



# Email Optimization Initiative Overview

## *EPA Email Goes Green*

OEI Symposium  
May 13, 2010

*Presented by*  
Members of the CRSSM Team



# Agenda

- ✓ Why are we updating the way EPA manages email?
- ✓ What is the Email Optimization Initiative?
- ✓ What is the Email Pilot?
- ✓ What will the user experience?



# Why are we updating the way EPA manages email?

- The centralization of email servers and central management of servers leads to higher uptime, more consistent control, and lower costs
- Industry trend toward data center consolidation and the centralization of email server resources
- Reduce our email carbon footprint
- Federal government targets for hardware, energy and cost efficiency



# What is the Email Optimization Initiative?

- *The Email Optimization Initiative will modernize, standardize, improve, and reduce the overall cost of the Agency's email service through:*
  - Consolidating the delivery of EPA's email service to four large computer centers
  - Efficiently managing email growth
  - More cost effectively managing the Agency's email service and reducing our environmental footprint



# Email Optimization Targets

Element	Current State	Future State
Computer Rooms	45 large and small rooms	4 large computer centers & 20-25 computer rooms
Email Servers	182 servers	20 servers (89% reduction)
Storage	81 TB	33.8 TB (58% reduction)



# Benefits

- Seamless experience regardless of organization or location within EPA
- Improves performance and portability for remote workers
- Controls cost of email storage growth
- Reduces our 'email footprint'





# How does email affect our environmental footprint?

- Studies estimate that the average business email user is responsible for 131 kg of CO<sub>2</sub> per year in email-related emissions. ***That's the same impact as 15 gallons of gas***
- The average EPA email user sends and receives 269 emails a week or 54 a day
- The weekly CO<sub>2</sub> footprint of those emails traveling on the EPA network is 25,389 kg. ***The equivalent of the annual GHG emissions of 4.9 passenger cars***





# Environmental Impact of Consolidation

- Reducing 182 servers to 20 servers = **an average annual GHG emissions savings of 33 passenger cars**
- Reducing storage from 81TB to 33.8 TB = **an average annual GHG emissions of 17.9 passenger cars**





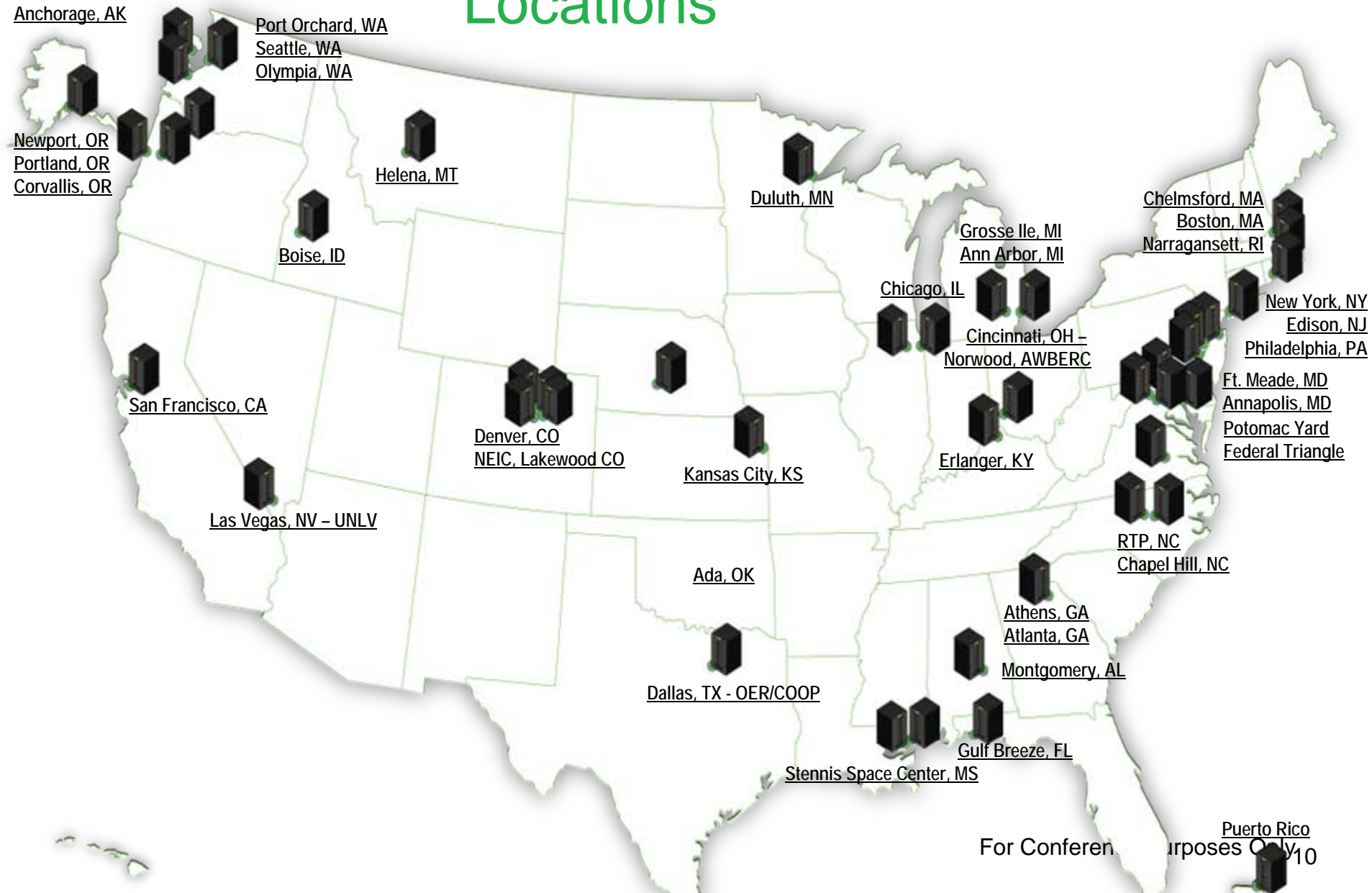
# What is changing?

- Consistent email user experience
- Consolidation of EPA's email computer rooms
- Email management tools
- New email configuration



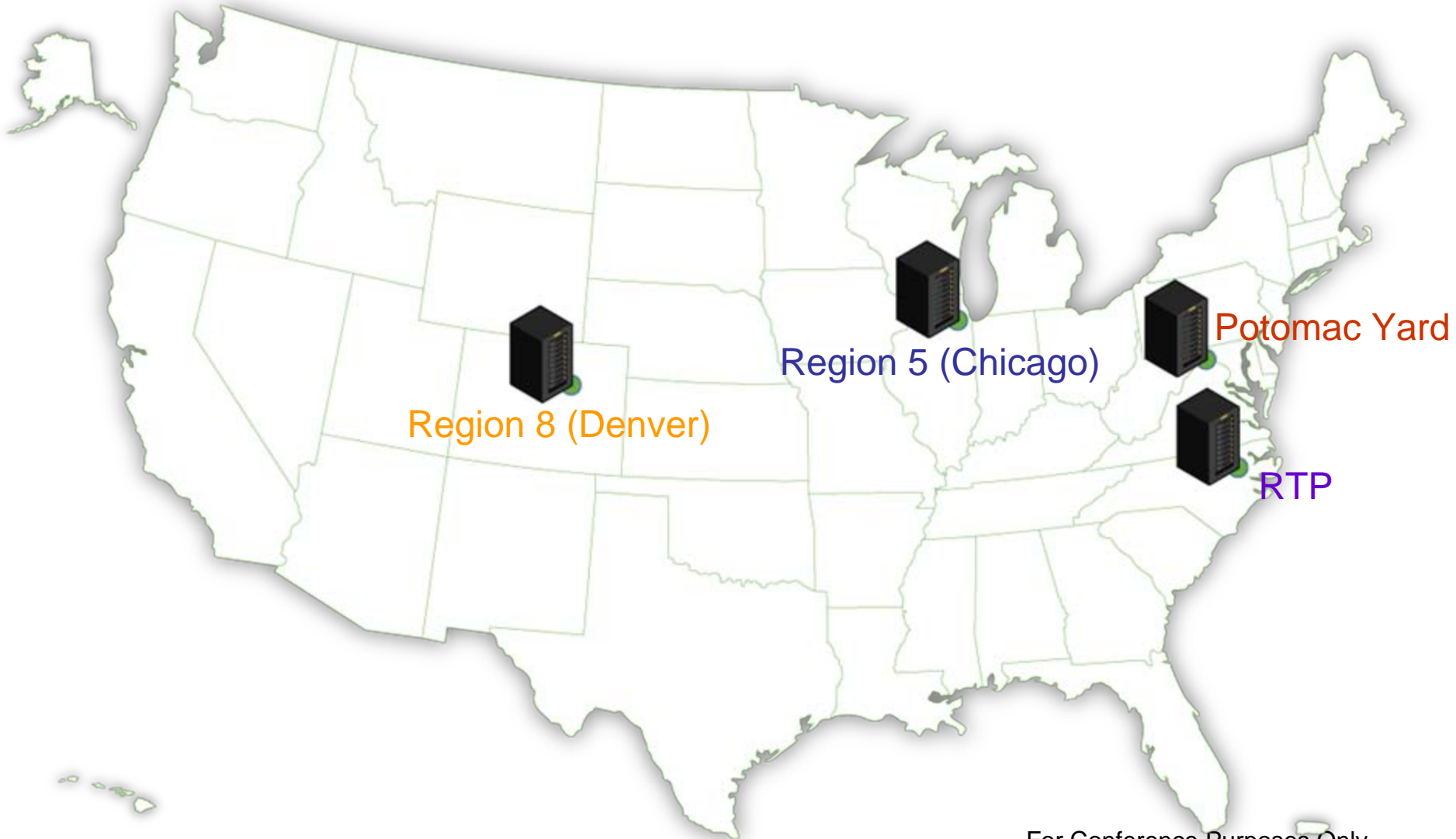


# EPA's Existing 45 Email Hosting Locations



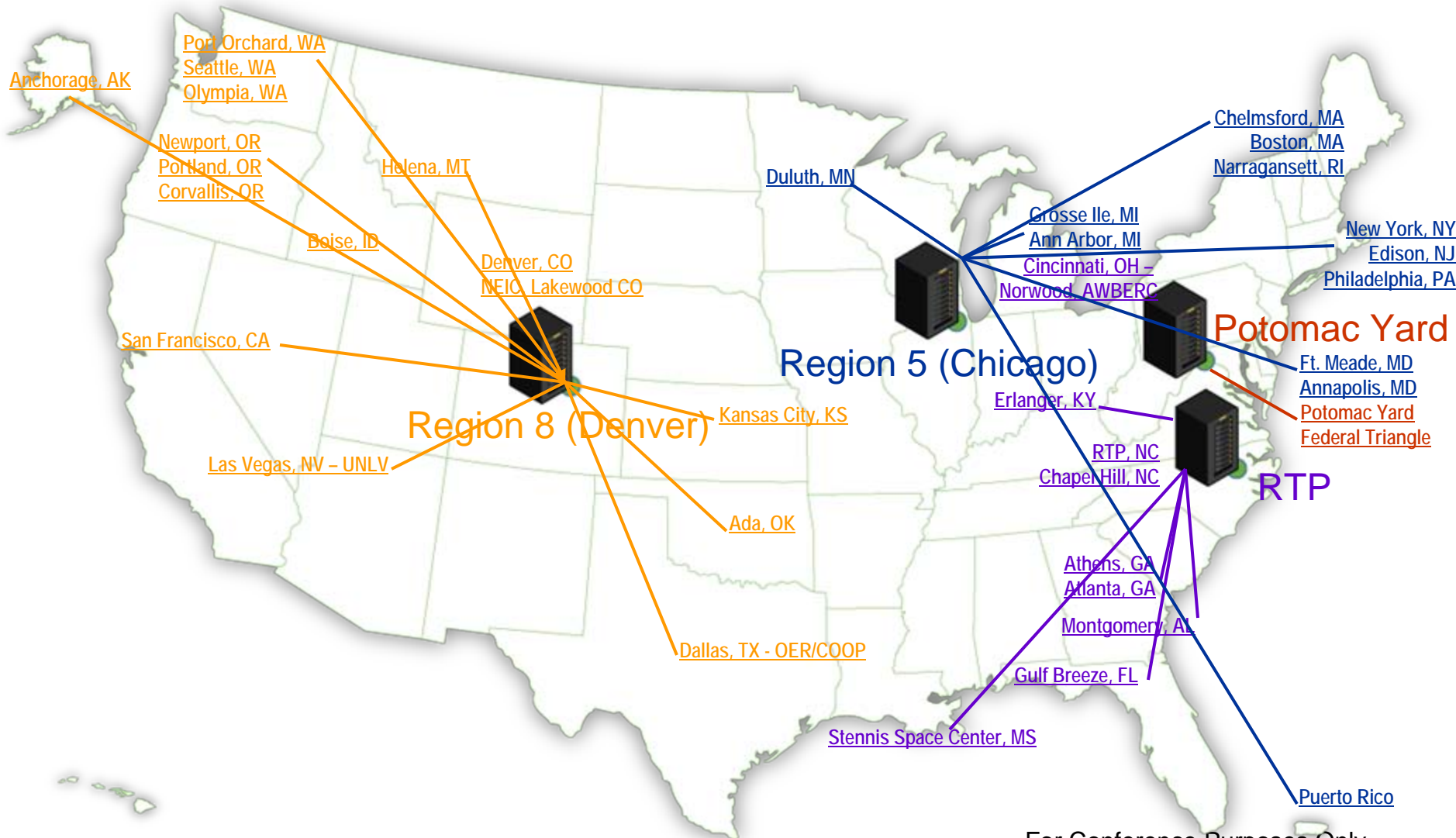


# Optimized Email Hosting – Email Service Centers





# Email Optimization Service Areas\*



\*Initial plan subject to change

For Conference Purposes Only<sub>12</sub>



# What is the Email Pilot?

- **Purpose**

- Proof of concept for the Email Optimization Initiative

- **Goals**

- Demonstrate enhanced business processes for service delivery
- Measure user experience
- Demonstrate technical capability and performance
- Determine efficiencies and potential cost avoidance for the Agency

- **Scope**

- The Email Pilot will include approximately 2,000 users

- **Schedule**

- Email Pilot will be conducted May to September 2010



# Who is in the pilot?

- **The pilot will be implemented in a phased approach**
- **The following are the EPA locations in the pilot:**
  - Phase 1:
    - Research Triangle Park, NC (415 email users\* in OARM, OAR, OCFO and OEI)
    - Region 8 (780 email users)
  - Phase 2:
    - Athens, GA (290 email users in Region 4 and ORD)
    - Chapel Hill (100 email users in ORD)
    - Cincinnati (260 email users\* in HQ Program Offices)
    - Region 10 (100 email users\*)
    - Las Vegas (120 email users\* in ORD)
    - Region 10's Manchester Lab (30 email users)

\*Subset of total employees at the location



# What is the pilot implementation timeline?

- Phase 1 migration will occur mid May through July 2010
  - Pilot participants will be migrated in four groups
  - Participants will be notified of their migration date and the migration process
- Phase 2 migration will occur after Phase 1 participants have been fully migrated



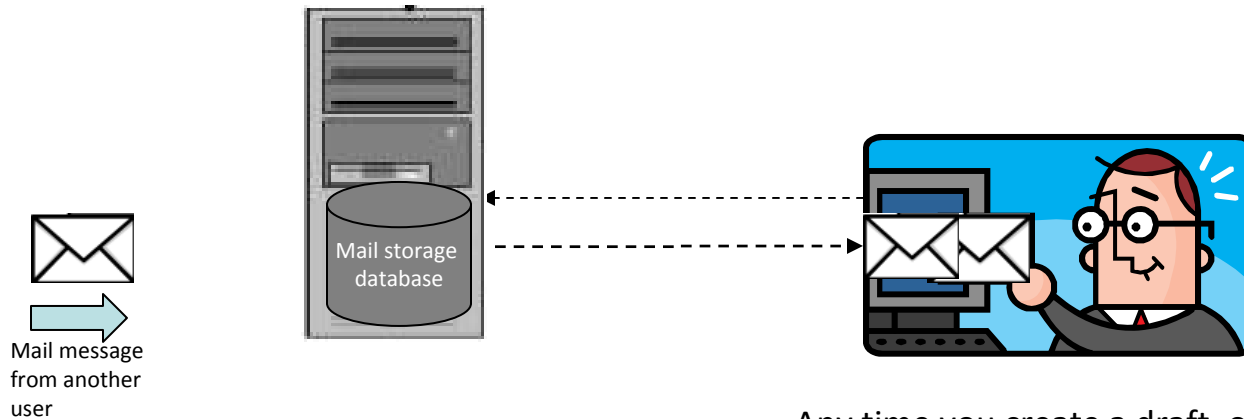
# What will the user experience?

- Email Support Remains Local
- Standardized User Interface
- Default Reply without Attachment
- Mailbox Size Quota
- Local Message Storage

# Local Message Storage

## Currently - Each email task is a trip to the server

Each piece of mail sent to you is received by the mail server and stored on the server's mail storage database. As soon as the email is received by the server, you are notified, and can open the mail to read and reply.

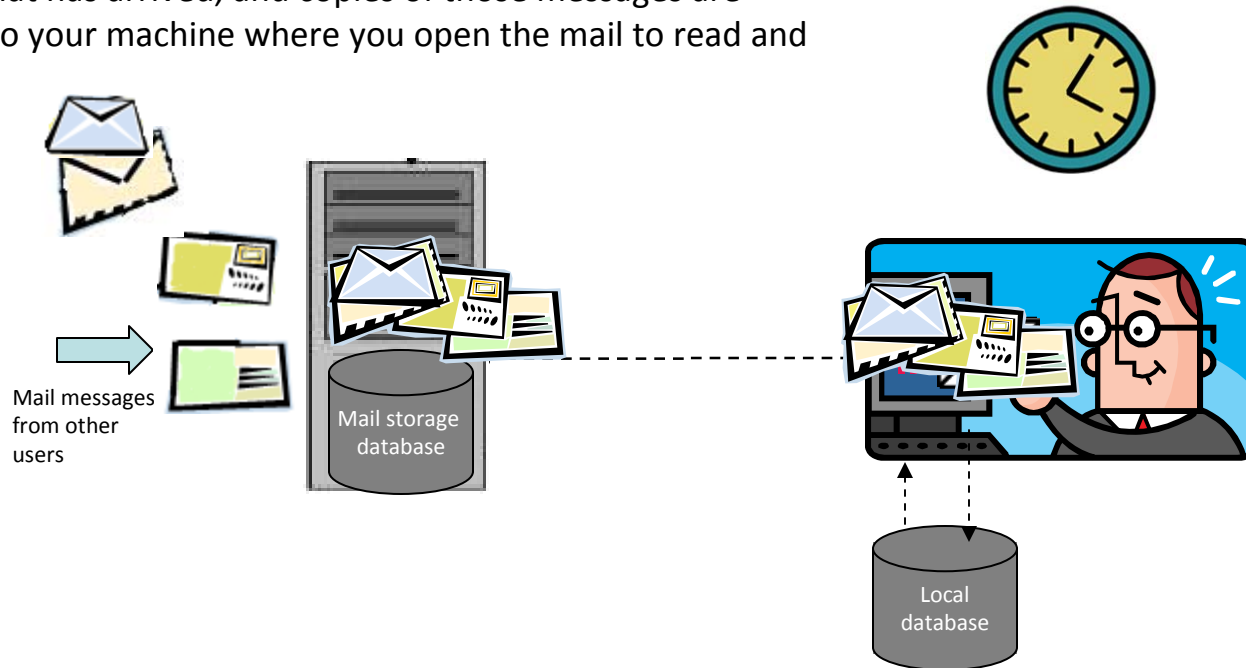


Any time you create a draft, or open an existing message to read, print, reply or forward it, you have to access the message on the server's database.

# Local Message Storage

**New configuration** - Messages are downloaded to your local machine every **5** minutes

Each piece of mail sent to you is received by the mail server and stored on the server's mail storage database. Every **5** minutes, you are notified of new mail that has arrived, and copies of those messages are downloaded to your machine where you open the mail to read and reply.



Any time you create a draft, or open an existing message to read, print, reply or forward it, you access the message on the local copy.



# What will the user experience?

- Email Support Remains Local
- Standardized User Interface
- Default Reply without Attachment
- Mailbox Size Quota
- Local Message Storage
- Remote Access to Email
- Auto Empty Trash
- Email Alerts
  - Large Number of Recipients Message
  - Large Attachment
  - Message Impact
- Archiving
  - Archive size quota
  - Stored on the server
  - Manual and Automatic



# Communications and Outreach

- **Communications**

- Intranet Web site
- Briefings with Pilot Managers
- End User Check-Ins

- **Survey**

- Two surveys to measure user satisfaction
  - Before pilot
  - At the end of the pilot

- **Trainings**

- End user training
  - Every week during migration
  - Quick Reference Guides
- Lotus Notes Administrator & Helpdesk staff training



# Summary

- The Email Optimization Initiative:
  - Provides employees with a seamless experience regardless of organization or location within EPA
  - Improves performance and portability for remote workers and enhances disaster recovery capabilities
  - Controls cost of email storage growth, saving the Agency money that can be used for other initiatives
  - Provides more efficient email management capabilities allowing employees to minimize the impact of their “email footprint”—less bandwidth and less storage not only saves money, its saves energy



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# Discussion and Questions

[intranet.epa.gov/emailemailoptimization](https://intranet.epa.gov/emailemailoptimization)

