

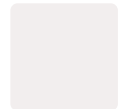
Email Protocols: POP3 vs IMAP

 by Catherine . A SNS



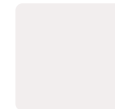


What is POP3? (Post Office Protocol 3)



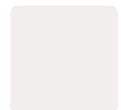
Definition

A standard protocol for retrieving email from a remote server.



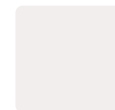
Mechanics

Downloads emails to a local device, often deleting from the server.



Introduction

POP1 was introduced in 1984; POP3 became standard in 1996 (RFC 1939).



Default Ports

110 (unencrypted) and 995 (encrypted via SSL/TLS) are commonly used.

POP3 in Detail: A Local Focus

Local Storage

Emails primarily reside on the user's single device.

Offline Access

Full access to downloaded messages without internet.

Bandwidth Efficiency

Downloads emails once, then disconnects from the server.

Server Mailbox

Typically cleared after download, saving server space.





What is IMAP? (Internet Message Access Protocol)



Definition

Standard protocol for accessing and managing email on a remote server.



Mechanics

Synchronises email state across multiple devices; keeps mail on the server.



Introduction

IMAP4 became a standard in 1994 (RFC 1733).



Default Ports

143 (unencrypted) and 993 (encrypted via SSL/TLS).



IMAP in Detail: A Synchronised Experience



Server-Centric

All emails and folders are managed on the server.



Multi-Device Access

Seamless synchronisation across all connected devices.



Offline Access

Provides cached copies for partial offline viewing.



Folder Management

Supports creating and managing folders directly on the server.

Key Differences: POP3 vs. IMAP

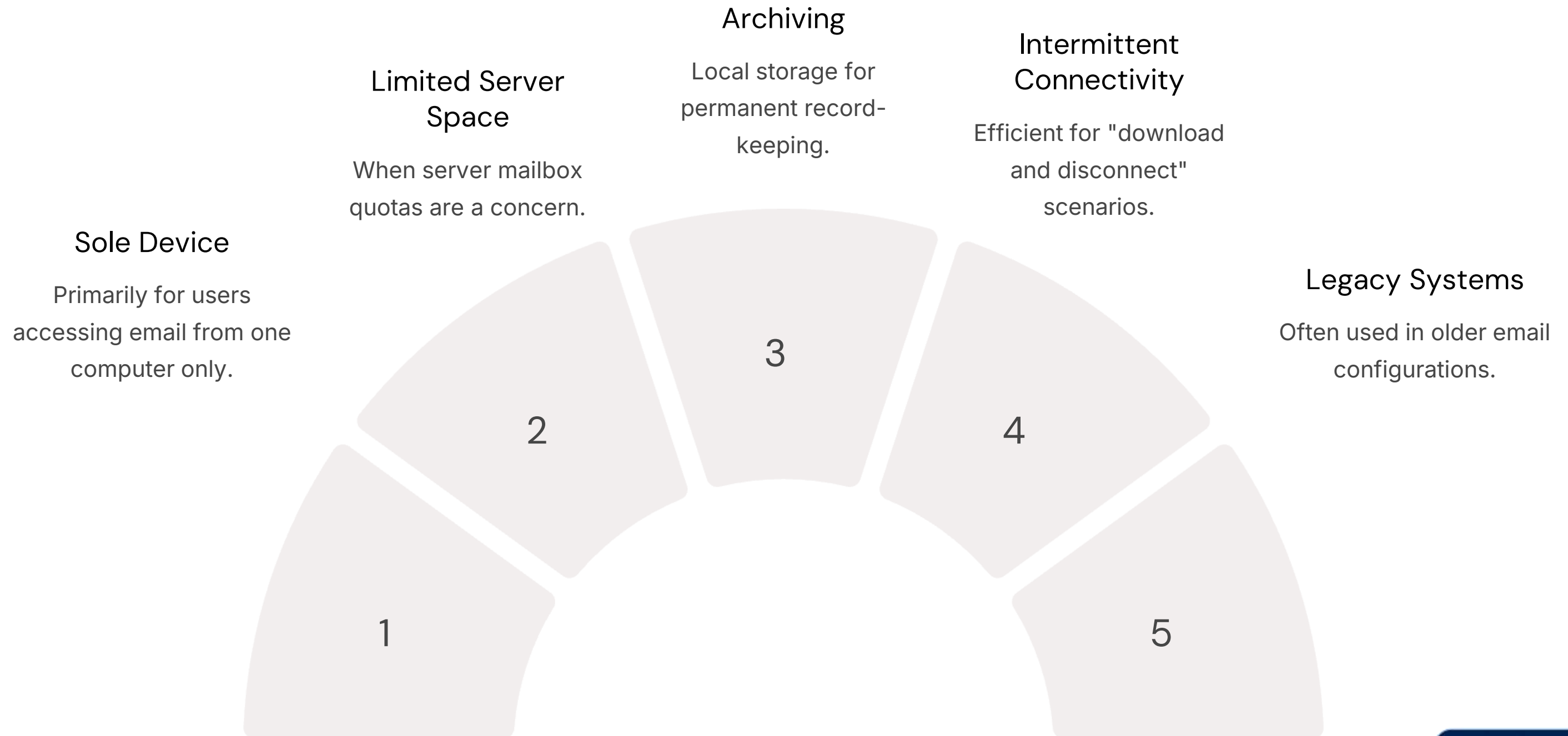
POP3

- Mail Storage: Local.
- Multi-Device Sync: Limited/none.
- Offline Access: Full for downloaded.
- Bandwidth Usage: Downloads all.
- Server Mailbox State: Empties.

IMAP

- Mail Storage: Server-based.
- Multi-Device Sync: Full, real-time.
- Offline Access: Cached for partial.
- Bandwidth Usage: Downloads headers first.
- Server Mailbox State: Retains mail and state.

Use Cases: When to Choose POP3

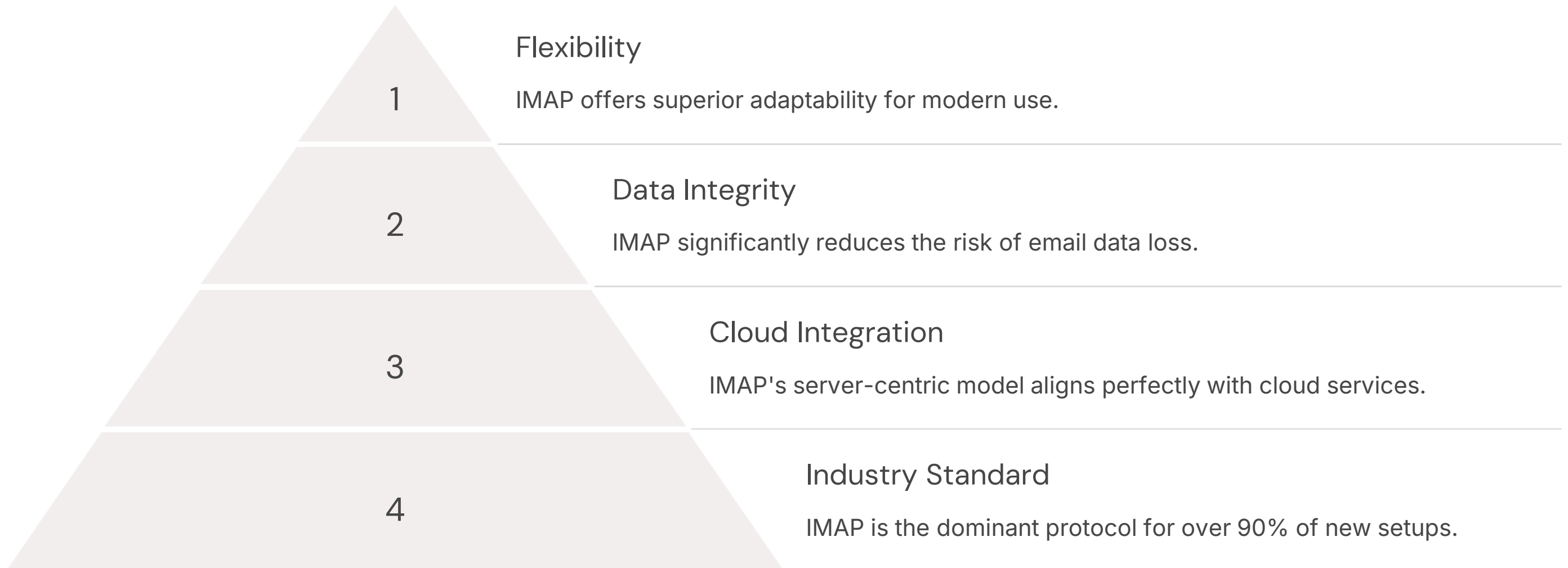




Use Cases: When to Choose IMAP

Multiple Devices	Essential for accessing email from phone, tablet, laptop, webmail.
Collaboration	Shared inboxes where multiple users need consistent views.
Data Redundancy	Server acts as primary backup for emails.
Frequent Travel	Consistent access regardless of location or device.
Modern Workflow	Standard for cloud-based email services.

Choosing the Right Protocol: Modern Considerations



Conclusion: The Evolution of Email Access

Recap

POP3 (local, simple, single-device) vs. IMAP (server-sync, flexible, multi-device).

Modern Preference

IMAP is preferred for ubiquitous access and data integrity.

Future Outlook

Evolution continues towards more secure, synchronised, cloud-native protocols.

Email remains critical: 347 billion emails sent daily in 2023.

