
certbot-dns-google Documentation

Release 0

Certbot Project

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Contents:

1	Named Arguments	3
2	Credentials	5
3	Examples	7
4	API Documentation	9
4.1	certbot_dns_google.dns_google	9
5	Indices and tables	13
	Python Module Index	15
	Index	17

The *dns_google* plugin automates the process of completing a `dns-01` challenge (DNS01) by creating, and subsequently removing, TXT records using the Google Cloud DNS API.

CHAPTER 1

Named Arguments

<code>--dns-google-credentials</code>	Google Cloud Platform <i>credentials</i> JSON file. (Required - Optional on Google Compute Engine)
<code>--dns-google-propagation-timeout</code>	The number of seconds to wait for DNS to propagate before asking the ACME server to verify the DNS record. (Default: 60)

Use of this plugin requires Google Cloud Platform API credentials for an account with the following permissions:

- `dns.changes.create`
- `dns.changes.get`
- `dns.managedZones.list`
- `dns.resourceRecordSets.create`
- `dns.resourceRecordSets.delete`
- `dns.resourceRecordSets.list`
- `dns.resourceRecordSets.update`

Google provides instructions for [creating a service account](#) and [information about the required permissions](#). If you're running on Google Compute Engine, you can [assign the service account to the instance](#) which is running certbot. A credentials file is not required in this case, as they are automatically obtained by certbot through the [metadata service](#).

Listing 1: Example credentials file:

```
{  
  "type": "service_account",  
  "...  
}
```

The path to this file can be provided interactively or using the `--dns-google-credentials` command-line argument. Certbot records the path to this file for use during renewal, but does not store the file's contents.

Caution: You should protect these API credentials as you would a password. Users who can read this file can use these credentials to issue some types of API calls on your behalf, limited by the permissions assigned to the account. Users who can cause Certbot to run using these credentials can complete a `dns-01` challenge to acquire new certificates or revoke existing certificates for domains these credentials are authorized to manage.

Certbot will emit a warning if it detects that the credentials file can be accessed by other users on your system. The warning reads “Unsafe permissions on credentials configuration file”, followed by the path to the credentials file. This warning will be emitted each time Certbot uses the credentials file, including for renewal, and cannot be silenced except by addressing the issue (e.g., by using a command like `chmod 600` to restrict access to the file).

Examples

Listing 1: To acquire a certificate for `example.com`

```
certbot certonly \  
  --dns-google \  
  --dns-google-credentials ~/.secrets/certbot/google.json \  
  -d example.com
```

Listing 2: To acquire a single certificate for both `example.com` and `www.example.com`

```
certbot certonly \  
  --dns-google \  
  --dns-google-credentials ~/.secrets/certbot/google.json \  
  -d example.com \  
  -d www.example.com
```

Listing 3: To acquire a certificate for `example.com`, waiting 120 seconds for DNS propagation

```
certbot certonly \  
  --dns-google \  
  --dns-google-credentials ~/.secrets/certbot/google.json \  
  --dns-google-propagation-seconds 120 \  
  -d example.com
```


4.1 certbot_dns_google.dns_google

DNS Authenticator for Google Cloud DNS.

class `certbot_dns_google.dns_google.Authenticator` (**args*, ***kwargs*)
Bases: `certbot.plugins.dns_common.DNSAuthenticator`

DNS Authenticator for Google Cloud DNS

This Authenticator uses the Google Cloud DNS API to fulfill a dns-01 challenge.

classmethod `add_parser_arguments` (*add*)
Add plugin arguments to the CLI argument parser.

NOTE: If some of your flags interact with others, you can use `cli.report_config_interaction` to register this to ensure values are correctly saved/overridable during renewal.

Parameters `add` (*callable*) – Function that proxies calls to `argparse.ArgumentParser.add_argument` prepending options with unique plugin name prefix.

`_setup_credentials` ()
Establish credentials, prompting if necessary.

`_perform` (*domain*, *validation_name*, *validation*)
Performs a dns-01 challenge by creating a DNS TXT record.

Parameters

- **`domain`** (*str*) – The domain being validated.
- **`validation_domain_name`** (*str*) – The validation record domain name.
- **`validation`** (*str*) – The validation record content.

Raises `errors.PluginError` – If the challenge cannot be performed

`_cleanup` (*domain*, *validation_name*, *validation*)

Deletes the DNS TXT record which would have been created by `_perform_achall`.

Fails gracefully if no such record exists.

Parameters

- **domain** (*str*) – The domain being validated.
- **validation_domain_name** (*str*) – The validation record domain name.
- **validation** (*str*) – The validation record content.

class `certbot_dns_google.dns_google._GoogleClient` (*account_json=None*,
dns_api=None)

Bases: `object`

Encapsulates all communication with the Google Cloud DNS API.

add_txt_record (*domain*, *record_name*, *record_content*, *record_ttl*)

Add a TXT record using the supplied information.

Parameters

- **domain** (*str*) – The domain to use to look up the managed zone.
- **record_name** (*str*) – The record name (typically beginning with ‘_acme-challenge.’).
- **record_content** (*str*) – The record content (typically the challenge validation).
- **record_ttl** (*int*) – The record TTL (number of seconds that the record may be cached).

Raises `certbot.errors.PluginError` – if an error occurs communicating with the Google API

del_txt_record (*domain*, *record_name*, *record_content*, *record_ttl*)

Delete a TXT record using the supplied information.

Parameters

- **domain** (*str*) – The domain to use to look up the managed zone.
- **record_name** (*str*) – The record name (typically beginning with ‘_acme-challenge.’).
- **record_content** (*str*) – The record content (typically the challenge validation).
- **record_ttl** (*int*) – The record TTL (number of seconds that the record may be cached).

Raises `certbot.errors.PluginError` – if an error occurs communicating with the Google API

get_existing_txt_rrset (*zone_id*, *record_name*)

Get existing TXT records from the RRset for the record name.

If an error occurs while requesting the record set, it is suppressed and `None` is returned.

Parameters

- **zone_id** (*str*) – The ID of the managed zone.
- **record_name** (*str*) – The record name (typically beginning with ‘_acme-challenge.’).

Returns List of TXT record values or `None`

Return type `list` of `string` or `None`

`_find_managed_zone_id` (*domain*)

Find the managed zone for a given domain.

Parameters `domain` (*str*) – The domain for which to find the managed zone.

Returns The ID of the managed zone, if found.

Return type *str*

Raises `certbot.errors.PluginError` – if the managed zone cannot be found.

static `get_project_id` ()

Query the google metadata service for the current project ID

This only works on Google Cloud Platform

Raises

- `ServerNotFoundError` – Not running on Google Compute or DNS not available
- `ValueError` – Server is found, but response code is not 200

Returns project id

CHAPTER 5

Indices and tables

- `genindex`
- `modindex`
- `search`

C

`certbot_dns_google`, 1

`certbot_dns_google.dns_google`, 9

Symbols

`_GoogleClient` (class in `certbot_dns_google.dns_google`), 10
`_cleanup()` (`certbot_dns_google.dns_google.Authenticator` method), 9
`_find_managed_zone_id()` (`certbot_dns_google.dns_google._GoogleClient` method), 10
`_perform()` (`certbot_dns_google.dns_google.Authenticator` method), 9
`_setup_credentials()` (`certbot_dns_google.dns_google.Authenticator` method), 9

A

`add_parser_arguments()` (`certbot_dns_google.dns_google.Authenticator` class method), 9
`add_txt_record()` (`certbot_dns_google.dns_google._GoogleClient` method), 10
`Authenticator` (class in `certbot_dns_google.dns_google`), 9

C

`certbot_dns_google` (module), 1
`certbot_dns_google.dns_google` (module), 9

D

`del_txt_record()` (`certbot_dns_google.dns_google._GoogleClient` method), 10

G

`get_existing_txt_rrset()` (`certbot_dns_google.dns_google._GoogleClient` method), 10
`get_project_id()` (`certbot_dns_google.dns_google._GoogleClient` static method), 11