



Isolation of identities and Indicating that isolation

When: Before a request is sent, examine it and determine if it needs to be placed in a contextual identity.

Why:

- To enable us to isolate tasks that the user may undertake in the browser(eepSite browsing, router console administration, torrents, web mail) from each other for security, and
- To give the user feedback that the isolation is successfully occurring.

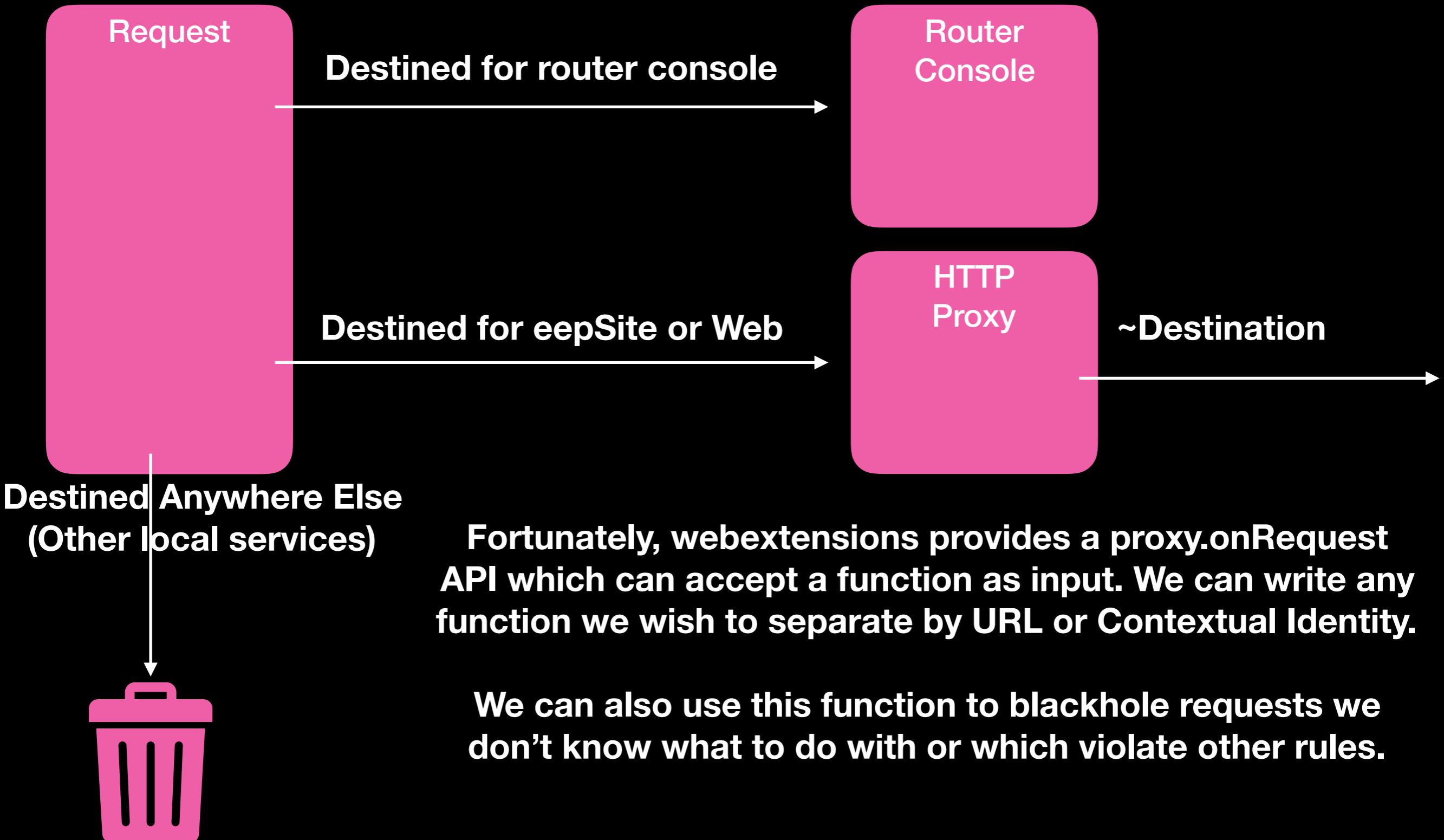
How:

- Before a request is sent, examine requests to determine which contextual identity applies to the request. If that contextual identity differs from the one where the request was made, automatically re-create the request in a new tab.
- Before a request is sent, examine the URL that the request is for. A URL is allowed to be either an eepSite URL, a web site URL, or a Router Console URL and *nothing else*.
- If a request is for an eepSite or a web URL, send it via the I2P HTTP Client proxy, if the URL is for the router console, do not.
- If a request is from the eepSite browsing contextual identity, always send it through the same HTTP proxy.

TLDR: Never use the same contextual identity to access different services. Enforce security-by-isolation in the browser.



Deciding whether or not to use the Proxy





duckduckgo.com



Sanitization in the Browser

Cleaning up headers, changing the user agent, etc

Request

Destined for router console

Don't bother, it's just us.

Destined for eepSite

Change the user agent to AN/
ON(6.66) even though the HTTP proxy
can't on HTTPS eepSites

Sanitize other headers potentially

Destined for Web

Change the user agent to match
common Firefox version

Sanitize other headers



console



Router Console URLs and Isolation

torrents



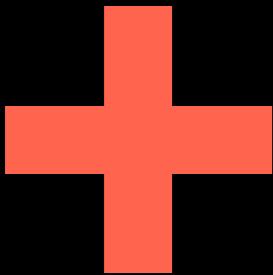
Torrent Integration

Protocol Handler

- Web extensions can define their own protocol handlers, which we can use to automatically enforce the use of Snark for handling torrent and magnet URL's.

Download Menu Integration

- Web extensions can also add items to the “Downloads” drop-down in the Firefox omni-bar.



Unobtrusive, Intuitive Snark Browser Interface

Since we don't need to visit Snark at all to add URL's to the torrent client, and we don't need to visit Snark at all to view download progress or interact with the downloaded files, Snark itself only needs to be present so that we can interact with the Snark-RPC plugin. To the end user, I2P torrents can work just as easily as any download from the web.

torrents

torrent download

http download

torrent download

http download



webmail



Security Controls, Options

Opening and closing a tab in Firefox causes events, and when they have contextual identities, we can determine what actions to take on those events. For instance we can:

- Clear cookies, log-out, when we close the last e-mail tab
- Support multiple e-mails logged in in different e-mail contextual identity tabs

Convenience, User-Interface

Besides that, we can also

- Override Firefox's default mailto: handler so we can handle e-mail url's automatically via Susimail
- Create notifications while an e-mail tab is open

To Be Continued in...
AnonymousMaybe might
have a Point