Uncovering Email Notification Issue in Aleph: Contributing Factors and Solutions

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Uncovering Email Notification Issue in Aleph:
Contributing Factors and Solutions

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Presentation overview

Introduction

Email notification issue
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Introduction

- New York City College of Technology (City Tech) Library is a member of the Libraries of City University of New York (CUNY)

- CUNY consists of 24 colleges across New York City with 269k+ students

- CUNY library system is an academic library consortium of 31 libraries

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Introduction

- CUNY Libraries’ integrated library system is managed by Office of Library Services (OLS) in close cooperation with Central Computing and Information Services (CIS) Department

- Each college campus also has their own local CIS Department

- The local CIS provides basic technical services for the library, such as network infrastructure, mail service, creating & managing patron, etc.
Introduction

- The services provided by OLS include:
  - acquisition, licensing, and management of resources
  - tech service including cataloging & metadata management
  - institutional repository management

- The technologies selected by OLS for CUNY Libraries include: Aleph, Primo, SFX, 360 Link, Digital Commons, EZproxy, ILLiad, etc.

- City Tech is the largest public, baccalaureate college of technology in the Northeast, with 17k+ enrollment

Problem Statement

- Libraries often need to send notifications to their patrons for circulation and acquisitions purposes

- At City Tech, we send notifications via email; if no email address, the notice will be printed out

- When I joined City Tech, Aleph server had stopped sending email notices to patrons for 1+ year

- The symptom was that email notices would bounce back to mail server for non-institutional email addresses, but could be sent to institutional ones
Literature review

- The initial attempt to solve the issue was to search for existing resources, like Aleph documentation, Ex Libris Knowledge Center, OLS technical support Website:
  - How to define exchange to send email via GUI
  - How to confirm if your mail server is working
  - How to define antivirus to send email via GUI
  - How to define the GUI to send Email introductory
  - The use of a secure SMTP server

- Those documents are very instructive. The first document dealt with unauthenticated mail servers, which is similar to our symptom, but the solutions seemed not quite applicable to our particular situation

Literature review

- We reviewed literature in library science databases, including LISA, LISTA, and Library Literature & Information Science, and even extended to public Websites. However, none of those efforts obtained effective solutions

- We sought solutions in Listserv Archives at listserv.nd.edu and consulted with peers via listservs. Some believed the problem was related to authenticated SMTP mail server

- Based on the review of existing documentation and consultation with peers, the issue was further explored under the direction of OLS, and finally the solution was developed and the issue was solved
Methodology

- To realize automatic notice processing, there are many factors to consider, including:
  1. local administrator status
  2. Aleph client
  3. Aleph system files
  4. security settings
  5. SMTP mail server

Local administrator status
To let Aleph function properly on a Windows PC, the logged-in user account should be a local administrator or has administrator privileges, that is, to grant the user account full control of the Aleph folder.
Methodology

- Aleph client
  Aleph client & print daemon must stay open at all times for automatic notice processing to work

  The print daemon transfers print files from Aleph server to workstations for processing

- Aleph system files
  2 Aleph system files, alephcom.ini and circulation print.ini, need to be updated

  The Mail server should be defined in the [Mail] section of alephcom.ini

  The file print.ini is used to specify how notifications are delivered
Methodology

- Security settings
  Aleph sends email via a mail server port 25. Many antivirus programs by default have this blocked. McAfee can interfere with sending emails. So we added exceptions in it and even completely turned it off, but the problem still persisted.

  Our local CIS checked firewall settings and local group policies on the workstations, but found nothing that prevented sending emails.

Methodology

- SMTP Mail server
  The mail server must be adjusted to a library's particular technological environment. Many mail administrators block SMTP mail traffic. So it's necessary to check with IT department to see if this is the case.

  Like all CUNY colleges, we always used OLS SMTP mail server in Aleph. We learned we were the only college had such an issue. Also we had never changed the mail server. So mail server seemed to not cause this issue.

  Nevertheless we wanted to test to see if we could send notifications to external email addresses by using our local SMTP mail server. But our local CIS told us we had no local mail server.
Methodology

- Further investigation
  We virtually exhausted all factors contributing to the issue. Revisiting all those factors, we could certainly rule out all of them except for mail server.

  So we reset our focus on the local SMTP mail server.

  From URL of the faculty web email, we figured out our possible local SMTP mail server.

  To dig into the mail settings, we tried all parameters for local SMTP server to reproduce the symptom using PHP:

  ```php
  // Local college SMTP parameters
  $config['protocol'] = 'smtp';
  $config['smtp_host'] = 'email1.citytech.cuny.edu'; // <<- SMTP host IP
  $config['smtp_port'] = '25'; // <<- host port
  $config['smtp_timeout'] = '30';
  $config['smtp_user'] = 'actual username'; // <<- Account to log in SMTP
  $config['smtp_pass'] = 'actual password'; // <<- Account password
  $config['mailtype'] = 'html';
  $config['charset'] = 'utf-8';
  $config['newline'] = '\r\n';
  ```
Further investigation

When testing, we found out using a valid username & password, we were able to send emails to external email addresses. So we certainly believed our issue was due to mail server.

We reported this to OLS, and they believed our local mail server requires authentication to send emails to external users. So we included authentication in Aleph client, and the problem was solved.

Incorporate authentication

Username & password to log in to SMTP mail server can be included in Aleph via admin module.
Incorporate authentication

Then a file called EMailPwd.dat will be created that contains authentication. The file should be put in AL500\alephcom\tab\. Finally the issue was solved.
**Recommendation**

- Our situation was quite unique: both our consortium and local CIS thought it was other side's problem.

- Consulting similar libraries is helpful, but that's all it can ever be. Even in the same consortium, if they have no issue, this doesn't mean you can certainly rule out some similar contributing factors.

- Regular meeting with campus IT is necessary whenever there is any change in technological environment.

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**Thanks**

*Thank you! Muchas gracias Merci beaucoup*
References