

Package ‘gpg’

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Type Package

Title GNU Privacy Guard for R

Version 1.1

Description Bindings to GnuPG for working with OpenPGP (RFC4880) cryptographic methods. Includes utilities for public key encryption, creating and verifying digital signatures, and managing your local keyring. Note that some functionality depends on the version of GnuPG that is installed on the system. On Windows this package can be used together with 'GPG4Win' which provides a GUI for managing keys and entering passphrases.

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SystemRequirements GPGME: libpgpme-dev / libpgpme11-dev (deb), gpgme-devel (rpm) gpgme (brew). On Linux 'haveged' is recommended for generating entropy when using the GPG key generator.

RoxygenNote 6.1.1

Imports curl, askpass

Suggests knitr, rmarkdown

VignetteBuilder knitr

URL <https://github.com/jeroen/gpg>

BugReports <https://github.com/jeroen/gpg/issues>

NeedsCompilation yes

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R topics documented:

gpg_encrypt	2
gpg_keygen	2
gpg_keys	3

gpg_restart	4
gpg_sign	5
pinentry	6

Index	7
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gpg_encrypt	<i>Encryption</i>
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Description

Encrypt or decrypt a message using the public key from the receiver. Optionally the message can be signed using the private key of the sender.

Usage

```
gpg_encrypt(data, receiver, signer = NULL)
gpg_decrypt(data, verify = TRUE, as_text = TRUE)
```

Arguments

data	path or raw vector with data to encrypt / decrypt
receiver	key id(s) or fingerprint(s) for recipient(s)
signer	(optional) key id(s) or fingerprint(s) for the sender(s) to sign the message
verify	automatically checks that all signatures (if any) can be verified and raises an error otherwise
as_text	convert output to text. Set to FALSE if you expect binary data.

See Also

Other gpg: [gpg_keygen](#), [gpg_keys](#), [gpg_sign](#)

gpg_keygen	<i>GPG key generation</i>
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Description

Generates a new standard private-public keypair. This function is mostly for testing purposes. Use the gpg --gen-key command line utility to generate an official GPG key with custom fields and options.

Usage

```
gpg_keygen(name, email, passphrase = NULL)
```

Arguments

name	value for the Name-Real field
email	value for the Name-Email field
passphrase	(optional) protect with a passphrase

References

GPG manual section on [Unattended key generation](#).

See Also

Other gpg: [gpg_encrypt](#), [gpg_keys](#), [gpg_sign](#)

gpg_keys	<i>GPG keyring management</i>
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Description

Signing or encrypting with GPG require that the keys are stored in your personal keyring. Use [gpg_version](#) to see which keyring (home dir) you are using. Also see [gpg_keygen](#) for generating a new key.

Usage

```
gpg_import(file)

gpg_recv(id, search = NULL, keyserver = NULL)

gpg_delete(id, secret = FALSE)

gpg_export(id, secret = FALSE)

gpg_list_keys(search = "", secret = FALSE)

gpg_list_signatures(id)
```

Arguments

file	path to the key file or raw vector with key data
id	unique ID of the pubkey to import (starts with 0x). Alternatively you can specify a search string.
search	string with name or email address to match the key info.
keyserver	address of http keyserver. Default searches several common servers (MIT, Ubuntu, GnuPG)
secret	set to TRUE to list/export/delete private (secret) keys

See Also

Other gpg: [gpg_encrypt](#), [gpg_keygen](#), [gpg_sign](#)

gpg_restart	<i>Manage the GPG engine</i>
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Description

Use `gpg_restart()` to find the `gpg` program and home directory (which contains configuration and keychains). Usually the default should be fine and you do not need to run this function manually.

Usage

```
gpg_restart(home = NULL, path = NULL, debug = "none",
            silent = FALSE)
```

```
gpg_version(silent = FALSE)
```

```
gpg_info()
```

```
gpg_options()
```

Arguments

home	path to your GPG configuration directory (including keyrings)
path	location of <code>gpg</code> or <code>gpg2</code> or <code>gpgconf</code> or (on windows) <code>gpgme-w32spawn.exe</code>
debug	debugging level, integer between 1 and 9
silent	suppress output of <code>gpg --version</code>

Details

Use `gpg_info()` to get your current engine settings. The `gpg_version()` function simply calls `gpg --version` to see some verbose output about the `gpg` executable.

`gpg_options` reads options in the GnuPG configuration file, which is stored by default in `~/ .gnupg/gpg.conf`. Note that changing options might affect other software using GnuPG.

Examples

```
gpg_version()
gpg_info()
```

Description

Utilities to create and verify PGP signatures.

Usage

```
gpg_verify(signature, data = NULL, error = TRUE)
```

```
gpg_sign(data, signer = NULL, mode = c("detach", "normal", "clear"))
```

Arguments

signature	path or raw vector for the gpg signature (contains the PGP SIGNATURE block)
data	path or raw vector with data to sign or verify. In <code>gpg_verify</code> this should be NULL if signature is not detached (i.e. clear or normal signature)
error	raise an error if verification fails because you do not have the signer public key in your keyring.
signer	(optional) vector with key ID's to use for signing. If NULL, GPG tries the user default private key.
mode	use normal to create a full OpenPGP message containing both data and signature or clear append the signature to the clear-text data (for email messages). Default detach only returns the signature itself.

See Also

Other gpg: [gpg_encrypt](#), [gpg_keygen](#), [gpg_keys](#)

Examples

```
# This requires you have the Debian master key in your keyring
msg <- tempfile()
sig <- tempfile()
download.file("http://http.us.debian.org/debian/dists/jessie/Release", msg)
download.file("http://http.us.debian.org/debian/dists/jessie/Release.gpg", sig)
gpg_verify(sig, msg, error = FALSE)
```

pinentry

Password Entry

Description

Function to prompt the user for a password to read a protected private key.

Usage

```
pinentry(prompt = "Enter your GPG passphrase:")
```

Arguments

prompt the string printed when prompting the user for input.

Details

If available, this function calls the GnuPG pinentry program. However this only works in a terminal. Therefore the IDE can provide a custom password entry widget by setting the askpass option. If no such option is specified we default to [readline](#).

Index

gpg (gpg_sign), 5
gpg_decrypt (gpg_encrypt), 2
gpg_delete (gpg_keys), 3
gpg_encrypt, 2, 3–5
gpg_export (gpg_keys), 3
gpg_import (gpg_keys), 3
gpg_info (gpg_restart), 4
gpg_keygen, 2, 2, 3–5
gpg_keys, 2, 3, 3, 5
gpg_list_keys (gpg_keys), 3
gpg_list_signatures (gpg_keys), 3
gpg_options (gpg_restart), 4
gpg_recv (gpg_keys), 3
gpg_restart, 4
gpg_sign, 2–4, 5
gpg_verify (gpg_sign), 5
gpg_version, 3
gpg_version (gpg_restart), 4

pinentry, 6

readline, 6