

Simplifying Email at UC Berkeley

A two year effort to retire aging on-premise email infrastructure

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Summary

UC Berkeley has recently embarked on a major email simplification program to increase the reliability of and decrease the costs associated with delivering email services to campus.

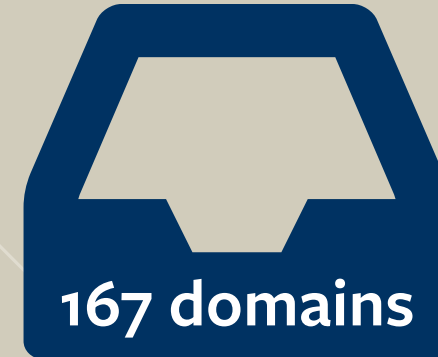
As a part of this program, we are working to eliminate older on-premise infrastructure while re-examining the architectural decisions that have been made over the past 25+ years with the goal of finding solutions that are simpler, less expensive, more reliable, and easier to maintain.

CalMail Email Service (early 2016)

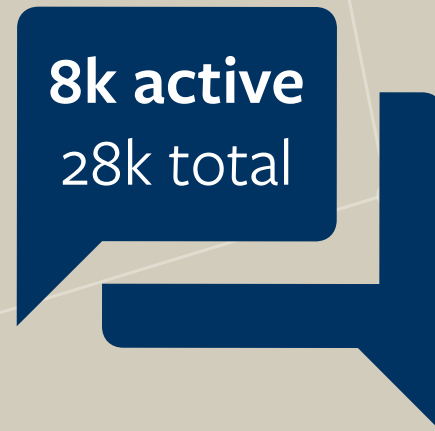
messages per day



mail routing



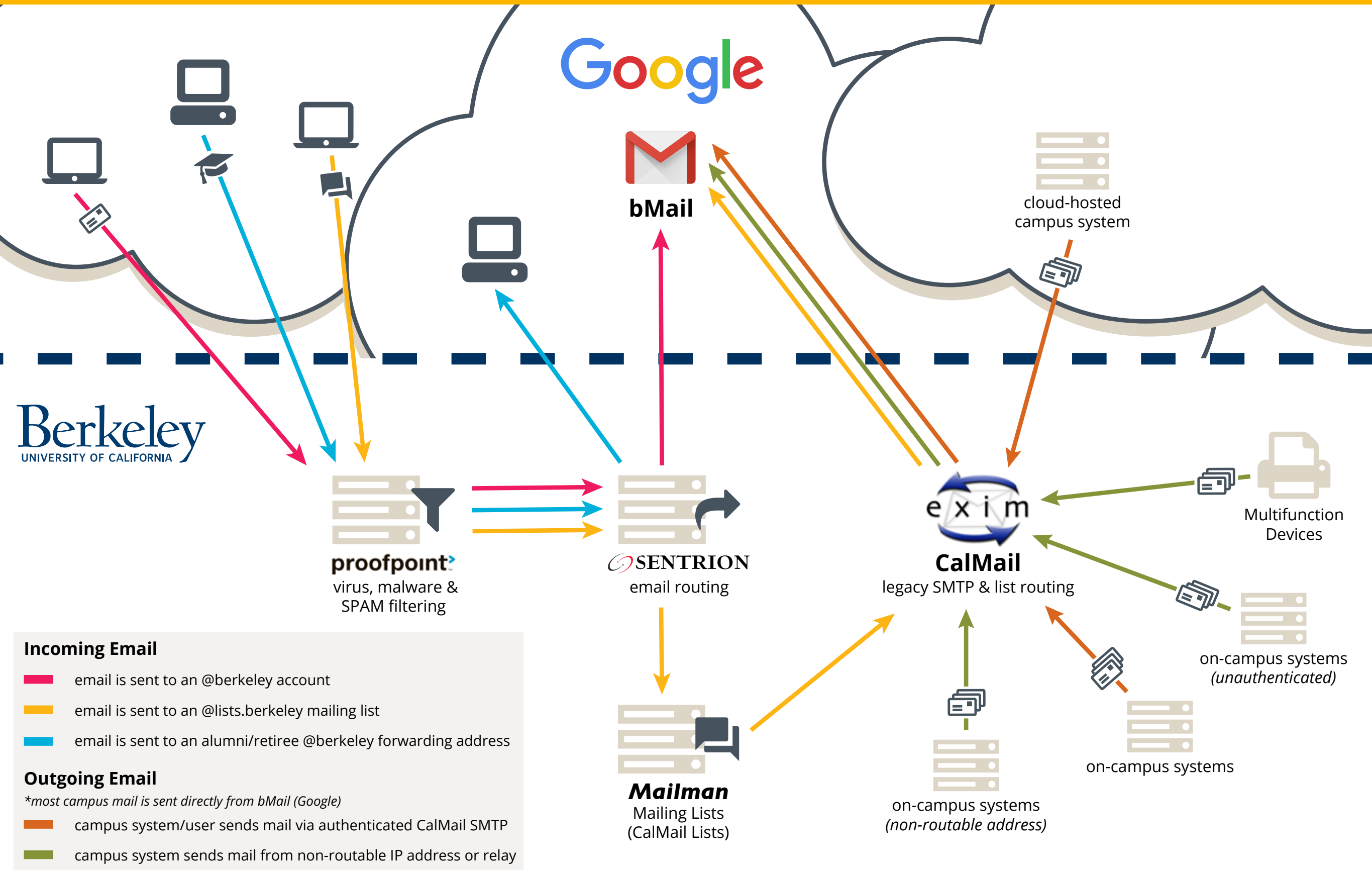
mailing lists



forwarding addresses



early 2016





Project Overview

Case for Change

The existing on-premise Enterprise Email Service is approaching end of life and needs to be replaced.

- * **operating systems** for on-premise services will no longer be vendor supported after **June 2017**
- * **mailing list service** runs on a custom platform that is not easily maintained and will be incompatible with Google, Yahoo & AOL's delivery rules in **July 2016**
- * **mail sending & receiving services** support complex routing rules that need to be **re-evaluated** including:
 - * alumni & retiree email forwarding
 - * unauthenticated & non-routable IP mail sending services
 - * complex subdomain mail routing/redirect services

Purpose

Provide a sustainable Enterprise Email Service that:

- * meets **essential** campus-wide needs
- * minimizes **security & performance** risks
- * eliminates **redundant** service options

Strategic Goals

Rely on Google as much as possible to sanitize, send and receive email

- * use Google authenticated SMTP wherever possible
- * route email directly to Google whenever possible
- * use Google Groups for all mailing lists
- * use groups, accounts & email alias instead of email redirects

Planned Changes

Migrate CalMail List Service with Google Groups

Replace existing mailing list service and integrate central groups management solution with Google Groups.

- * allow user to **easily migrate** mailing lists
- * offer new mailing list service using **Google Groups**
- * **CalGroups** integration with Google Groups
- ◆ **retire CalMail Lists servers** (Mailman)

Provide Alumni & Retirees with Google Accounts

Allow alumni and retirees to “upgrade” email forwarding addresses to full Google accounts.

- * allow recent & new alumni to keep Google accounts
- * offer migration path to accounts for existing alumni
- * offer migration path to accounts for staff retirees
- ◆ retire email forwarding services for alumni & retirees

Simplify & Manage Campus Outgoing Mail Services

Provide purposed SMTP services for campus systems that send Bulk mail or send from a non-routable campus IP address.

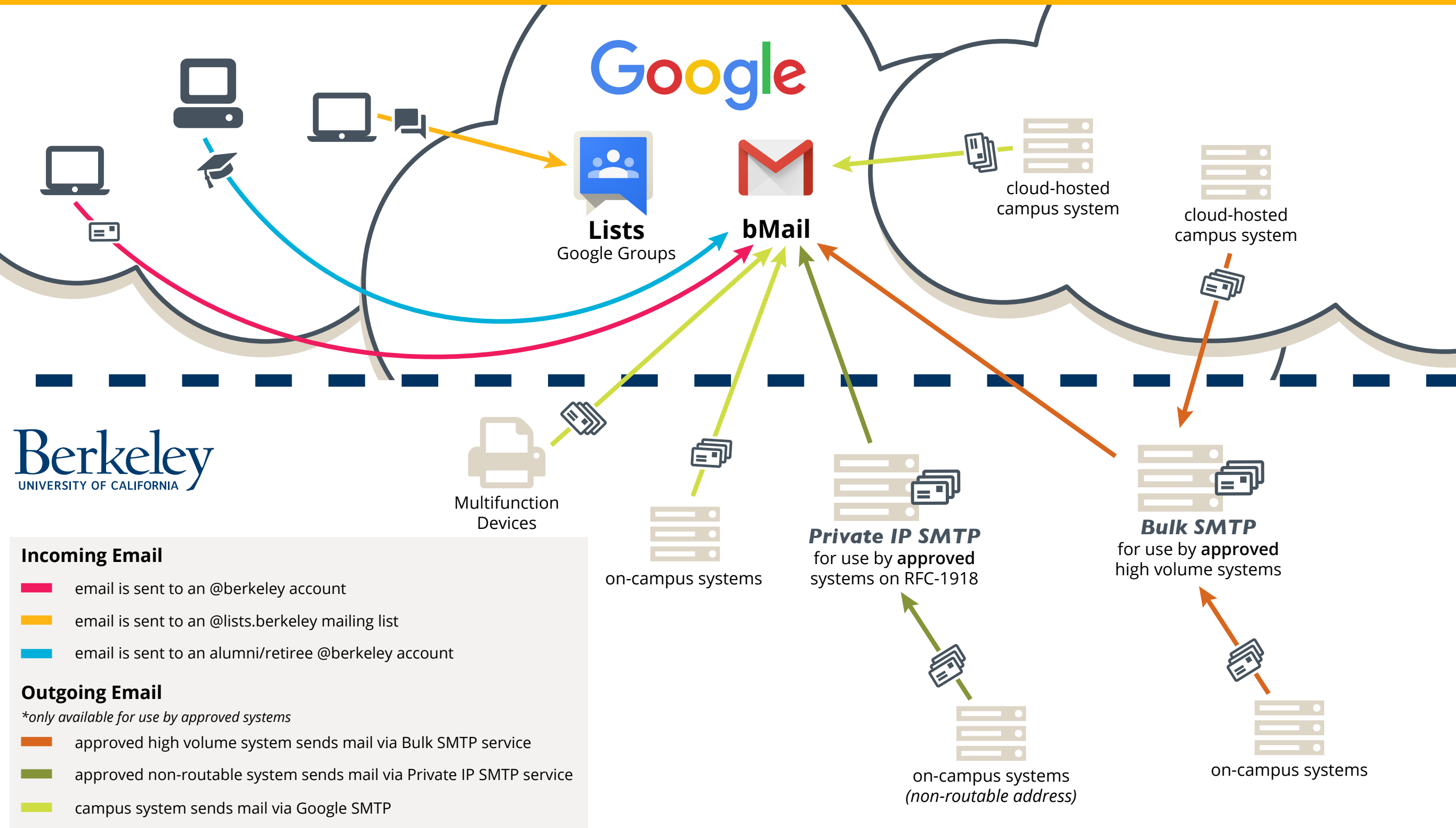
- * migrate users & multifunction devices to **Google SMTP**
- * migrate non-bulk, public IP systems to **Google SMTP**
- * provide outgoing mail service for **~500 approved** systems on non-routable (RFC-1918) networks via a **Private IP SMTP service**.
- * provide outgoing mail service for **~40 approved** high volume systems via a **Bulk SMTP service**
- ◆ **retire CalMail SMTP servers (Exim)**

Route Centrally Managed Domains to Google

Simplify mail routing by retiring on-premise routing infrastructure and routing mail directly to Google accounts and groups.

- * route inbound mail **directly to Google** for all domains
- * convert existing redirects to **email aliases**
- * allow domain **admins** to create groups and apply aliases
- ◆ **retire Proofpoint** email sanitation appliances
- ◆ **retire Sentrion** mail transfer agents

2017



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