

Overview of changes in this branch

String conversions: StringPiece -> absl::string_view

Changes have been made to allow everything under pagespeed/ and net/ to work with absl::string_view. Those can be pretty much defined as:

- sp.starts_with("foo") -> absl::StartsWith(sp, "foo")
- sp.ends_with("foo") -> absl::EndsWith(sp, "foo")
- sp.CopyToString(dest) -> dest = GoogleString(sp)
- sp.as_string() -> GoogleString(sp)
- sp.AppendToString(s) -> s.append(GoogleString(sp))

third_party/css_parser

Still relies on chromium's stringpiece. Renamed all its StringPiece references to CssStringPiece so we can easily disambiguate. this diff needs to be checked because it seems I broke it somewhere in the process as all tests relaying in this parser either crash or fail.

chromium/url & chromium/base

Based on a hacked recent v77.x chromium /base & /url

See

<https://github.com/oschaaf/incubator-pagespeed-mod/commits/19e8a272b0d6a28d9331cf97785eb12540b31afc> and

<https://github.com/oschaaf/incubator-pagespeed-mod/commit/19e8a272b0d6a28d9331cf97785eb12540b31afc>

Probably want to figure out the changes I made there, annotate them or save a diff, and move this into its own repo.

This would make the required change to the mod_pagespeed repo a lot smaller.

protobuf

Updated this dep to what we had

grpc

Updated the grpc code, but this needs double checking because I disabled one test. I suspect that that test still breaks (or rather hangs) because the tested behaviour

no longer exists. We need to figure out if we're OK.

BUILD files & compiling pagespeed/ & 'net/'

- Shooting for a single BUILD file per directory, which has:
 - a target for building the contained functionality (e.g. http)
 - a target for testing the contained functionality (e.g. http_test)
 - a target for test-infra for the the above (mocks, test_bases, etc) (e.g. http_test_base)
- Moving net/instaweb/config:
To reflect its circular dependency net/instaweb/config was relocated to net/instaweb/rewriter/config.

Testing

We use some of Envoy's build infra for our cpp unit-testing.

This may change later, but for now it helps. Shared mem tests seem broken, probably because of Envoy-injected stuff.

Build-flow for generated code: Data2c, gperf, cc_proto, cc_grpc

- Building and using data2c
- Added genrules for gperf/.proto (both protoc and grpc code gen)

High level TODO

- Land the mechanical string-related changes on master. We can probably create shim versions of absl::StartsWith / absl::EndsWith. The goal would be to land this mechanical first on master separately as an intermediate step, so the final diff becomes a lot smaller.
- Create a separate repo for our hacked version of chromium/url and chromium/base, figure out what changes have been made, and annotate those.
- We ported all the deps we will need, except openssl, which still needs to be done unless we want to rely on Envoy for that (which may be an option).
- Libjpeg_turbo needs love, it doesn't use the asm/optimized code, so we have room for improvement here.
- Some calls relying on openssl crash, notably HMAC().
- data2c generated opt js needs to actually get minified in the build flow.
- Some static initialization was introduced as I want to deprecate base::LazyInitXXX this needs fixing.
- I hacked pagespeed's atomic.cc/h, but we probably want to undo that and rely on chromium, because other things still depend on it as well. We can postpone this, as it probably isn't trivial to prove we'd have an equivalent implementation of our own.

