Multipart/Form-Data Consolidated Parameters for

draft-motiwala-consolidated-multipart-params-00

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Motivation

Operational inefficiency in multipart/form-data deployments

- RFC 7578: one MIME part per field
- File uploads often include many parameters
- Structural overhead scales with parameter count
  - Each text parameter requires ~100 bytes of overhead:
    - Boundary delimiters (~40 bytes)
    - Content-Disposition header (~45-60 bytes)
    - Separators and line breaks (~7 bytes)
- Observed production impact at high volume
- Ad hoc consolidation patterns exist but are undocumented

Current vs Consolidated

Current: One Part Per Field

```
------WebKitBoundary
Content-Disposition: form-data;
  name="user_id"

12345
------WebKitBoundary
Content-Disposition: form-data;
  name="session"

abc123
------WebKitBoundary
Content-Disposition: form-data;
  name="file"; filename="doc.pdf"
Content-Type: application/pdf

[binary PDF data]
```

Proposed: Consolidated

```
------WebKitBoundary
Content-Disposition: form-data;
  name="params"
Content-Type: application/
  x-www-form-urlencoded

user_id=12345&session=abc123
------WebKitBoundary
Content-Disposition: form-data;
  name="file"; filename="doc.pdf"
Content-Type: application/pdf

[binary PDF data]
```

78% reduction in parameter overhead (2 params shown; real forms often have 15+)

Background & Community

Draft & Discussions

Draft:

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Prior Engagement:

- Submitted to DISPATCH
- Guidance from HTTP WG chairs

Standards Compliance:

- **No changes to RFC 7578**
- Uses existing Content-Types
- Fully backward compatible

Production Deployment:

- mesibo (chat/messaging platform)
- Millions of uploads daily
- 45-60% overhead reduction

Who Would Advance This:

- High-volume API platform operators handling multipart uploads
- Cloud storage and media ingestion services
- Application framework maintainers (HTTP/multipart parsers)
- CDN / edge platform operators optimizing request processing
- HTTP ecosystem participants concerned with deployment efficiency

Proposed Dispatch Outcome

Publish as Informational (AD-sponsored), unless the HTTP WG prefers to adopt it.

Rationale:

- Documents an existing deployment pattern
- No protocol changes or IANA actions required
- Does not modify RFC 7578 semantics
- Provides operational guidance not currently documented