Package 'polished'

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Type Package

Title Authentication, User Administration, and Hosting for 'shiny' Apps

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Description Easily add modern authentication and user administration to your 'shiny' apps. Customize user sign in and registration pages to match your brand. Control who can access one or more of your 'shiny' apps.

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URL https://github.com/tychobra/polished, https://polished.tech

BugReports https://github.com/tychobra/polished/issues

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`admin_button_ui` *An html button to navigate the the "Admin Panel"*

Description

The UI portion of the 'shiny' module for the button to navigate to the "Admin Panel". This is the button that, when clicked, navigates a 'polished' admin from your 'shiny' app to the 'polished' Admin Panel. If your app is set up with the default 'polished' configuration, this button appears in the bottom right of your 'shiny' app.

Usage

```
admin_button_ui(align = "right", vertical_align = "bottom")
```

Arguments

`align`	The horizontal alignment of the button. Valid options are "right" (the default) or "left".
`vertical_align`	the vertical alignment of the button. Valid options are "bottom" (the default) or "top"

Value

admin button UI

---

bundle_app *Create a tar archive*

Description

This function is called by `deploy_app()` to compress Shiny apps before deploying them to Polished Hosting. You probably won't need to call this function directly.

Usage

```
bundle_app(app_dir = ".")
```

Arguments

`app_dir`	The path to the directory containing your Shiny app. Defaults to the working directory.

Examples

```
## Not run:
bundle_app(
  system.file("examples/polished_example_01", package = "polished")
)

## End(Not run)
```

default_admin_ui_options *Default Options for the Admin UI*

Description

This function specifies the default logos that are displayed in the "Admin Panel".

Usage

```
default_admin_ui_options()
```

Value

the default list of HTML for branding elements in the Admin Panel UI. The valid list element names are:

- `title` - Title/Logo element in top left corner of Admin Panel dashboard & browser tab title
- `sidebar_branding` - Branding (e.g. Logo) on left sidebar of Admin Panel dashboard
- `browser_tab_icon` - Icon to display in browser tab

deploy_app *Deploy a Shiny app to Polished Hosting*

Description

Deploy a Shiny app to Polished Hosting

Usage

```
deploy_app(
  app_name,
  app_dir = ".",
  api_key = getOption("polished")$api_key,
  api_url = "https://host-api.polished.tech",
  launch_browser = TRUE,
  region = "us-east1",
  ram_gb = 2,
  r_ver = NULL
)
```

Arguments

app_name	You Shiny app's name.
app_dir	The path to the directory containing your Shiny app.
api_key	Your polished.tech API key. Defaults to getOption("polished")$api_key.
api_url	The Polished API url. Defaults to "https://host-api.polished.tech". You should not change from the default unless you are testing a development version of the API.
launch_browser	Whether or not to open your default browser to your newly deployed app after it is successfully deployed. TRUE by default.
region	the region to deploy the app to on Google Cloud Platform. See https://cloud.google.com/compute/docs/regions-zones for all available regions on Google Cloud Platform. Currently on "us-east1" is supported, but soon, all regions will be supported.
ram_gb	the amount of memory to allocate to your Shiny app server. Valid values are 2, 4, or 8.
r_ver	Character string of R version. If kept as NULL, the default, then deploy_app() will detect the R version you are currently running. The R version must be a version supported by an r-ver Docker image. You can see all the r-ver Docker image versions of R here https://github.com/rocker-org/rocker-versioned2/tree/master/dockerfiles and here https://github.com/rocker-org/rocker-versioned/tree/m

Examples

```
## Not run:
deploy_app(
  app_name = "polished_example_01",
  app_dir = system.file("examples/polished_example_01", package = "polished"),
  api_key = "<your polished.tech API key>"
)

## End(Not run)
```

---

email_input *A Shiny email* input

Description

This is a replica of shiny::textInput() with the HTML input type attribute set to "email" rather than "text".

Usage

```
email_input(
  inputId,
  label = tagList(icon("envelope"), "Email"),
  value = "",
  width = NULL,
  placeholder = NULL
)
```

Arguments

inputId	The input slot that will be used to access the value.
label	Display label for the control, or NULL for no label.
value	Initial value.
width	The width of the input, e.g. '400px'.
placeholder	A character string giving the user a hint as to what can be entered into the control. Internet Explorer 8 and 9 do not support this option.

---

firebase_dependencies *Load the Firebase JavaScript dependencies into the UI*

Description

Under the hood, polished uses Firebase JavaScript dependencies to handle user authentication. This function loads the required Firebase JavaScript dependencies in the the UI of your Shiny app.

Usage

```
firebase_dependencies(services = c("auth"), firebase_version = "7.15.5")
```

Arguments

services	character vector of Firebase services to load into the UI. Valid strings are "auth" (default), "firestore", "functions", "messaging", and "storage"
firebase_version	character string of the Firebase version. Defaults to "7.15.5".

Value

the HTML <script> tags for the Firebase JavaScript dependencies

Examples

```
firebase_dependencies()
```

firebase_init *Initialize Firebase*

Description

Executes a couple lines of JavaScript to initialize Firebase. This function should be called in your Shiny UI immediately after `firebase_dependencies`.

Usage

```
firebase_init(firebase_config)
```

Arguments

`firebase_config`	list of firebase configuration

Value

a character string of JavaScript code to initialize Firebase

Examples

```
## Not run:
my_config <- list(
  apiKey = "your Firebase API key",
  authDomain = "your Firebase auth domain",
  projectId = "your Firebase Project ID"
)

firebase_init(my_config)

## End(Not run)
```

global_sessions_config *Configuration for global sessions*

Description

This is the primary function for configuring `polished`. It configures your app's instance of the `Sessions` class that manages your user's `polished` sessions. Call this function in your `global.R` file. See https://github.com/Tychobra/polished/blob/master/inst/examples/polished_example_01/global.R for a complete example.

Usage

```
global_sessions_config(
  app_name,
  api_key,
  firebase_config = NULL,
  admin_mode = FALSE,
  is_invite_required = TRUE,
  api_url = "https://api.polished.tech",
  sign_in_providers = "email",
  is_email_verification_required = TRUE,
  is_auth_required = TRUE,
  sentry_dsn = NULL
)
```

Arguments

app_name	the name of the app.
api_key	the API key. Either from https://polished.tech or your on premise polished API deployment.
firebase_config	a list containing your Firebase project configuration. This list should have the following named elements: • apiKey • authDomain • projectId
admin_mode	FALSE by default. Set to TRUE to enter the polished Admin Panel without needing to register and sign in. This is useful during development for inviting the first users to your app. Make sure to set admin_mode = FALSE before deploying your app.
is_invite_required	TRUE by default. Whether or not to require the user to have an invite before registering/signing in
api_url	the API url. Defaults to "https://api.polished.tech".
sign_in_providers	the sign in providers to enable. Valid values are "google" "email", "microsoft", and/or "facebook". Defaults to "email".
is_email_verification_required	TRUE by default. Whether or not to require the user to verify their email before accessing your Shiny app.
is_auth_required	TRUE by default. Whether or not to require users to be signed in to access the app. It can be useful to set this argument to FALSE if you want to allow user to do certain actions (such as viewing charts and tables) without signing in, and only require users to sign in if they want to save data to your database.
sentry_dsn	either NULL, the default, or your Sentry project DSN.

Examples

```
## Not run:
# global.R

global_sessions_config(
  app_name = "<your app name>",
  api_key = "<your API key>"
)


## End(Not run)
```

`password_input` *A modification of* `shiny::passwordInput`

Description

This modified version of Shiny's `passwordInput()` does not actually send the password to our Shiny server. It is just a regular password input that always keeps your user's password on the client. The password is used to sign the user in and then converted to a JWT by Firebase, all on the client, before it is sent to your Shiny server.

Usage

```
password_input(
  input_id,
  label = tagList(icon("unlock-alt"), "Password"),
  value = "",
  style = "",
  placeholder = NULL
)
```

Arguments

`input_id`	The `input` slot that will be used to access the value.
`label`	Display label for the control, or `NULL` for no label.
`value`	Initial value.
`style`	Character string of in-line CSS to style the input.
`placeholder`	A character string giving the user a hint as to what can be entered into the control. Internet Explorer 8 and 9 do not support this option.

profile_module *Profile Module Server*

Description

The server logic to accompany the profile_module_ui.

Usage

```
profile_module(input, output, session)
```

Arguments

input	the Shiny server input
output	the Shiny server output
session	the Shiny server session

profile_module_ui *Profile Module UI*

Description

Generates the UI for a user profile dropdown button to be used with the shinydashboard package.

Usage

```
profile_module_ui(id, other_lis = NULL)
```

Arguments

id	the Shiny module id.
other_lis	additional HTML tags to place between the email address and the Sign out button in the user profile dropdown. This is often used to add a user "My Account" page/app where the user can set their account settings.

providers_ui *UI for the Firebase authentication providers buttons*

Description

Creates the HTML UI of the "Sign in with *" buttons. These buttons are only necessary if you enable social sign in via the `sign_in_providers` argument passed to `global_sessions_config`.

Usage

```
providers_ui(
  ns,
  sign_in_providers = c("google", "email"),
  title = "Sign In",
  fancy = TRUE
)
```

Arguments

`ns`	the Shiny namespace function created with `shiny::NS()`.
`sign_in_providers`	the sign in providers to enable. Valid values are `"google"` `"email"`, `"microsoft"`, and/or `"facebook"`. Defaults to `"email"`.
`title`	The title to be used above the provider buttons. Set to `NULL` to not include
`fancy`	Should the buttons be large and colorful?

Value

the HTML UI of the "Sign in with *" buttons.

remove_query_string *Remove the URL query*

Description

Remove the entire query string from the URL. This function should only be called inside the server function of your Shiny app.

Usage

```
remove_query_string(
  session = shiny::getDefaultReactiveDomain(),
  mode = "replace"
)
```

Arguments

session	the Shiny session
mode	the mode to pass to shiny::updateQueryString(). Valid values are "replace" or "push".

---

secure_server *Secure your Shiny app's server*

Description

This function is used to secure your Shiny app's server function. Make sure to pass your Shiny app's server function as the first argument to secure_server() at the bottom of your Shiny app's server.R file.

Usage

```
secure_server(
  server,
  custom_sign_in_server = NULL,
  custom_admin_server = NULL,
  allow_reconnect = FALSE,
  account_module = NULL,
  splash_module = NULL
)
```

Arguments

server	A Shiny server function (e.g function(input,output,session) {})
custom_sign_in_server	Either NULL, the default, or a Shiny module server containing your custom sign in server logic.
custom_admin_server	Either NULL, the default, or a Shiny module server function containing your custom admin server functionality.
allow_reconnect	argument to pass to the Shiny session$allowReconnect() function. Defaults to FALSE. Set to TRUE to allow reconnect with shiny-server and Rstudio Connect. Set to "force" for local testing. See https://shiny.rstudio.com/articles/reconnecting.html for more information.
account_module	the server code for the user account module.
splash_module	the server code for the splash page.

`secure_static` *Secure a static HTML page*

Description

`secure_static()` can be used to secure any HTML page using `polished`. It is often used to add `polished` to `.Rmd` htmloutput and flexdashboards.

Usage

```
secure_static(
  html_file_path,
  global_sessions_config_args,
  sign_out_button = shiny::actionLink("sign_out", "Sign Out", icon =
    shiny::icon("sign-out-alt"), class = "polished_sign_out_link")
)
```

Arguments

`html_file_path` the path the to HTML file. See the details for more info.

`global_sessions_config_args`
: arguments to be passed to `global_sessions_config`.

`sign_out_button`
: action button or link with `inputId = "sign_out"`. Set to `NULL` to not include a sign out button.

Details

To secure a static HTML page, place the HTML page in a folder named "www" and call `secure_static()` from a file named `app.R`. The file structure should look like:

- app.R
- www/
  - index.html

See an example here: https://github.com/Tychobra/polished_example_apps/tree/master/05_flex_dashboard

Value

a Shiny app object

secure_ui *Secure your Shiny UI*

Description

This function is used to secure your Shiny app's UI. Make sure to pass your Shiny app's UI as the first argument to `secure_ui()` at the bottom of your Shiny app's `ui.R` file.

Usage

```
secure_ui(
  ui,
  sign_in_page_ui = NULL,
  custom_admin_ui = NULL,
  custom_admin_button_ui = admin_button_ui(),
  admin_ui_options = default_admin_ui_options(),
  account_module_ui = NULL,
  splash_module_ui = NULL
)
```

Arguments

`ui` UI of the application.

`sign_in_page_ui`
Either `NULL`, the default (See `sign_in_ui_default`), or the HTML, CSS, and JavaScript to use for the UI of the Sign In page.

`custom_admin_ui`
Either `NULL`, the default, or a list of 2 Shiny module UI functions to add additional `shinydashboard` tabs to the `polished` Admin Panel. The list must be in the form:

```
list(
  "menu_items" = <your_custom_admin_menu_ui("custom_admin")>,
  "tab_items" = <your_custom_admin_tabs_ui("custom_admin")>
)
```

`custom_admin_button_ui`
Either `admin_button_ui()`, the default, or your custom UI to take Admins from the custom Shiny app to the `polished` Admin Panel.

`admin_ui_options`
list of HTML elements to customize branding of the `polished` Admin Panel. Valid list element names are `title`, `sidebar_branding`, and `browser_tab_icon`. See `default_admin_ui_options`, the default.

`account_module_ui`
the UI portion for the user's account module.

`splash_module_ui`
the UI portion for the splash page module.

Value

Secured Shiny app UI

`send_password_reset_email_module` *the server logic for a Shiny module to send a password reset email*

Description

This function sends a request to the `https://polished.tech` API to reset a user's password.

Usage

```
send_password_reset_email_module(input, output, session, email)
```

Arguments

`input`	the Shiny server `input`
`output`	the Shiny server `output`
`session`	the Shiny server `session`
`email`	A reactive value returning the email address to send the password reset email to.

`send_password_reset_email_module_ui` *the UI for a Shiny module to send a password reset email*

Description

the UI for a Shiny module to send a password reset email

Usage

```
send_password_reset_email_module_ui(id)
```

Arguments

`id`	the Shiny module `id`

`Sessions` *R6 class to track polished sessions*

Description

An instance of this class handles the 'polished' user sessions for each 'shiny' app using 'polished'. The 'shiny' developer should not need to interact with this class directly.

Methods

Public methods:

- `Sessions$config()`
- `Sessions$sign_in_social()`
- `Sessions$get_invite_by_email()`
- `Sessions$find()`
- `Sessions$sign_in_email()`
- `Sessions$register_email()`
- `Sessions$refresh_email_verification()`
- `Sessions$set_signed_in_as()`
- `Sessions$get_signed_in_as_user()`
- `Sessions$set_inactive()`
- `Sessions$sign_out()`
- `Sessions$get_admin_mode()`
- `Sessions$clone()`

Method `config()`**:** polished Sessions configuration function

Usage:

```
Sessions$config(
  firebase_config = NULL,
  admin_mode = FALSE,
  is_invite_required = TRUE,
  sign_in_providers = "email",
  is_email_verification_required = TRUE,
  is_auth_required = TRUE
)
```

Details: This function is called via `global_sessions_config()` in global.R of all Shiny apps using polished.

Method `sign_in_social()`**:** verify the users Firebase JWT and store the session

Usage:

```
Sessions$sign_in_social(firebase_token, hashed_cookie)
```

Arguments:

`firebase_token` the Firebase JWT. This JWT is created client side (in JavaScript) via `firebase.auth()`.

hashed_cookie the hashed polished cookie. Used for tracking the user session. This cookie is inserted into the "polished.sessions" table if the JWT is valid.

Returns: NULL if sign in fails. If sign in is successful, a list containing the following:

- email
- email_verified
- is_admin
- user_uid
- hashed_cookie
- session_uid

Method `get_invite_by_email()`**:**

Usage:

```
Sessions$get_invite_by_email(email)
```

Method `find()`**:**

Usage:

```
Sessions$find(hashed_cookie, page)
```

Method `sign_in_email()`**:**

Usage:

```
Sessions$sign_in_email(email, password, hashed_cookie)
```

Method `register_email()`**:**

Usage:

```
Sessions$register_email(email, password, hashed_cookie)
```

Method `refresh_email_verification()`**:**

Usage:

```
Sessions$refresh_email_verification(session_uid, firebase_token)
```

Method `set_signed_in_as()`**:**

Usage:

```
Sessions$set_signed_in_as(session_uid, signed_in_as, user_uid = NULL)
```

Method `get_signed_in_as_user()`**:**

Usage:

```
Sessions$get_signed_in_as_user(user_uid)
```

Method `set_inactive()`**:**

Usage:

```
Sessions$set_inactive(session_uid, user_uid)
```

Method `sign_out()`**:**

Usage:

```
Sessions$sign_out(hashed_cookie, session_uid)
```

Method `get_admin_mode()`**:**

Usage:

```
Sessions$get_admin_mode()
```

Method `clone()`**:** The objects of this class are cloneable with this method.

Usage:

```
Sessions$clone(deep = FALSE)
```

Arguments:

`deep` Whether to make a deep clone.

`set_config_env` *Automatically set the config environment*

Description

Determines if the app is deployed to a server or running locally, and adjusts the config environment to `"production"` or `"default"`, respectively. This function is almost always called in the `global.R` file of a Shiny app immediately before the configuration in the `config.yml` is read in.

Usage

```
set_config_env(override = NULL)
```

Arguments

`override`	Set the environment to `"default"` or `"production"` manually. **CAUTION:** Be sure you know the difference between `"default"` & `"production"` configuration environments. Using the `"production"` environment will affect the database of the deployed application.

`sign_in_check_jwt` *Check the JWT from the user sign in*

Description

This function retrieves the JWT created by the JavaScript from `sign_in_js` and signs the user in as long as the token can be verified. This function should be called in the server function of a shiny module. Make sure to call `sign_in_js` in the UI function of this module.

Usage

```
sign_in_check_jwt(jwt, session = shiny::getDefaultReactiveDomain())
```

Arguments

`jwt`	a reactive returning a Firebase JSON web token for the signed in user.
`session`	the shiny session.

sign_in_js *Sign in and register pages JavaScript dependencies*

Description

This function should be called at the bottom of your custom sign in and registration pages UI. It loads in all the JavaScript dependencies to handle polished sign in and registration. See the vignette for details.

Usage

```
sign_in_js(ns)
```

Arguments

ns	the ns function from the Shiny module that this function is called within.

sign_in_module *Server logic for the Sign In & Register pages*

Description

This server logic accompanies the sign_in_module_ui.

Usage

```
sign_in_module(input, output, session)
```

Arguments

input	the Shiny input
output	the Shiny output
session	the Shiny session

sign_in_module_2 *Server logic for the Sign In & Register pages*

Description

This server logic accompanies sign_in_module_2_ui.

Usage

```
sign_in_module_2(input, output, session)
```

Arguments

input	the Shiny input
output	the Shiny output
session	the Shiny session

sign_in_module_2_ui *UI for the Sign In & Register pages*

Description

Alternate sign in UI that works regardless of whether or not invites are required. The UI displays email sign in inputs on the left, and social sign in options on the right. sign_in_module_2 must be provided as the argument custom_sign_in_server in secure_server for proper functionality.

Usage

```
sign_in_module_2_ui(id)
```

Arguments

id	the Shiny module id

sign_in_module_ui *UI for the Sign In & Register pages*

Description

UI for the Sign In & Register pages when a user invite is required to Register & Sign In.

Usage

```
sign_in_module_ui(id, register_link = "First time user? Register here!")
```

Arguments

id	the Shiny module id
register_link	The text that will be displayed in the link to go to the user registration page. The default is "First time user? Register here!". Set to NULL if you don't want to use the registration page.

sign_in_ui_default *Default UI styles for the Sign In & Registration pages*

Description

Default styling for the sign in & registration pages. Update the sign_in_ui_default() arguments with your brand and colors to quickly style the sign in & registration pages to match your brand.

Usage

```
sign_in_ui_default(
  sign_in_module = sign_in_module_ui("sign_in"),
  color = "#5ec7dd",
  company_name = "Your Brand Here",
 logo_top = tags$div(style = "width: 300px; max-width: 100%; color: #FFF;", class =
  "text-center", h1("Your", style = "margin-bottom: 0; margin-top: 30px;"), h1("Brand",
    style = "margin-bottom: 0; margin-top: 10px;"), h1("Here", style =
    "margin-bottom: 15px; margin-top: 10px;")),
  logo_bottom = NULL,
  icon_href = "polish/images/polished_icon.png",
  background_image = NULL,
  terms_and_privacy_footer = NULL,
  align = "center"
)
```

Arguments

sign_in_module	UI module for the Sign In & Registration pages.
color	hex color for the background and button.
company_name	your company name.
logo_top	HTML for logo to go above the sign in panel.
logo_bottom	HTML for the logo below the sign in panel.
icon_href	the URL/path to the browser tab icon.
background_image	the URL/path to a full width background image. If set to NULL, the default, the color argument will be used for the background instead of this image.
terms_and_privacy_footer	links to place in the footer, directly above the copyright notice.
align	The horizontal alignment of the Sign In box. Defaults to "center". Valid values are "left", "center", or "right"

Value

the UI for the Sign In & Registration pages

---

sign_out_from_shiny *Sign Out from your Shiny app*

Description

Call this function to sign a user out of your Shiny app. This function should be called inside the server function of your Shiny app. See https://github.com/Tychobra/polished/blob/master/inst/examples/polished_example_01/server.R For an example of this function being called after the user clicks a "Sign Out" button.

Usage

```
sign_out_from_shiny(
  session = shiny::getDefaultReactiveDomain(),
  redirect_page = "?page=sign_in"
)
```

Arguments

session	the Shiny session
redirect_page	the query string for the page that the user should be redirected to after signing out.

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