
2. Healthcare – electronic health records storage, exchange and retrieval system
3. Manufacturing/Engineering – product design and development, store and exchange product specifications.
4. Legal – contracts and proposals creation, store and exchange contracts.
5. Digital Media – store and exchange rich media.
6. Sales & Marketing – track sales and marketing activities, store and exchange marketing materials.

Target Market

According to the 2017 study from the Radicati Group, the number of worldwide email users, including both business and consumer users, will grow from over 3.7 billion in 2017 to over 4.1 billion by 2021. Email use continues to grow in the business world where it is often used not only simply as an interpersonal communication tool, but also as the default choice to send files. That is a lot of B2B and B2C relationships to generate leads to grow the business.

Competitive Trends

Although instant messaging, social networking, chat, and enterprise file sharing and synchronization systems are seeing strong adoption, centralized systems are not very acceptable solutions for B2B and B2C communication. The absence of an effective Identity and Access Management system can lead to potential privacy issues such as leakage of intellectual property or loss of confidential content and makes these systems incompatible with enterprise security policies.

Competitive Advantage

Transparency and unambiguous data ownership - data are transferred not shared. Ease of use - everyone who uses a computer knows how to use email client, there is no need for AEMS users to take a training course.

Unfair Advantage

Intellectual property rights of the Specification Lead / Working Group.

Business Model

AEMS is an open source software:

1. Offer a range of support plans to help organizations to use AEMS as a secure and reliable communication platform.
2. Offer custom integrations and consultations for a fee.
3. There is an opportunity to build a business model on global and/or regional AEMS services à la Gmail.
4. Cloud provider partnerships.

Promotion

To highlight the underlying difference between email and AEMS use the Cargo Services analogy. Endorse the AEMS term.

Marketing and Sales

Partners, Network effect / Word of mouth.

Market Opportunities

1. Enterprises
2. Associations
3. Providers
4. Universities

Project Status

Major idea iterations completed, software architecture within several prototypes has been internally tested. Work in progress – a proof-of-concept prototype of a communication system for presentation purposes and experiments.

Strategic Partnership

Build a strategic relationship with the open minded technology company to ensure alignment of visions, goals and objectives, and to drive product adoption.

Exit

Linux Foundation, Kantara Initiative

Conclusion

AEMS can play an important role in communication across various industries in the public and private sectors. Consolidation of repository, communication and identity represents a central source of information within any organization.