

# Background

---

Webpages sometimes group multiple subresources into a single combined resource to allow cross-resource compression and to reduce the overhead of HTTP/1 requests. The W3C TAG (Technical Architecture Group) proposed a web packaging format based on multipart/\* , to give web browsers visibility into the substructure of these combined resources. That has not seen deployment and HTTP/2 did not make these bundles unnecessary as was once expected.

These bundles are still needed. In countries with expensive and/or unreliable mobile data, there is an established practice of sharing content and native applications peer-to-peer. Untrusted web content can generally be shared, but with the web's move to HTTPS, it is no longer possible to share web apps over these channels

## WPACK

---

The WPACK working group will develop a specification for a web packaging format that efficiently bundles multiple HTTP resources. It will also specify a way to optionally sign these resources such that a user agent can trust that they came from their claimed web origins. Key goals for WPACK are:

- Efficient storage across a range of resource combinations. Three examples to be supported are: a client-generated snapshot of a complete web page, a web page's tree of JavaScript modules, and El Paquete Semanal from Cuba.
- Safe web app installation after having been retrieved from a peer.
- Low latency to load a subresource from a package, whether the package is signed or unsigned, and whether the package is streamed or loaded from random-access storage.
- Being extensible, including to avoid cryptography that becomes obsolete.
- Security and privacy properties of using bundles as close as practical to TLS 1.3 transport of the same resources. Where properties do change, the group will document exactly what changed and how content authors can compensate.
- A low likelihood that the new format increases centralization or power imbalances on the web.

The packaging format will also aim to achieve the secondary goals described in draft-yasskin-wpack-use-cases as long as they don't compromise or delay the above properties.

The following potential goals are out of scope under this charter:

- DRM
- A way to distribute the private portions of a website. For example, WPACK might define a way to distribute Gmail's application but wouldn't define a way to distribute individual emails without a direct connection to Gmail's origin server.
- Defining the details of how web browsers load the formats and interact with any protocols we define here.
- A way to automatically discover the URL for an accessible package that includes specific content.

Note that consensus is required both for changes to the current protocol mechanisms and retention of current mechanisms. In particular, because something is in the initial document set (consisting of draft-yasskin-wpack-use-cases, draft-yasskin-wpack-bundled-exchanges, and draft-yasskin-http-origin-signed-responses) does not imply that there is consensus around the feature or around how it is specified.

## Relationship to Other WGs and SDOs

---

WPACK will work with the W3C and WHATWG to identify the existing security and privacy models for the web, and to ensure those SDOs can define how this format is used by web browsers.

## Milestones

---

- Chartering + 3 Months: Working group adoption of use cases document
- Chartering + 3 Months: Working group adoption of bundling document
- Chartering + 3 Months: Working group adoption of security analysis document
- Chartering + 3 Months: Working group adoption of privacy analysis document
- Chartering + 3 Months: Working group adoption of signing document
- Chartering + 18 Months: Use cases document to IESG
- Chartering + 18 Months: Bundling document to IESG
- Chartering + 24 Months: Security analysis document to IESG
- Chartering + 24 Months: Privacy analysis document to IESG
- Chartering + 24 Months: Signing document to IESG