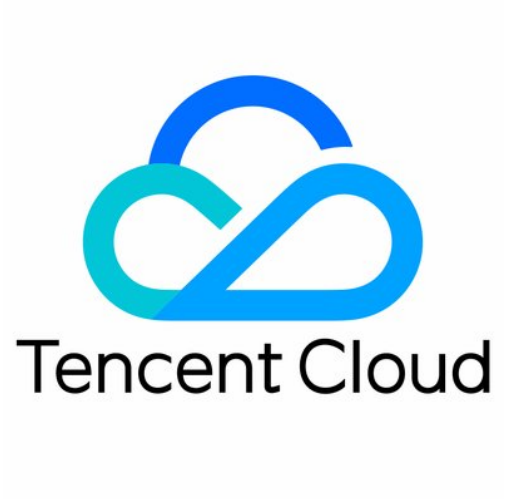
Serverless Application Center

Getting Started

Product Documentation



©2013-2022 Tencent Cloud. All rights reserved.

Copyright Notice

©2013-2023 Tencent Cloud. All rights reserved.

Copyright in this document is exclusively owned by Tencent Cloud. You must not reproduce, modify, copy or distribute in any way, in whole or in part, the contents of this document without Tencent Cloud's the prior written consent.

Trademark Notice

Tencent Cloud

All trademarks associated with Tencent Cloud and its services are owned by Tencent Cloud Computing (Beijing) Company Limited and its affiliated companies. Trademarks of third parties referred to in this document are owned by their respective proprietors.

Service Statement

This document is intended to provide users with general information about Tencent Cloud's products and services only and does not form part of Tencent Cloud's terms and conditions. Tencent Cloud's products or services are subject to change. Specific products and services and the standards applicable to them are exclusively provided for in Tencent Cloud's applicable terms and conditions.

Contents

©2013-2022 Tencent Cloud. All rights reserved.

Getting Started
Installing Serverless Framework

Last updated：2021-01-05 15:12:29

Overview

You can quickly install Serverless Framework through npm or binary installation.

Installing

Method 1. Installation through npm

Prerequisites

Before installing through npm, you need to make sure that Node.js (above v10) and npm have been installed in your environment (for more information, please see Node.js Installation Guide) .

```
$ node -v
v12.18.0

$ npm -v
7.0.10
```

Note：

To ensure the installation speed and stability, we recommend you use cnpm for installation: download and install cnpm first, and then replace all the npm commands used below with cnpm commands.

Installation steps

Run the following command on the command line:

```
npm install -g serverless
```

Note：

©2013-2022 Tencent Cloud. All rights reserved.

> If macOS prompts that you have no permission, you need to run `sudo npm install -g serverless` for installation.

If you have already installed Serverless Framework, you can run the following command to upgrade it to the latest version:

```
npm update -g serverless
```

Viewing version information

After the installation is completed, run the `serverless -v` command to view the version information of Serverless Framework:

```
serverless -v
```

Method 2. Binary installation

If Node.js is not installed in your local environment, you can install it directly in binary mode:

macOS/Linux

Open the command line and enter the following command:

```
curl -o- -L https://slss.io/install | bash
```

If you have already installed a binary version, you can run the following command to upgrade it:

```
serverless upgrade
```

Windows

Windows supports installation through Chocolatey. Open the command line and enter the following command:

```
choco install serverless
```

If you have already installed a binary version, you can run the following command to upgrade it:

```
choco upgrade serverless
```

Viewing version information

©2013-2022 Tencent Cloud. All rights reserved.

After the installation is completed, run the `serverless -v` command to view the version information of Serverless Framework:

```
serverless -v
```

Relevant Operations

Next step: getting started

- Quick Deployment of Function Template

©2013-2022 Tencent Cloud. All rights reserved.

Quick Deployment

Last updated：2021-01-05 15:12:15

Overview

This task shows you how to use Serverless Framework to quickly create, configure, and deploy a Serverless application on Tencent Cloud.

Note：

- Serverless Framework provides a Visualized Page for you to view and manage the resources of a Serverless application.
- Serverless Framework Component V2 has been released. We advise you to use the latest version.

Prerequisites

- Ensure that Serverless Framework 1.67.2 or later has been installed in advance.
- If your Tencent Cloud account is the root account, you can continue implementing deployment. If your account is a sub-account, please go to Account and Permission Configuration to get permission before implementing deployment.

Directions

Creating an Application

You can run the `sls init` command to quickly create an SCF, Express.js, or static website hosting application. For example, to create an Express.js application:

```
sls init express-demo
```

Note：

You can run the `sls registry` command to view the supported demo.

Go to the `express-demo` directory and perform deployment:

©2013-2022 Tencent Cloud. All rights reserved.

```
cd express-demo && sls deploy
```

After the deployment is completed, visit the URL returned from the CLI to access the deployed application.

Note

To view the detailed information during deployment, you can add the `--debug` parameter.

Viewing the Deployment Information

To view the application deployment statuses and resources again, go to the directory that is successfully deployed and run the following command:

```
$ cd express-app #Go to the project directory.
$ sls info
```

Note

`sls` is short for the `serverless` command.

Developing and Debugging

Run the `sls dev` command to enable the real-time deployment log. This capability automatically detects the updates of the local code and deploys the updates on cloud. In addition, the invoked log can be output in real time. For a Node.js 10 application, cloud debugging is available. For more information, please see “In-cloud Debugging: Node.js 10+” in Development Mode and In-cloud Debugging

```
$ cd express-app
$ sls dev
```

Removing the Project

Run the `sls remove` command to remove all on-cloud resources, as shown below:

```
$ cd express-app #Go to the project directory.
$ sls remove

serverless ⚡ framework
Action: "remove" - Stage: "dev" - App: "scfApp" - Instance: "scfdemo"

6s › scfdemo › Success
```

©2013-2022 Tencent Cloud. All rights reserved.

Note

To view the detailed information during removal, you can add the `--debug` parameter.

Configuring Account Information (Optional)

To configure persistent environment variables or key information, please refer to Account and Permission Configuration.

FAQs

- Question 1: What do I do if instructions are not displayed when I enter `serverless` ?
  Solution: Add the `SERVERLESS_PLATFORM_VENDOR=tencent` configuration to the `.env` file.

- Question 2: What do I do if the deployment with an overseas network is very slow after I enter `sls deploy` ?
  Solution: Add the `GLOBAL_ACCELERATOR_NA=true` configuration to the `.env` file to accelerate the overseas network.

- Question 3: What do I do if network error occurs during deployment after I enter `sls deploy` ?
  Solution: Add the following proxy configurations to the `.env` file.

```
HTTP_PROXY=http://127.0.0.1:12345 #Your proxy
HTTPS_PROXY=http://127.0.0.1:12345 #Your proxy
```

©2013-2022 Tencent Cloud. All rights reserved.

Quickly Deploying a Function Template

Last updated：2023-05-05 15:04:43

Overview

This document describes how to use Serverless Cloud Framework to quickly create, configure, and deploy an Serverless Cloud Function (SCF) application on Tencent Cloud.

Prerequisites

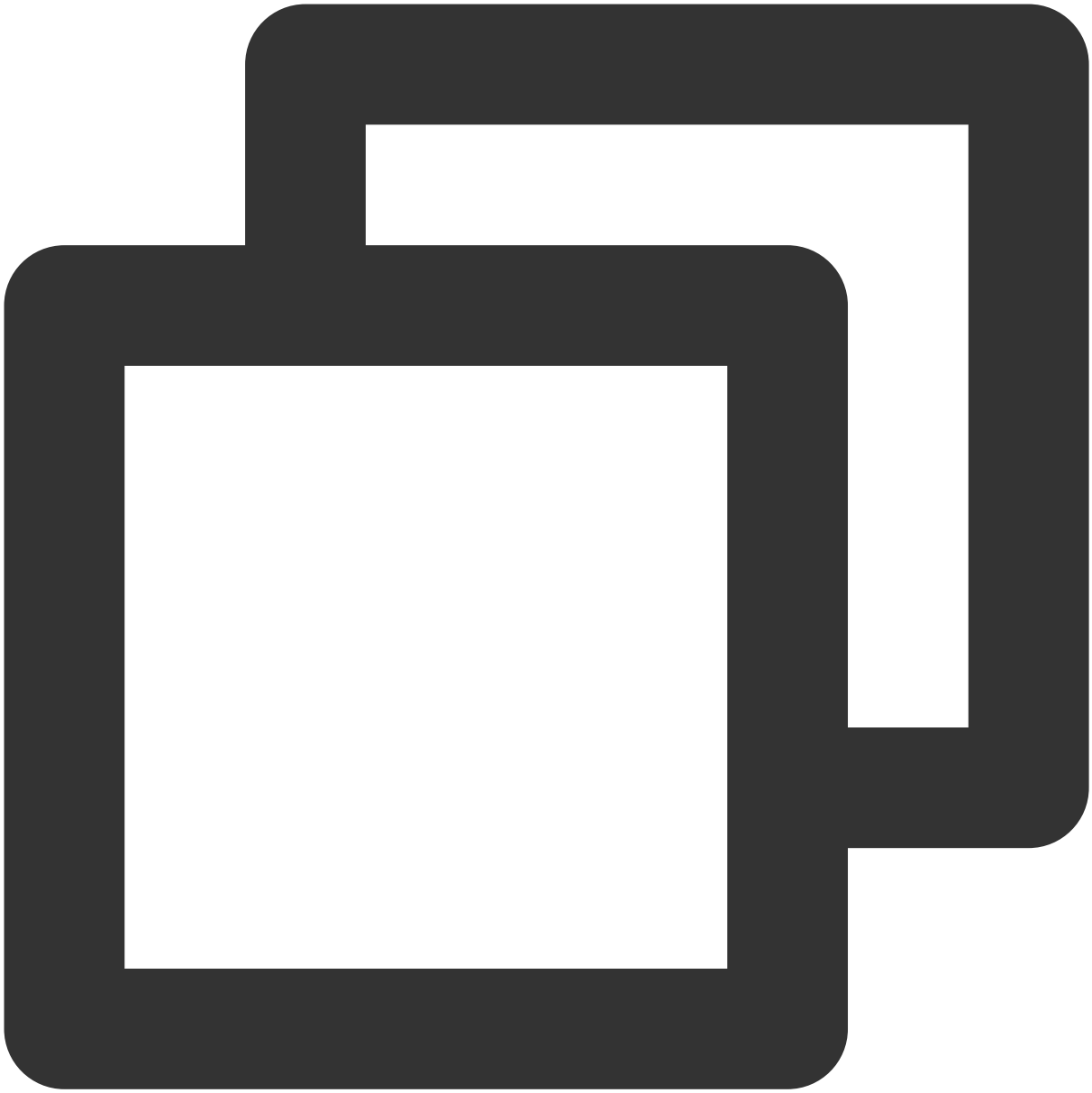
You have installed Serverless Cloud Framework 1.67.2 or later. For more information, see Installing Serverless Cloud Framework.
You have signed up for a Tencent Cloud account as instructed in Signing Up.
Note
If your account is a **Tencent Cloud sub-account**, first get the authorization from the root account as instructed in Account and Permission Configuration.

Directions

Quick deployment

In an **empty folder** directory, run the following command:

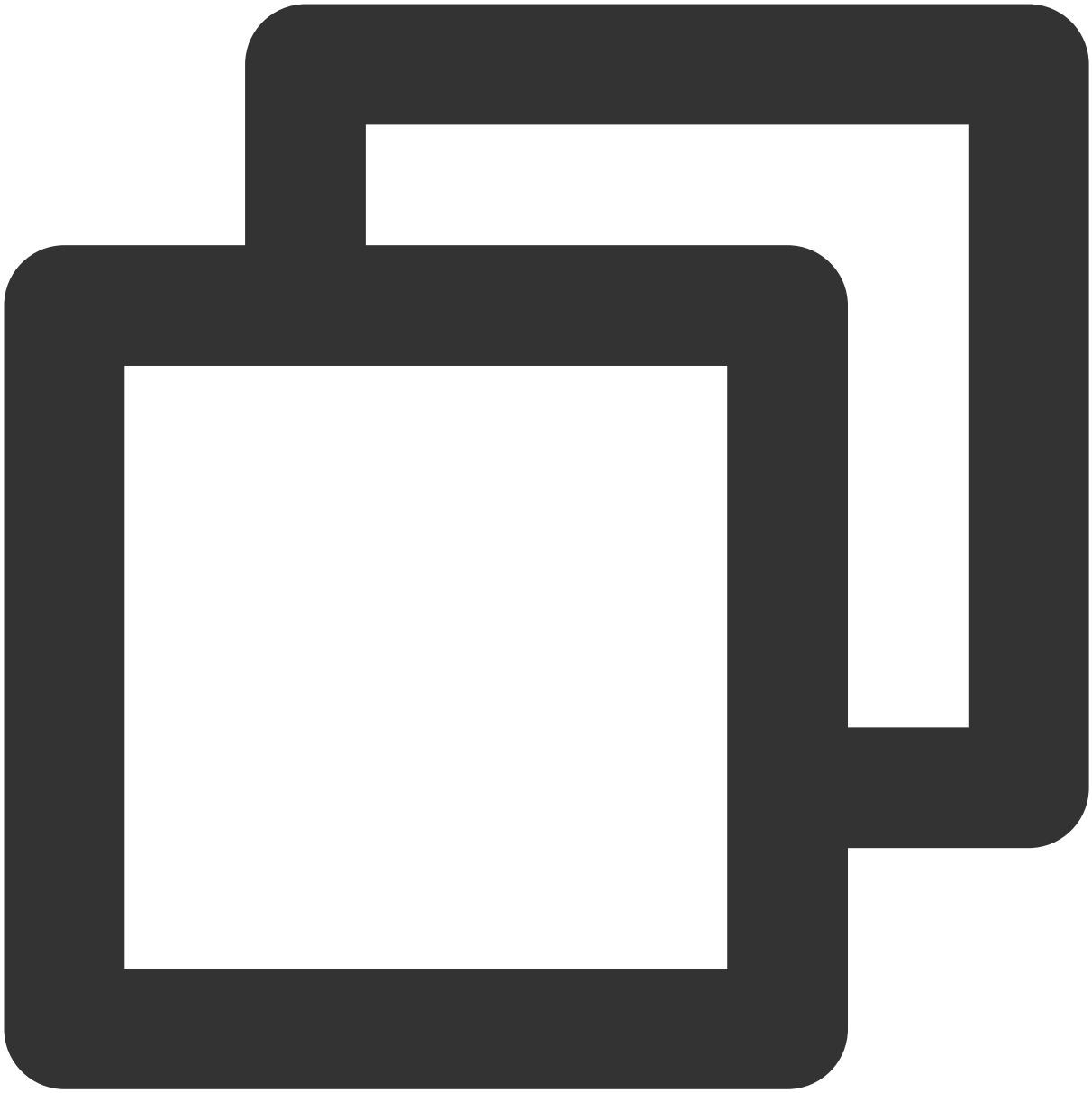
©2013-2022 Tencent Cloud. All rights reserved.



```
serverless-cloud-framework
```

Next, initialize the project as prompted. Select the `scf-starter` template for the application and select the runtime you want to use (Node.js is used as an example here):

©2013-2022 Tencent Cloud. All rights reserved.



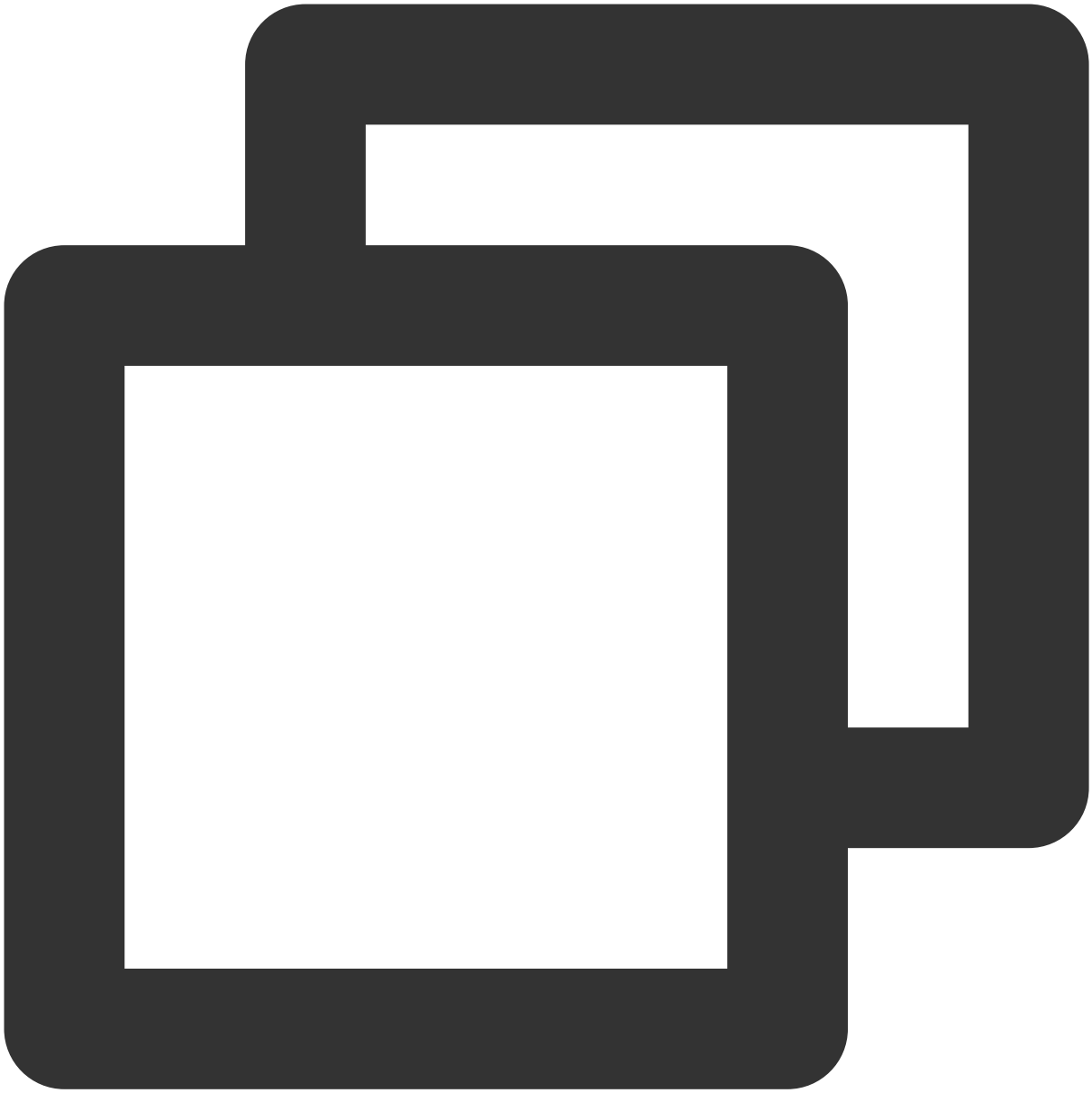
```
serverless-cloud-framework: No Serverless project is detected. Do you want to creat
serverless-cloud-framework: Select the Serverless application you want to create: s

  react-starter - quickly deploys a React.js application
  restful-api - quickly deploys a RESTful API to use Python + API Gateway
❯ scf-starter - quickly deploys an SCF function
  vue-starter - quickly deploys a basic Vue.js application
  website-starter - quickly deploys a static website
  eggjs-starter - quickly deploys a basic Egg.js application
  express-starter - quickly deploys a basic Express.js application
```

©2013-2022 Tencent Cloud. All rights reserved.

```
serverless-cloud-framework: Select the runtime of the application: scf-nodejs - qui

  scf-golang - quickly deploys an SCF function in Go
❯ scf-nodejs - quickly deploys an SCF function in Node.js
  scf-php - quickly deploys an SCF function in PHP
  scf-python - quickly deploys an SCF function in Python

serverless-cloud-framework: Enter the project name: demo
serverless-cloud-framework: Installing the scf-nodejs application...

scf-nodejs › Created


The demo project has been successfully created!
```

Click **Deploy Now** to quickly deploy the initialized project to the SCF console:

©2013-2022 Tencent Cloud. All rights reserved.



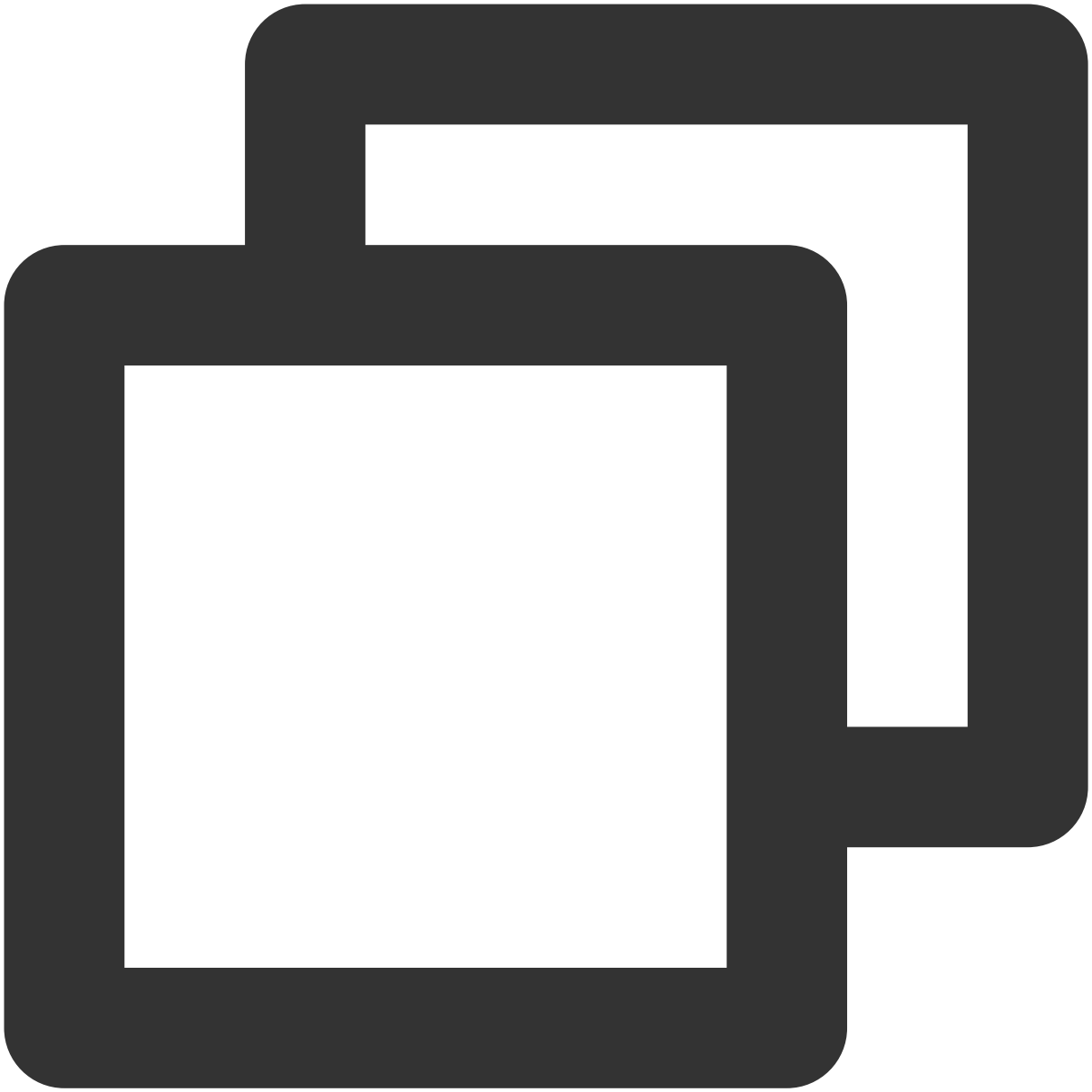
```
serverless-cloud-framework: Do you want to deploy the project in the cloud now? Yes

Click the link below to log in:
https://slslogin.qcloud.com/********
Logged in successfully!

serverless-cloud-framework
Action: "deploy" - Stage: "dev" - App: "scfApp" - Name: "scf-nodejs"

code:
  bucket: sls-cloudfunction-ap-guangzhou-code
```

©2013-2022 Tencent Cloud. All rights reserved.

```
  object: /scf_component_******-**********.zip
description:           This is a function in scfApp application
functionName:          scf-nodejs-dev-scfApp
handler:               index.main_handler
lastVersion:           $LATEST
memorySize:            128
namespace:             default
runtime:               Nodejs10.15
sourceCodeDownloadUrl: https://sls-app-code-prod-**********.cos.ap-guangzhou.myqclo
triggers:
  -
    NeedCreate:  true
    apiList:
      -
        apiId:           api-********
        apiName:         index
        authType:        NONE
        businessType:    NORMAL
        created:         true
        isBase64Encoded: false
        method:          GET
        path:            /
    created:     true
    environment: release
    protocols:   http
    serviceId:   service-********
    serviceName: serverless
    subDomain:   service-********-**********.gz.apigw.tencentcs.com
    urls:
      - http://service-********-**********.gz.apigw.tencentcs.com/release/
type:                  event

SCF console: https://serverless.cloud.tencent.com/apps/scfApp/scf-nodejs/dev

184s »scf-nodejs» Execution succeeded.
```

After deployment, complete the remote invocation of the function by running the following command:

©2013-2022 Tencent Cloud. All rights reserved.



```
scf invoke --inputs function=helloworld
```

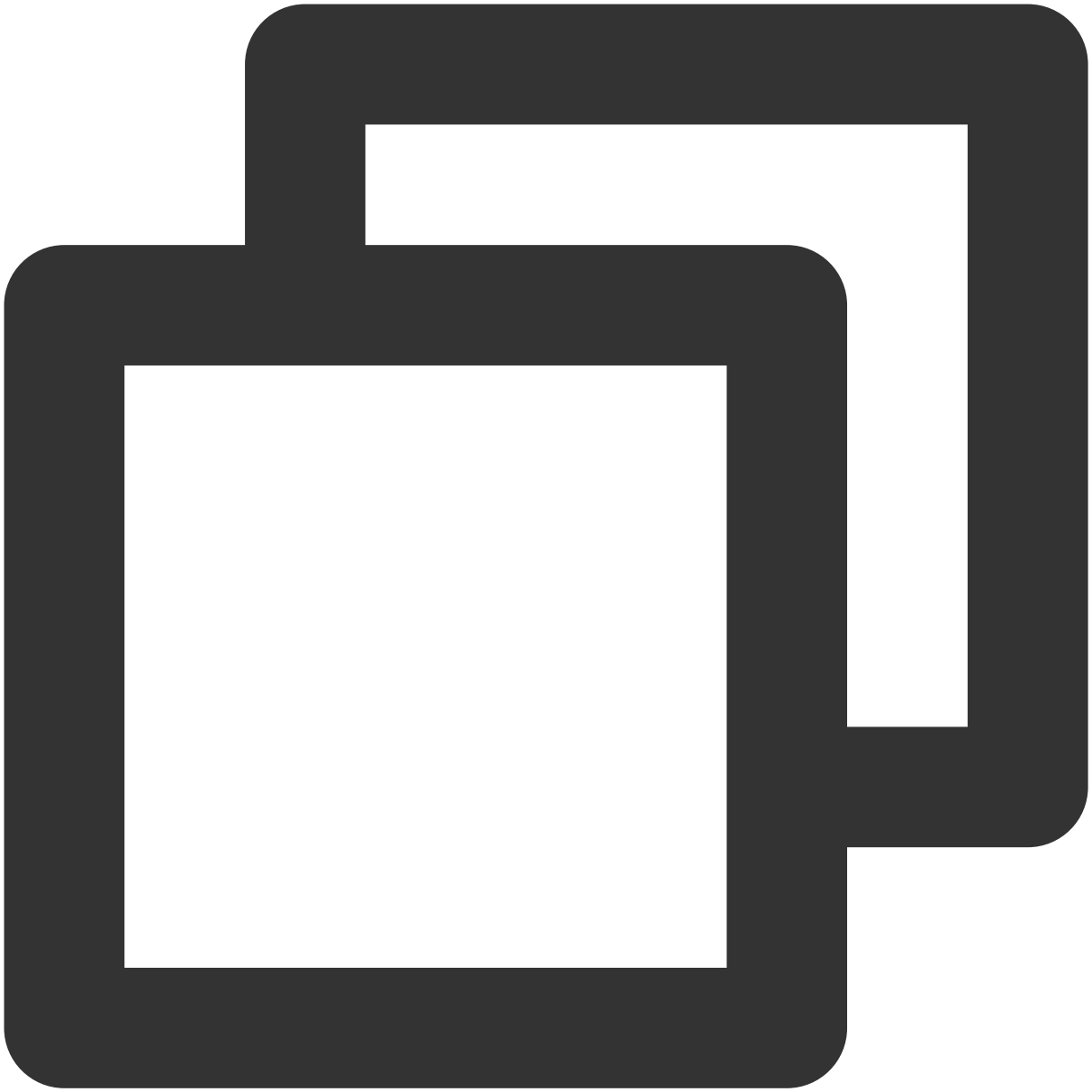
Note

`scf` is short for `serverless-cloud-framework` .

Viewing the Deployment Information

To view the application deployment statuses and resources again, go to the directory that is successfully deployed and run the following command:

©2013-2022 Tencent Cloud. All rights reserved.

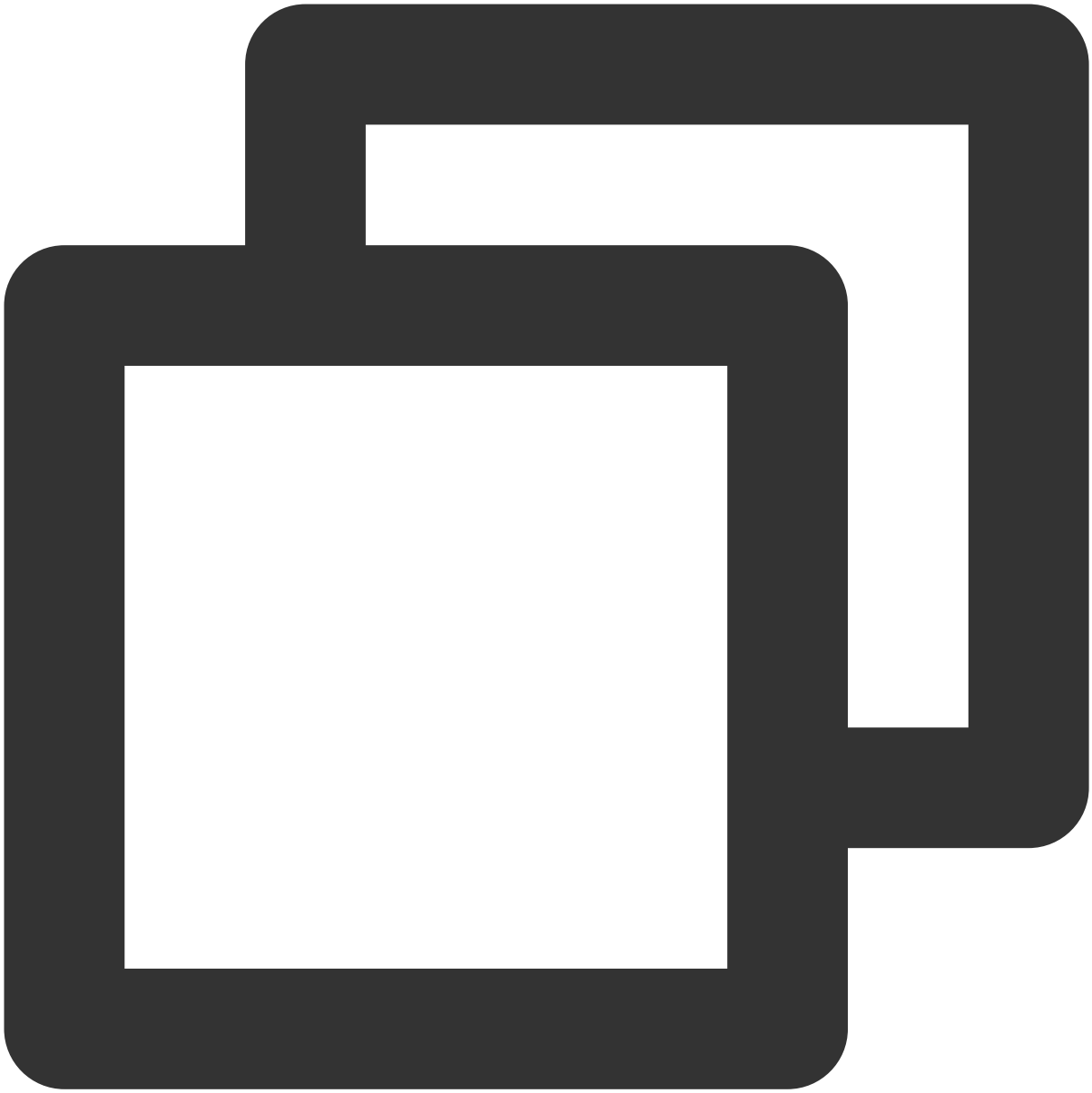


```
cd demo # Enter the project directory. Please change to your actual project's direc
scf info
```

Viewing the directory structure

In the directory of the initialized project, you can see the most basic structure of a serverless function project:

©2013-2022 Tencent Cloud. All rights reserved.



```
.
├── serverless.yml  # Configuration file
├── index.js    # Entry function
└── .env # Environment variable file
```

The `serverless.yml` configuration file implements the quick configuration of the basic function information. All the configuration items supported by the SCF console can be configured in the `.yml` file. For more information, see SCF Configuration Information.

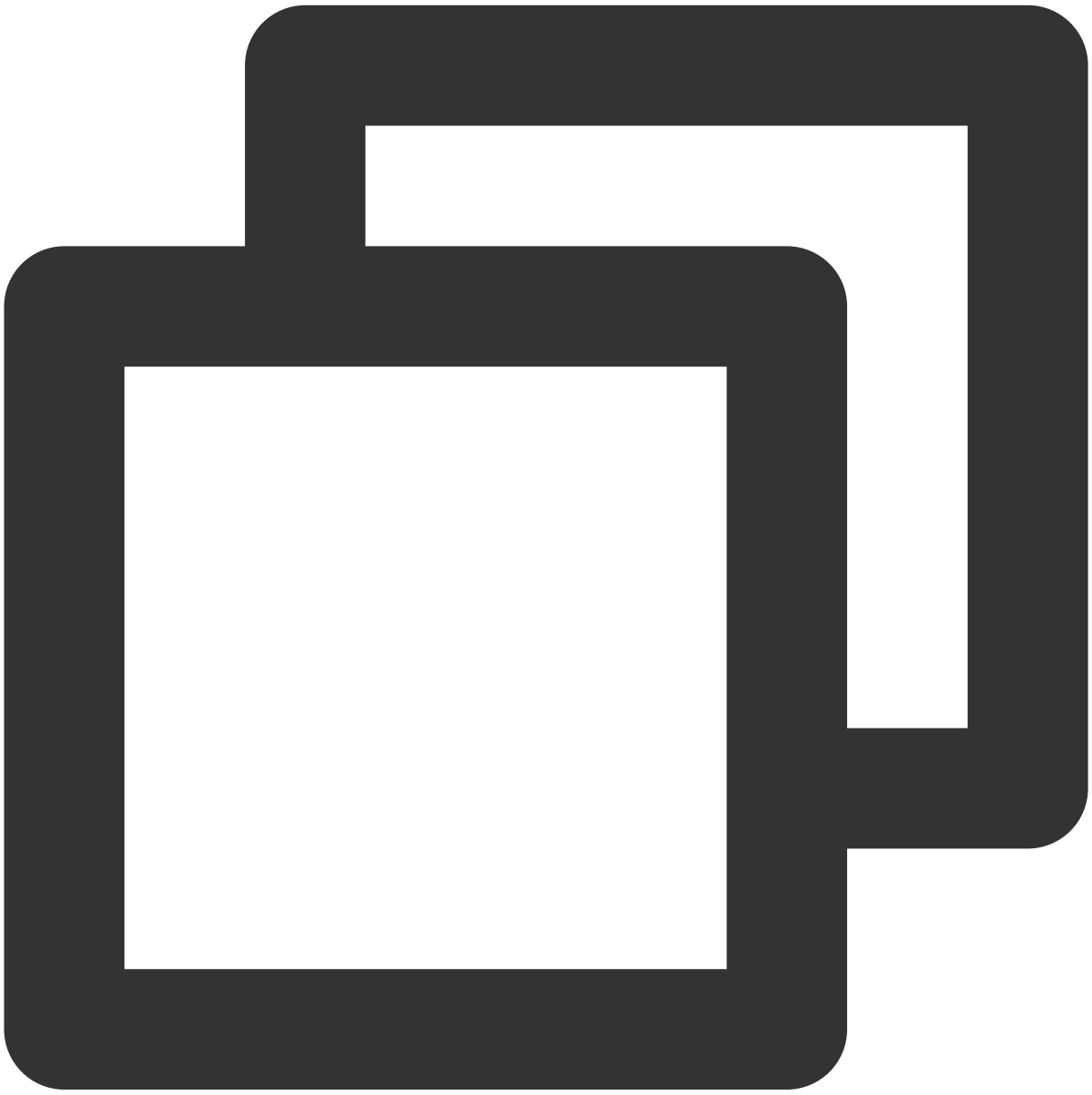
`index.js` is the entry function of the project, which is the `helloworld` template here.

©2013-2022 Tencent Cloud. All rights reserved.

The `.env` file stores user login authentication information. You can also configure other environment variables in it.

Redeployment

In the local project directory, you can modify the function template and configuration file and then redeploy the project by running the following command:



```
scf deploy
```

Note

To view the detailed information during removal, you can add the `--debug` parameter.

©2013-2022 Tencent Cloud. All rights reserved.

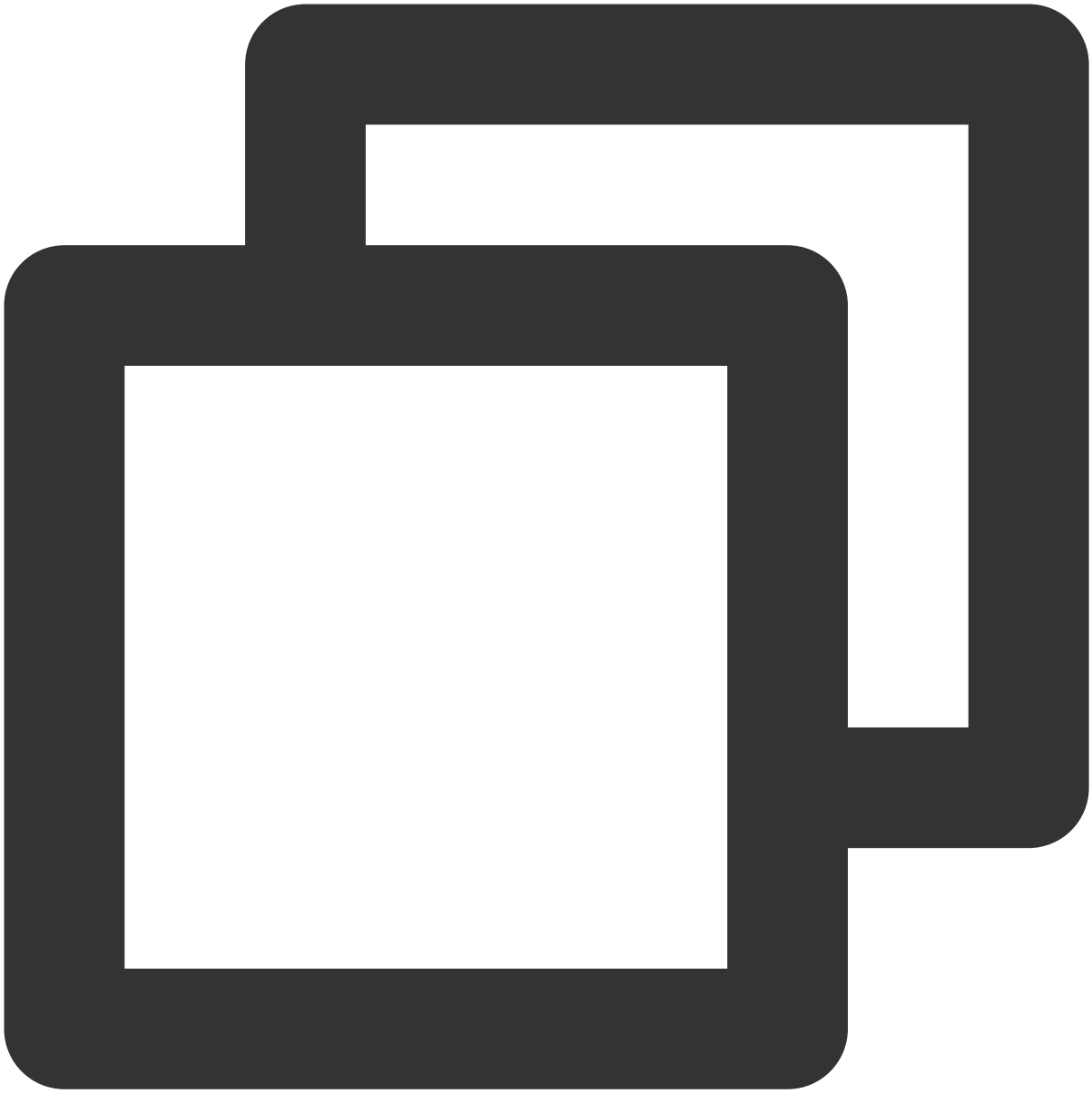
Continuous development

After the deployment is completed, Serverless Cloud Framework allows you to run different commands to implement capabilities such as continuous development and grayscale release for the project. You can also use this component in conjunction with other components to manage the deployment of multi-component applications.
For more information, see Application Management and List of Supported Commands.

FAQs

Question 1: What should I do if the wizard does not pop up by default after I enter `serverless-cloud-framework` .
Solution: Add the `SERVERLESS_PLATFORM_VENDOR=tencent` configuration to the `.env` file.
Question 2: What should I do if the deployment is very slow in an overseas network after I enter `sls deploy` ?
Solution: Add the `GLOBAL_ACCELERATOR_NA=true` configuration to the `.env` file to accelerate the overseas network.
Question 3: What should I do if a network error occurs during deployment after I enter `scf deploy` ?
Solution: Add the following proxy configurations to the `.env` file.

©2013-2022 Tencent Cloud. All rights reserved.



```
HTTP_PROXY=http://127.0.0.1:12345 # Replace "12345" with your proxy port
HTTPS_PROXY=http://127.0.0.1:12345 # Replace "12345" with your proxy port
```

©2013-2022 Tencent Cloud. All rights reserved.

Quick Creation of Application Template

Last updated：2022-05-16 11:43:29

Overview

This document describes how to create, configure, and deploy a web framework application in Tencent Cloud through Serverless Framework.

Prerequisites

- Install Serverless Framework 1.67.2 or later versions.

```
npm install -g serverless
```

- Register on Tencent Cloud and complete identity verification.

> Note：
> If your account is a **Tencent Cloud sub-account**, please get the authorization from the root account first as instructed in Account and Permission Configuration.

Directions

Quick deployment

In an **empty folder** directory, run the following command:

```
serverless
```

Next, follow the prompts to initialize the project. Select the application framework template you want to deploy (Express is used as an example here):

```
Serverless: No serverless project is detected. Do you want to create one? Yes
Serverless: Please select the serverless application you want to create: express-starter
```

©2013-2022 Tencent Cloud. All rights reserved.

```
eggjs-starter - quickly deploys a basic Egg.js application
❯ express-starter - quickly deploys a basic Express.js application
flask-starter - quickly deploys a basic Flask application
fullstack - quickly deploys a full stack application (Vue.js + Express + Postgre
s)
koa-starter - quickly deploys a basic Koa.js application
laravel-starter - quickly deploys a basic Laravel application
nextjs-starter - quickly deploys a basic Next.js application

Serverless: Please enter the project name: demo
Serverless: Installing the express-starter application...

express-starter › Created

The demo project has been successfully created!
```

Select **Deploy Now** to deploy the initialized project to Tencent Cloud:

```
Serverless: Do you want to deploy the project in the cloud now? Yes
xxxxxxxx
x QR x
x CODE x
xxxxxxxx
Please scan the QR code above with WeChat or click the link below to log in
https://slslogin.qcloud.com/XKYUcbaK
Logged in successfully!
serverless ⚡framework
Action: "deploy" - Stage: "dev" - App: "demo1" - Instance: "expressDemo"
region: ap-guangzhou
apigw:
serviceId: service-xxxxx
subDomain: service-xxxxx.gz.apigw.tencentcs.com
environment: release
url: https://service-xxxxx.gz.apigw.tencentcs.com/release/
scf:
functionName: express_component
runtime: Nodejs10.15
namespace: default
lastVersion: $LATEST
traffic: 1
26s › expressDemo › Success
```

After the deployment is completed, click the API Gateway link output by the command line to quickly access the successfully deployed web framework application.

Viewing deployment information

©2013-2022 Tencent Cloud. All rights reserved.

If you want to check the deployment status and resources of the application again, you can go to the folder where the project is successfully deployed and run the following command to view the corresponding information:

```
cd demo # Enter the project directory. Please change to your actual project's directory name here
sls info
```

Note
`sls` is short for the `serverless` command.

Viewing directory structure

In the directory of the initialized project, you can see the most basic structure of an Express project:

```
.
├── serverless.yml # Configuration file
├── index.js # Entry function
├── package.json # Project dependencies
└── .env # Environment variable file
```

- The `serverless.yml` configuration file implements the quick configuration of the basic function information. All the configuration items supported by the SCF console can be configured in the `.yml` file (for more information, please see SCF Configuration Information).
- `index.js` is the entry function of the project, which is the `helloworld` template here.
- `package` is the dependent file of the project, which records the dependency package that should be installed for the Express project.
- The `.env` file stores user login authentication information. You can also configure other environment variables in it.

Redeployment

In the local project directory, you can modify the function template and configuration file, reinstall the dependencies, and then redeploy the project by running the following command:

```
npm install && sls deploy
```

Note

©2013-2022 Tencent Cloud. All rights reserved.

If you want to view the details during the removal process, you can add the `--debug` parameter after `sls deploy` .

Continuous development

After the deployment is completed, you can log in to the SLS console to view the monitoring metric data output after project deployment, such as the basic information, the number of project requests, and project error statistics.
View the monitoring metric data output after project deployment, such as the basic information, the number of project requests, and project error statistics, and implement the continuous development and deployment of the project.

For more information, see Console Deployment Guide.
Serverless Framework supports running different commands to help you implement continuous development, deployment, and grayscale release for the project. You can also use this component in conjunction with other advanced capabilities such as **layer** and **custom domain name** to configure advanced features for the application.

FAQs

- Problem 1: The wizard does not pop up by default when `serverless` is entered.
  Solution: Add the `SERVERLESS_PLATFORM_VENDOR=tencent` configuration item to the `.env` file.
- Problem 2: After `sls deploy` is entered in a network environment outside the Chinese mainland, the deployment is very slow.
  Solution: Add the `GLOBAL_ACCELERATOR_NA=true` configuration item to the `.env` file to enable acceleration outside the Chinese mainland.
- Problem 3: Ater `sls deploy` is entered, the deployment reports a network error.
  Solution: Add the following proxy configuration to the `.env` file.

```
HTTP_PROXY=http://127.0.0.1:12345 # Replace "12345" with your proxy port
HTTPS_PROXY=http://127.0.0.1:12345 # Replace "12345" with your proxy port
```

©2013-2022 Tencent Cloud. All rights reserved.

Deployment in Console

Last updated：2022-07-22 15:16:16

Overview

For common framework components, you can quickly develop and deploy your applications in the Tencent Cloud SLS console.

Prerequisites

Before deploying your application in the console, you must complete the following permission configuration:

Authorizing by root account

1. Log in to the SLS console and click **Authorize** to enter the CAM console.
2. On the **Role** list page in the CAM console, check whether the **SLS_QcsRole** and **CODING_QCSRole** service roles have been created successfully.

> Note：
> If you have already created `CODING_QCSRole`, please check whether it has complete permissions. It requires the following basic policies: `QcloudSLSFullAccess`, `QcloudSSLFullAccess`, and `QcloudAccessForCODINGRole`. If any policy is missing, please add it manually.

3. You can start to use the service after making sure that both the roles and permissions meet the requirements.

Granting permissions to sub-account

If the **Tencent Cloud SLS** and **Coding DevOps** services haven't been activated yet, please contact the root account to activate them and create the roles (as instructed in Directions).

Directions

Step 1. Create an application

1. Log in to the SLS console.
2. Click **Create Application** to enter the project creation page.

©2013-2022 Tencent Cloud. All rights reserved.

3. Enter the basic application information as prompted on the page.

- Application Name: it can contain 2–63 lowercase letters, digits, and hyphens and must start with a lowercase letter and end with a digit or lowercase letter. It cannot be changed once the application is created.
- Environment: select `dev`, `test`, or `prod`. Custom environment is also supported.
- Region: it is the same as the region supported by SCF. For more information, see Region List.
- Creation Method: you can create an application from an **application template** or by **importing an existing project**. You can choose either method based on your actual needs.

> Note
> If you choose to create an application by importing an existing project, you need to make certain modifications to some frameworks. For more information, please see the relevant framework migration documentation.

4. Click **Create**, and the application will be automatically deployed for you. You can view the deployment log of the project.

Creating application from application template

If you choose to create an application from a template, you can quickly create a web application by selecting a project template provided in the console. During template-based deployment, the following configuration will be completed for you by default:

1. Create a layer (**for the Node.js framework only**) and store the project dependency package `node_modules` in the layer. For more information on how to use a layer, please see Overview.
2. Create a COS bucket (**for Next.js and Nuxt.js frameworks only**), separate the static resources, and host them in the COS bucket.

You can also configure more capabilities for your project in **Advanced Configuration**, such as custom domain name and detailed function configuration.

> Note
> When configuring a custom domain name, make sure that an ICP filing has been obtained and a CNAME record has been configured for it. For more information, see Custom Domain Name and Certificate.

Importing existing project

©2013-2022 Tencent Cloud. All rights reserved.

The Serverless console allows you to migrate an existing project through **code hosting** and **folder upload**.

- Code hosting
  Currently, **GitHub, GitLab, Gitee**, and public custom code repositories are supported. You can have your application automatically updated by selecting the trigger method for it.

- Folder upload
  You can directly import a local project by uploading the folder. For the Node.js framework, Serverless Framework will automatically create a layer and pass the dependency package `node_modules` into the layer to complete the deployment.

Step 2. Manage resources

In the SLS console, click the target application to enter the application details page and view the basic information output after the project is deployed as well as monitoring metric data such as the number of requests and error statistics.

Step 3. Deploy for development

Click **Deploy** at the top of the application details page, and you can quickly modify the configuration of your project and upload it for re-deployment. Three methods are supported: **local upload, code hosting, and CLI development**.

©2013-2022 Tencent Cloud. All rights reserved.