# Serverless Cloud Function Web Framework Development Product Documentation





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## Contents

Web Framework Development

Deploying Framework on Command Line

Quickly Deploying Egg Framework

Quickly Deploying Express Framework

Quickly Deploying Flask Framework

Quickly Deploying Koa Framework

Quickly Deploying Laravel Framework

Quickly Deploying Nest.js Framework

Quickly Deploying Next.js Framework

Quickly Deploying Nuxt.js Framework

Quickly Deploying Django Framework

## Web Framework Development Deploying Framework on Command Line

Last updated : 2021-08-26 15:23:13

In addition to the console, you can also quickly deploy a web framework on the command line. This document describes how to use the HTTP component of Serverless Framework to complete the local deployment of web applications.

### Prerequisites

You have activated the service and completed the permission configuration for Serverless Framework.

### Supported frameworks

Supported Framework	Document
Express	Quickly Deploying Express Framework
Коа	Quickly Deploying Koa Framework
Egg	Quickly Deploying Egg Framework
Next.js	Quickly Deploying Next.js Framework
Nuxt.js	Quickly Deploying Nuxt.js Framework
Nest.js	Quickly Deploying Nest.js Framework
Flask	Quickly Deploying Flask Framework
Django	Quickly Deploying Django Framework
Laravel	Quickly Deploying Laravel Framework

### Directions

1. Develop an application locally

Complete the development locally according to your actual business scenario. For more information, please see the documents in the Supported frameworks section.

### 2. Configure the .yml file

Create a serverless.yml file in the project root directory and write the configuration by referring to the



following sample. For the full configuration, please see Configuration Document.

```
# serverless.yml
component: http # Component name, which is required
name: webDemo # Component instance name, which is required
inputs:
region: ap-guangzhou # Function region
src: # Deploy the file code under `src`, package it into a zip file, and uploa
d it to the bucket
src: ./ # The file directory that needs to be packaged locally
exclude: # Excluded files or directories
- .env
- 'node_modules/**'
faas: # Function configuration
framework: express # Select the framework. Express is used here as an example
runtime: Nodejs12.16
name: webDemo # Function name
timeout: 10 # Timeout period in seconds
memorySize: 512 # Memory size, which is 512 MB by default
layers:
- name: layerName # Layer name
version: 1 # Version
apigw: # # The HTTP component will create an API Gateway service by default
isDisabled: false # Specify whether to disable automatic API Gateway creation
id: service-xxx # API Gateway service ID. If you leave it empty, a gateway wil
1 be automatically created
name: serverless # API Gateway service ID
api: # Relevant configuration of the created API
cors: true # Specify whether to allow CORS
timeout: 15 # API timeout period
name: apiName # API name
qualifier: $DEFAULT # Version associated with the API
protocols:
- http
- https
environment: test
```

3. After the creation is completed, run sls deploy in the root directory to deploy. The component will automatically generate the scf\_bootstrap bootstrap file for deployment according to the selected framework.

Note :

As the bootstrap file logic is strongly related to your business logic, the generated default bootstrap file may cause the framework start to fail. We recommend you manually configure the bootstrap file according to your actual business needs. For more information, please see the deployment guide document of each framework.

### Sample scf\_bootstrap :

#### • express:

```
#!/usr/bin/env bash
/var/lang/node12/bin/node app.js
```

#### koa

#!/usr/bin/env bash
/var/lang/node12/bin/node app.js

#### • egg

```
#!/var/lang/node12/bin/node
/**
* Node path in docker: /var/lang/node12/bin/node
* As only `/tmp` is readable/writable in SCF, two environment variables need t
o be modified at startup
* `NODE_LOG_DIR` changes the default node write path of `egg-scripts` (~/logs)
to `/tmp`
* `EGG_APP_CONFIG` changes the default directory of the Egg application to `/t
mp`
*/
process.env.EGG_SERVER_ENV = 'prod';
process.env.NODE_ENV = 'production';
process.env.NODE_LOG_DIR = '/tmp';
process.env.EGG_APP_CONFIG = '{"rundir":"/tmp","logger":{"dir":"/tmp"}}';
const { Application } = require('egg');
// If you deploy `node_modules` through layers, you need to modify `eggPath`
Object.defineProperty(Application.prototype, Symbol.for('egg#eggPath'), {
value: '/opt',
});
```



```
const app = new Application({
mode: 'single',
env: 'prod',
});
app.listen(9000, '0.0.0.0', () => {
console.log('Server start on http://0.0.0.0:9000');
});
```

### nextjs

```
#!/var/lang/node12/bin/node
```

```
/*
# As the HTTP passthrough function runs based on the docker image, the listeni
ng address must be 0.0.0.0, and the port 9000
*/
const { nextStart } = require('next/dist/cli/next-start');
nextStart(['--port', '9000', '--hostname', '0.0.0.0']);
```

### nuxtjs

```
#!/var/lang/node12/bin/node
/*
# As the HTTP passthrough function runs based on the docker image, the listeni
ng address must be 0.0.0.0, and the port 9000
*/
require('@nuxt/cli')
.run(['start', '--port', '9000', '--hostname', '0.0.0.0'])
.catch((error) => {
require('consola').fatal(error);
require('exit')(2);
});
```

nestjs

```
#!/bin/bash
# SERVERLESS=1 /var/lang/node12/bin/npm run start -- -e /var/lang/node12/bin/no
de
SERVERLESS=1 /var/lang/node12/bin/node ./dist/main.js
```

#### flask

```
#!/bin/bash
# As the HTTP passthrough function runs based on the docker image, the listenin
g address must be 0.0.0.0, and the port 9000
/var/lang/python3/bin/python3 app.py
```

django

#!/bin/bash
# As the HTTP passthrough function runs based on the docker image, the listeni
ng address must be 0.0.0.0, and the port 9000
/var/lang/python3/bin/python3 manage.py runserver 0.0.0.0:9000

#### laravel

#### #!/bin/bash

```
# Inject environment variables in the serverless environment
# Inject the SERVERLESS flag
export SERVERLESS=1
# Modify the template compilation cache path, as only `/tmp` is readable/writa
ble in SCF
export VIEW_COMPILED_PATH=/tmp/storage/framework/views
# Modify `session` to store it in the memory (array type)
export SESSION_DRIVER=array
# Output logs to `stderr`
export LOG_CHANNEL=stderr
# Modify the application storage path
export APP_STORAGE=/tmp/storage
# Initialize the template cache directory
mkdir -p /tmp/storage/framework/views
# As the HTTP passthrough function runs based on the docker image, the listeni
ng address must be 0.0.0.0, and the port 9000
# Path of the executable file in the cloud: /var/lang/php7/bin/php
/var/lang/php7/bin/php artisan serve --host 0.0.0.0 --port 9000
```

## Quickly Deploying Egg Framework

Last updated : 2022-02-14 18:02:45

## Overview

This document describes how to quickly deploy a local Egg project to the cloud through a web function.

Note :

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, please see Deploying Framework on Command Line.

## Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

## Directions

### Template deployment - quick deployment of Egg project

- 1. Log in to the SCF console and click **Function Service** on the left sidebar.
- 2. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template** for **Creation Method**, enter Egg in the search box to filter function templates, select **Egg Framework Template**, and click **Next** as shown below:

erless Cloud	← Create										
Overview Function Service		Create Method	or application	nplate to create a function	custom reate a custom function u elloWoird demo ge returns	ising	Q Total	: 15			Sort by recomm v
		L	ExpressDer	no	Learn More	FlaskDemo		Learn More	NextjsDemo	)	Learn More
			Category	Function		Category	Function		Category	Function	
			Description	An Express demo for APIGW a Web Function	ind Node.js	Description	A Flask demo for APIGW Function	and Python3 Web	Description	A Nextjs demo for APIGW a Function	nd Node.js Web
			Tag	WebFunc Express No	dejs12.16	Tag	WebFunc Flask web	Python3.6	Tag	WebFunc Nextjs No SSR web	odejs12.16
			Author	S Tencent Cloud		Author	Tencent Cloud		Author	So Tencent Cloud	
			Deploy	8,543 time		Deploy	10,527 time		Deploy	9,211 time	
			KoaDemo		Learn More	Node12-De	no	Learn More	LaravelDem	0	Learn More
			Category	Function		Category	Function		Category	Function	
			Description	A Koa demo for APIGW and N Function	ode.js Web	Description	A HelloWorld demo for A Web Function	PIGW and python	Description	A Laravel demo for APIGW Function	and PHP Web
			Tag	WebFunc Koa Nodejs web	12.16	Tag	WebFunc hellowork	Nodejs12.16	Tag	WebFunc Laravel F	hp7 web
			Author	S Tencent Cloud		Author	🔗 Tencent Cloud		Author	Tencent Cloud 7.757 time	
			Deploy	9,542 time		Deploy	8,951 time		Deploy	1,101 time	

- 4. On the **Configuration** page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the web function, you can view its basic information on the **Function Management** page.
- 6. You can access the deployed Egg project at the access path URL generated by API Gateway. Click **Trigger Management** on the left to view the access path as shown below:

Function Management	Trigger Management	
Trigger Management	Create a Trigger	
Monitoring Information		ias: Default Traffic
Log Query		SCF_API_SERVICE 🗹
Concurrency Quota	apild	api-5lsrk7lu
Deployment Logs	Request method	ANY
	Publishing Environment	Publish
	Authentication Method	No authentication
	Enable integration response	On
	Enable Base64 encoding	Disabled
	Support CORS	No
	Backend timed out	15s

7. Click the access path URL to access the Egg project.

### Custom deployment - quick migration of local project to cloud

### Prerequisites

The Node.js runtime environment has been installed locally.

### Local development

1. Refer to Quick Start to quickly initialize the sample project as follows:

```
mkdir egg-example && cd egg-example
npm init egg --type=simple
npm i
```

2. In the root directory, run the following command to directly start the service locally.

```
npm run dev
open http://localhost:7001
```

3. Visit http://localhost:7001 in a browser, and you can access the sample Egg project locally.

### **Cloud deployment**

Next, perform the following steps to make simple modifications to the initialized project, so that it can be quickly deployed through a web function. The project transformation here is usually divided into the following three steps:

- Change the listening address and port to 0.0.0.0:9000 .
- Modify the write path. Only the /tmp directory is readable/writable in the SCF environment.
- Add the scf\_bootstrap bootstrap file.

The specific steps are as follows:

1. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to configure environment variables and start services. Here is only a sample. Please adjust the specific operations according to your actual business scenario):

```
#!/var/lang/node12/bin/node
'use strict';
/**
* Node path in docker: /var/lang/node12/bin/node
* As only `/tmp` is readable/writable in SCF, two environment variables need t
```

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```
o be modified at startup
* `NODE_LOG_DIR` changes the default node write path of `egg-scripts` (~/logs)
to `/tmp`
* `EGG_APP_CONFIG` changes the default directory of the Egg application to `/t
mp`
*/
process.env.EGG_SERVER_ENV = 'prod';
process.env.NODE_ENV = 'production';
process.env.NODE LOG DIR = '/tmp';
process.env.EGG_APP_CONFIG = '{"rundir":"/tmp","logger":{"dir":"/tmp"}}';
const { Application } = require('egg');
// If you deploy `node_modules` through layers, you need to modify `eqqPath`
Object.defineProperty(Application.prototype, Symbol.for('egg#eggPath'), {
value: '/opt',
});
const app = new Application({
mode: 'single',
env: 'prod',
});
app.listen(9000, '0.0.0.0', () => {
console.log('Server start on http://0.0.0.0:9000');
});
```

2. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

- 3. Log in to the SCF console and click Function Service on the left sidebar.
- 4. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.

5. Select Custom Creation for Creation Method and configure the options as prompted as shown below:

Create Method	Template Use demo template to create a function or application	Custom Create a custom function using HelloWolrd demo
Basic Config	urations	
Function Type <b>*</b>	Event Function 🜔 Web Function (i)	
Function name *	helloworld-1629445850	
Hume.	It supports 2 to 60 characters, including letter	s, numbers, underscores and hyphens. It must start with a letter and end with a number or letter.
Region *	🔇 Guangzhou 🔻	
Deployment Mode *	O Code ○ Image	
Runtime	Nodejs12.16 💌	
Environment *		
Function Co	<b>des</b> ① Please modify the listening port of y	our project to 9000 before uploading the project.
Submitting Method *	Online editing Occal ZIP file O	Local folder 🔷 Upload a ZIP pack via COS
Function Co	odes * No folder selected Please select a folder (up to 250M)	Upload

- Function Type: select Web function.
- **Function Name**: enter the name of your function.
- Region: enter your function deployment region, which is Guangzhou by default.
- Runtime Environment: select Nodejs 12.16.
- Deployment Method: select Code deployment and upload your local project.
- Submitting Method: select Local folder.
- Function Code: select the specific local folder where the function code is.
- 6. Click Complete.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture.

## Quickly Deploying Express Framework

Last updated : 2023-02-01 17:37:37

## Overview

This document describes how to quickly deploy a local Express project to the cloud through an HTTP-triggered function.

Note:

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

## Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete the identity verification first.

### Directions

### Template deployment: Quick deployment of Express project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter WebFunc in the search box to filter all HTTP-triggered function templates, select **ExpressDemo**, and click **Next** as shown below:

Template				ate from s			Use TCR in	-		
Use demo temp application	late to create a fur	nction or	Start	from a Hell	lo World sample		Create a fur	nction ba	sed on a TCR i	mage
Fuzzy search	WebFunc S	Separate multiple t	tags with	carriage ret	ums			<b>Q</b> , To	otal: 32	
	ExpressDen	no			Learn more	FlaskDemo				Learn
	Category	Function				Category	Function			
	Description	An Express dem Function	io for API	GW and No	de.js Web	Description	A Flask demo Function	o for APIC	GW and Pythor	n3 Web
	Tag	WebFunc E	Express	Nodejs12.	.16	Tag	WebFunc	Flask	Python3.6	web
		web				CA	🙆 Tencent	Cloud		
	CA	🔗 Tencent Clo	ud			Deploy	15,416 time			

- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Express project as shown below:

Default trigger Trig	gered alias: Default traffic
Access path (	Public https://service-jjl7rpm-
Supported protocols	HTTP&HTTPS
Request method	ANY
Publishing environment	Publish
Authentication method	No authentication
Tag	Not enabled
You can upgrade to API C	Sateway Standard to use advanced API gateway features. Note that the operation cannot be undone.Learn more 🕑

7. Click the access path URL to access the Express project as shown below:

https://service-jjl?r
Welcome to Express.js application Tencent Cloud Serverless to provide you with services

### Custom deployment: Quick migration of local project to cloud

### **Prerequisites**

The Node.js runtime environment has been installed locally.

### Local development

1. Run the following command to install the Express framework and express-generator scaffold and initialize the sample Express project.

```
npm install express --save
npm install express-generator --save
express WebApp
```

2. Run the following command to enter the project directory and install the required dependencies:

cd WebApp npm install

3. After the installation is completed, run the following command to directly start the service locally.

npm start

4. Visit http://localhost:3000 in a browser, and you can access the sample Express project locally.

### **Deployment in cloud**

You need to make simple modifications to the initialized project, so that the project can be quickly deployed through an HTTP-triggered function. The project transformation here is usually divided into the following two steps:

- Change the listening address and port to 0.0.0.0:9000 .
- Add the scf\_bootstrap bootstrap file.

The detailed directions are as follows:

1. In the sample Express project, you can specify the listening address and port through the environment variable in the ./bin/www file. If you don't specify it, port **3000** will be listened on by default as shown below:

```
/**
 * Get port from environment and store in Express.
 */
var port = normalizePort(process.env.PORT || '3000');
app.set('port', port);
/**
 * Create HTTP server.
 */
var server = http.createServer(app);
/**
 * Listen on provided port, on all network interfaces.
 */
server.listen(port);
server.on('error', onError);
server.on('listening', onListening);
```

2. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to configure environment variables and start services):

```
#!/bin/bash
export PORT=9000
```

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```
npm run start
```

3. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

```
chmod 777 scf_bootstrap
```

4. After the local configuration is completed, run the following command to start the file (with execution in the scf\_bootstrap directory as an example) and make sure that your service can be normally started locally.

./scf\_bootstrap

- 5. Log in to the SCF console and click **Functions** on the left sidebar.
- 6. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 7. Select Create from scratch and configure the options as prompted as shown below:

Template Use demo template application	e to create a function or	Create from scratch Start from a Hello World sample	Use TCR image Create a function based on a TCR image	
Basic configur	ations			
Function type *	Event-triggered function Triggers functions by JSON eve	nts from Cloud API and other triggers <b>here 12</b>		
	O HTTP-triggered Function	uests, which is applicable to web-based scenaric	alaan 12	
Function name *	be		ners. It must start with a letter and end with a number or letter.	
Region *	🔇 Guangzhou	¥		
Runtime environment *	Nodejs 12.16	Ŧ		
Function code	S () Please modify the listeni	ng port of your project to 9000 before uploadin	g the project.	
Submitting method *	Online editing OLocal	ZIP file 🔹 Local folder 🔷 Upload a ZIP p	ack via COS	
Function code	No folder selected	Upload		

- Function type: Select HTTP-triggered function.
- Function Name: Enter the name of your function.
- Region: Enter your function deployment region, which is Guangzhou by default.

- Runtime environment: Select Nodejs 12.16.
- Submitting method: Select Local folder and upload your local project.
- Function codes: Select the specific local folder where the function code is.
- 8. Click **Complete**.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture as shown below:

-	ggered alias: Default traffic				Test
Test templates				Returned resul	t Learn more 🗹
Request method	GET	•	T	Return code	200
path	1			Response time	43ms
headers	key Please enter the key	value Please enter the value		Response body	<idoctype html=""> <pre></pre></idoctype>
arams	key Please enter the key	value Please enter the value			<meta content="Serverless Express.js 应用" name="description"/> <meta content="express.express.js.serverless.无服务" name="keywords"/> <title>Serverless - Express.js</title> <style lang="css"> h1 {</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td>text-align: center; width: 600px; margin: 300px auto;</td></tr></tbody></table></style>

## Quickly Deploying Flask Framework

Last updated : 2022-08-12 15:32:21

## Overview

This document describes how to quickly deploy a Flask business to the cloud through an SCF web function.

Note:

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

## Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete the identity verification first.

## Directions

### Template deployment - quick deployment of Flask project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter WebFunc in the search box to filter all HTTP-triggered function templates, select **FlaskDemo**, and click **Next** as shown below:

ion erview				
erview notion Service //er	Create Method	Template Custom Custom Greate a custom function or application	rction using	
	Fuzzy search	webfunc Separate multiple tags with carriage returns	Q Total: 15	Sort by recomm w
		ExpressDemo Learn Mo	e FlaskDemo Learn More	NextjsDemo Learn More
		Category Function	Category Function	Category Function
		Description An Express demo for APIGW and Node.js Web Function	Description A Flask demo for APIGW and Python3 Web Function	Description A Nextjs demo for APIGW and Node.js Web Function
		Tag WebFunc Express Nodejs12.16 web	Tag WebFunc Flask Python3.6 web	Tag WebFunc Nextjs Nodejs12.16 SSR web
		Author 🔗 Tencent Cloud	Author 🔗 Tencent Cloud	Author 🔗 Tencent Cloud
		Deploy 8,543 time	Deploy 10,527 time	Deploy 9,211 time
		KoaDemo Learn Mo	e Node12-Demo Learn More	LaravelDemo Learn More
		Category Function	Category Function	Category Function
		Description A Koa demo for APIGW and Node.js Web Function	Description A HelloWorld demo for APIGW and python Web Function	Description A Laravel demo for APIGW and PHP Web Function
		Tag WebFunc Koa Nodejs12.16 web	Tag WebFunc helloworld Nodejs12.16 web	Tag WebFunc Laravel Php7 web
		Author 🙆 Tencent Cloud	Author 🔗 Tencent Cloud	Author Stencent Cloud Deploy 7,757 time
		Deploy 9,542 time	Deploy 8,951 time	bopioy ipor and

- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. You can access the deployed Flask project at the access path URL generated automatically. Click **Trigger management** on the left to view the access path as shown below:

Function Management	Trigger Management	
Trigger Management	Create a Trigger	
Monitoring Information	API Gateway Trigger Alias: Default Traffic	
internation	API Name SCF_API_SERVICE 🗹	
	serviceId service-bbm8vdcw	
Concurrency Quota	apild api-5lsrk7lu	
Deployment Logs	Request method ANY	
	Publishing Environment Publish	
	Authentication Method No authentication	
	Enable integration response On	
	Enable Base64 encoding Disabled	
	Support CORS No	
	Backend timed out 15s	

7. Click the access path URL to access the Flask project.

### Custom deployment - quick migration of local project to cloud

### Local development

1. Run the following command to confirm that Flask has been installed in your local environment.

```
pip install Flask
```

2. Create the Hello World sample project locally.

In the project directory, create the app.py file to implement the Hello World application. Below is the sample code:

```
from flask import Flask
app = Flask (__name__)
@app.route('/')
def hello_world():
return 'Hello World'
if __name__ == '__main__':
app.run()
```

3. Run the python3 app.py command locally to start the app.py file. Below is the sample code:

```
$ python3 app.py
* Serving Flask app "app" (lazy loading)
* Environment: production
WARNING: Do not use the development server in a production environment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
127.0.0.1 - - [22/Jun/2021 09:41:04] "GET / HTTP/1.1" 200 -
```

4. Visit http://127.0.0.1:5000 in a browser, and you can access the sample Flask project locally as shown below:

÷

## $\leftarrow \rightarrow \ \ \bigcirc \ 127.0.0.1:5000$ **Hello World**

### **Deployment in cloud**

Next, perform the following steps to make simple modifications to the locally created project, so that it can be quickly deployed through a web function. The steps of project transformation for Flask are as follows:

### 1. Install dependencies

2. As the Flask dependency library is not provided in the standard cloud environment of SCF, you must install the dependencies and upload them together with the project code. Create the requirements.txt file first with the following content:

```
#requirements.txt
Flask==1.0.2
werkzeug==0.16.0
```

### Note:

Due to the limitation of SCF's built-in runtime environment version (Python 3.6), only lower versions of Werkzeug (<=1.0.x) can be used, while later versions may not work. The runtime environment version upgrade has been planned. Stay tuned.

### 2. Run the following command to install:

```
pip install -r requirements.txt
```

### 3. Modify the listening address and port

The listening port in the HTTP-triggered function must be 9000, so you need to change the listening address and

port to 0.0.0.0:9000 as shown below:



Note :

You can also configure the listening port through the environment variable in scf\_bootstrap .

### 4. Add the scf\_bootstrap bootstrap file

5. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to configure environment variables, specify service startup commands, and make sure that your service can be started normally through this file):

```
#!/bin/bash
/var/lang/python3/bin/python3 app.py
```

6. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

Note:

In the SCF environment, only files in the /tmp directory are readable/writable. We recommend you select
 /tmp when outputting files. If you select other directories, write will fail due to the lack of permissions.

- If you want to output environment variables in the log, you need to add the -u parameter before the startup command, such as python -u app.py.
- 5. After the local configuration is completed, run the following command to start the service (with execution in the scf\_bootstrap directory as an example) and make sure that your service can be normally started locally.
  - ./scf\_bootstrap
- 6. Log in to the SCF console and click Functions on the left sidebar.
- 7. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 8. Select **Create from scratch** and configure the options as prompted as shown below:

Template		Create from scratch	Use TCR image	
Use demo template application	e to create a function or	Start from a Hello World sample	Create a function based on a TCR image	
Basic configur	ations			
Function type *	O Event-triggered function			
	Triggers functions by JSON eve	nts from Cloud API and other triggershere 🕻		
	HTTP-triggered Function			
	Triggers functions by HTTP req	uests, which is applicable to web-based scenar	rioshere 🗹	
Function name *	hellower			
	It supports 2 to 60 characters, i	ncluding letters, numbers, underscores and hy	phens. It must start with a letter and end with a number or letter	er.
Region *	🔇 Hong Kong, China	Ŧ		
Runtime	Python 3.6	Ŧ		

- Function type: Select HTTP-triggered function.
- Function name: Enter the name of your function.
- **Region**: Enter your function deployment region.
- Deployment mode: Select Code deployment and upload your local project.
- Runtime Environment: Select Python 3.6.
- 9. Click Complete.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture.

## Quickly Deploying Koa Framework

Last updated : 2023-02-02 11:00:57

## Overview

This document describes how to quickly deploy a local Koa project to the cloud through an HTTP-triggered function.

Note:

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

## Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

## Directions

### Template deployment: Quick deployment of Koa project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter koa in the search box to filter function templates, select the **Koa template**, and click **Next**.
- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Koa project as shown below:



Default trigger Trigg	gered alias: Default traffic	Delete
Access path 🚯	Public https://service-5 lease/To network	
Supported protocols	HTTP&HTTPS	
Request method	ANY	
Publishing environment	Publish	
Authentication method	No authentication	
Tag	Not enabled	
You can upgrade to API G	ateway Standard to use advanced API gateway features. Note that the operation cannot be undone.Learn more 🖸	

7. Click the access path URL to access the Koa project as shown below:

https://service-9	 ( ' e/					
			elcome t			
	1	<u>encent</u>	<u>Cloud Se</u>			vide
			you wit	h service	es	

### Custom deployment: Quick migration of local project to cloud

### Prerequisites

The Node.js runtime environment has been installed locally.

### Local development

1. Refer to the Koa.js official documentation to install the Koa environment and initialize your Koa project. The following takes hello world as an example. The content of app.js is as follows:

```
// app.js
const Koa = require('koa');
const app = new Koa();
const main = ctx => {
ctx.response.body = 'Hello World';
```

```
};
app.use(main);
app.listen(3000);
```

2. In the root directory, run the following command to directly start the service locally.

```
node app.js
```

3. Visit http://localhost:3000 in a browser, and you can access the sample Koa project locally.

### Deployment in cloud

You need to make simple modifications to the initialized project, so that the project can be quickly deployed through an HTTP-triggered function. The project transformation here is usually divided into the following two steps:

- Change the listening address and port to 0.0.0.0:9000 .
- Add the scf\_bootstrap bootstrap file.

The detailed directions are as follows:

1. In the sample Koa project, change the listening port to 9000 as shown below:



2. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to configure environment variables and start services):

### 🔗 Tencent Cloud

```
#!/bin/bash
/var/lang/node12/bin/node app.js
```

3. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

- 4. Log in to the SCF console and click **Functions** on the left sidebar.
- 5. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 6. Select Create from scratch and configure the options as prompted:
  - Function type: Select HTTP-triggered function.
  - **Function name**: Enter the name of your function.
  - Region: Enter your function deployment region, which is Guangzhou by default.
  - Runtime environment: Select Nodejs 12.16.
  - Submitting method: Select Local folder and upload your local project.
  - Function codes: Select the specific local folder where the function code is.

### 7. Click Complete.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture.

## **Quickly Deploying Laravel Framework**

Last updated : 2023-02-02 11:00:57

## Overview

This document describes how to use an HTTP-triggered function to quickly migrate a local Laravel service to the cloud.

### Note :

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

### Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

### Directions

### Template deployment: Quick deployment of Laravel project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter WebFunc in the search box to filter all HTTP-triggered function templates, select the **Laravel template**, and click **Next**.
- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Laravel project as shown below:



Default trigger Trigg	Default trigger Triggered alias: Default traffic				
Access path 🚯	Public https://ser ā network				
Supported protocols	HTTP&HTTPS				
Request method	ANY				
Publishing environment	Publish				
Authentication method	No authentication				
Tag	Not enabled				
You can upgrade to API Gateway Standard to use advanced API gateway features. Note that the operation cannot be undone.Learn more 💈					

7. Click the access path URL to access the Laravel project as shown below:



### Custom deployment: Quick migration of local project to cloud

### Local development

- 1. Refer to Getting Started on macOS to set up the Laravel development environment locally.
- 2. Create the sample Laravel project locally. Enter the project directory and run the following command to initialize it.

composer create-project --prefer-dist laravel/laravel blog

3. Run the following command to start the sample project locally. Below is the sample code:

```
$ php artisan serve --host 0.0.0.0 --port 9000
Laravel development server started: <http: 0.0.0.0:9000="">
[Wed Jul 7 11:22:05 2021] 127.0.0.1:54350 [200]: /favicon.ico
```

4. Visit http://0.0.0.0:9000 in a browser, and you can access the sample Laravel project locally as shown below:





### **Deployment in cloud**

Perform the following steps to make simple modifications to the initialized project, so that it can be quickly deployed through an HTTP-triggered function. The steps of project transformation are as follows:

### 1. Add the scf\_bootstrap bootstrap file

Create the scf\_bootstrap bootstrap file in the project root directory. This file is used to configure environment variables, specify service bootstrap commands, and make sure that your service can be started normally through this file.

#### Note :

- scf\_bootstrap must have the executable permission of 755 or 777.
- If you want to output environment variables in the log, you need to add the -u parameter before the bootstrap command, such as python -u app.py .

### 2. Modify the file read/write path

In the SCF environment, only files in the /tmp directory are readable/writable. If you select other directories, write will fail due to the lack of permissions. Therefore, you need to inject environment variables in the scf\_bootstrap file to adjust the output directory of the Laravel framework:

```
#!/bin/bash
# Inject the SERVERLESS flag
```



export SERVERLESS=1
# Modify the template compilation cache path, as only `/tmp` is readable/writab
le in SCF
export VIEW\_COMPILED\_PATH=/tmp/storage/framework/views
# Modify `session` to store it in the memory (array type)
export SESSION\_DRIVER=array
# Output logs to `stderr`
export LOG\_CHANNEL=stderr
# Modify the application storage path
export APP\_STORAGE=/tmp/storage
# Initialize the template cache directory
mkdir -p /tmp/storage/framework/views

#### 3. Modify the listening address and port

The listening port in the HTTP-triggered function must be 9000, so you need to specify the listening port in scf\_bootstrap through the following command:

/var/lang/php7/bin/php artisan serve --host 0.0.0.0 --port 9000

The content of scf\_bootstrap is as follows:





### 4. Deploy Laravel

After the local configuration is completed, run the bootstrap file and make sure that your service can be normally started locally. Then, perform the following steps to deploy Laravel:

- i. Log in to the SCF console and click **Functions** on the left sidebar.
- ii. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- iii. Select Create from scratch and configure the options as prompted:
  - Function type: Select HTTP-triggered function.
  - Function name: Enter the name of your function.
  - **Region**: Enter your function deployment region, such as Chengdu.
  - Runtime environment: Select Php7.
  - Submitting method: Select Local folder and upload your local project.
  - **Function codes**: Select the specific local folder where the function code is.

iv. After the deployment is completed, click the generated URL to access your Laravel application as shown below:

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				Laravel						
				DOCS LARACASTS NEWS BLOG NOVA FORGE GITHUB						

### Development management

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture.

## Quickly Deploying Nest.js Framework

Last updated : 2023-02-02 11:00:57

## Overview

This document describes how to quickly deploy a local Nest.js project to the cloud through an HTTP-triggered function.

Note:

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

## Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

### Directions

### Template deployment: Quick deployment of Nest.js project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter **nest** in the search box to filter function templates, select the **Nest template**, and click **Next**.
- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Nest.js project as shown below:


Default trigger Trigg	gered alias: Default traffic	Delete
Access path (j)	Public https://service //To network	
Supported protocols	HTTP&HTTPS	
Request method	ANY	
Publishing environment	Publish	
Authentication method	No authentication	
Tag	Not enabled	
You can upgrade to API Ga	ateway Standard to use advanced API gateway features. Note that the operation cannot be undone.Learn more 🗹	

7. Click the access path URL to access the Nest.js project as shown below:



### Custom deployment: Quick migration of local project to cloud

### **Prerequisites**

The Node.js runtime environment has been installed locally.

### Local development

1. Refer to First steps to initialize your Nest.js project:

```
npm i -g @nestjs/cli
nest new nest-app
```



2. In the root directory, run the following command to directly start the service locally.

```
cd nest-app && npm run start
```

3. Visit <a href="http://localhost:3000">http://localhost:3000</a> in a browser, and you can access the sample Nest.js project locally as shown below:

## **Hello World!**

### **Deployment in cloud**

You need to make simple modifications to the initialized project, so that the project can be quickly deployed through an HTTP-triggered function. The project transformation here is usually divided into the following two steps:

- Add the scf\_bootstrap bootstrap file.
- Change the listening address and port to 0.0.0.0:9000 .

The detailed directions are as follows:

1. Modify the bootstrap file ./dist/main.js to change the listening port to 9000 as shown below:

```
"use strict";
Object.defineProperty(exports, "__esModule", { value:
    const core_1 = require("@nestjs/core");
    const app_module_1 = require("./app.module");
    async function bootstrap() {
        const app = await core_1.NestFactory.create(app_mod
        await app.listen(9000);
    }
    bootstrap();
    //# sourceMappingURL=main.js.map
```

2. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to start services):

```
#!/bin/bash
SERVERLESS=1 /var/lang/node12/bin/node ./dist/main.js
```

Note

- Here is only a sample bootstrap file. Adjust the specific operations according to your actual business scenario.
- The sample uses the standard node environment path of SCF. When debugging locally, you need to change it to your local path.
- 3. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

- 4. Log in to the SCF console and click **Functions** on the left sidebar.
- 5. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 6. Select Create from scratch and configure the options as prompted:
  - Function type: Select HTTP-triggered function.
  - **Function name**: Enter the name of your function.
  - Region: Enter your function deployment region, which is Guangzhou by default.
  - Runtime environment: Select Nodejs 12.16.
  - Submitting method: Select Local folder and upload your local project.
  - Function codes: Select the specific local folder where the function code is.
- 7. Click **Complete**.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture.

## Quickly Deploying Next.js Framework

Last updated : 2023-02-02 11:00:57

## Overview

This document describes how to quickly deploy a local Next.js SSR project to the cloud through an HTTP-triggered function.

Note:

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

### Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

### Directions

### Template deployment: Quick deployment of Next.js project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter webfunc in the search box to filter function templates, select the **Next.js template**, and click **Next**.
- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Next.js project as shown below:



Access path  Public https://servi network Supported protocols HTTP&HTTPS Request method ANY Publishing environment Publish	
Request method ANY	
Publishing environment Publish	
Authentication method No authentication	
Tag Not enabled	

7. Click the access path URL to access the Next.js project as shown below:



Note :

As the Next.js framework needs to be rebuilt before each deployment, be sure to update the code locally and run build again before deploying.

### Custom deployment: Quick migration of local project to cloud

### Prerequisites

The Node.js runtime environment has been installed locally.

### Local development

1. Refer to Getting Started to install and initialize your Next.js project:

npx create-next-app

2. In the root directory, run the following command to directly start the service locally.

cd my-app && npm run dev

3. Visit http://localhost:3000 in a browser, and you can access the sample Next.js project locally as shown below:

$\leftrightarrow$ $\rightarrow$ $\mathbf{C}$ $\odot$ localhost:3000			x 🗟 🕸 🔿 🕇
	Welcome	to Next.js!	
		iting pages/index.js	
	Documentation → Find in-depth information about Next.js features and API.	Learn → Learn about Next.js in an interactive course with quizzes!	
	Examples → Discover and deploy boilerplate example Next.js projects.	<b>Deploy →</b> Instantly deploy your Next.js site to a public URL with Vercel.	

### **Deployment in cloud**

You need to make simple modifications to the initialized project, so that the project can be quickly deployed through an HTTP-triggered function. The project transformation here is usually divided into the following two steps:

- Change the listening address and port to 0.0.0.0:9000 .
- Add the scf\_bootstrap bootstrap file.

The detailed directions are as follows:

1. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to start services and specify the bootstrap port):

```
#!/var/lang/node12/bin/node
const { nextStart } = require('next/dist/cli/next-start');
nextStart([ '--port', '9000', '--hostname', '0.0.0.0' ])
```

Note

- Here is only a sample bootstrap file. Adjust the specific operations according to your actual business scenario.
- The sample uses the standard node environment path of SCF. When debugging locally, you need to change it to your local path.
- 2. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

- 3. Log in to the SCF console and click **Functions** on the left sidebar.
- 4. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.



5. Select Create from scratch and configure the options as prompted as shown below:

emplate		Create from scratch	Use TCR image	
se demo template pplication	to create a function or	Start from a Hello World sample	Create a function based on a TCR image	
Basic configura	ations			
-				
Function type *	Event-triggered function	events from Cloud API and other triggers <b>here </b>		
	O HTTP-triggered Function			
		• equests, which is applicable to web-based scenarios <b>h</b> e	ere 🗹	
Function name *	hello			
	It supports 2 to 60 character	s, including letters, numbers, underscores and hyphen	s. It must start with a letter and end with a number or letter.	
Region *	🔇 Guangzhou	v		
Runtime	Nodejs 12.16	<b>v</b>		
environment *				
Function code	Please modify the list	ening port of your project to 9000 before uploading th	ne project.	
Submitting method <b>*</b>	Online editing 🔾 Loo	al ZIP file OLocal folder OUpload a ZIP pack	via COS	
Function code	s *	Upload		

- Function type: Select HTTP-triggered function.
- Function name: Enter the name of your function.
- Region: Enter your function deployment region, which is Guangzhou by default.
- Runtime environment: Select Nodejs 12.16.
- Submitting method: Select Local folder and upload your local project.
- Function codes: Select the specific local folder where the function code is.
- 6. Click **Complete**.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low



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cost and flexible scaling brought by the serverless architecture.

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#### Deploy $\rightarrow$

Instantly deploy your Next.js site to a public URL with Vercel.

## Quickly Deploying Nuxt.js Framework

Last updated : 2023-02-02 11:00:57

## Overview

This document describes how to quickly deploy a local Nuxt.js SSR project to the cloud through an HTTP-triggered function.

Note:

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

### Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

### Directions

### Template deployment: Quick deployment of Nuxt.js project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter webfunc in the search box to filter function templates, select the **Nuxt.js template**, and click **Next**.
- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Nuxt.js project as shown below:



Default trigger Trigg	jered alias: Default traffic	Delete
Access path 🚯	Public https://servic /To network	
Supported protocols	HTTP&HTTPS	
Request method	ANY	
Publishing environment	Publish	
Authentication method	No authentication	
Tag	Not enabled	
You can upgrade to API G	ateway Standard to use advanced API gateway features. Note that the operation cannot be undone.Learn more 💈	

7. Click the access path URL to access the Nuxt.js project as shown below:



Note :

As the Nuxt.js framework needs to be rebuilt before each deployment, be sure to update the code locally and run build again before deploying.

### Custom deployment: Quick migration of local project to cloud

### Prerequisites

The Node.js runtime environment has been installed locally.

### Local development

1. Refer to Installation to install and initialize your Nuxt.js project:

```
npx create-nuxt-app nuxt-app
```

2. In the root directory, run the following command to directly start the service locally.

```
cd nuxt-app && npm run dev
```

3. Visit http://localhost:3000 in a browser, and you can access the sample Nuxt.js project locally as shown below:



### **Deployment in cloud**

You need to make simple modifications to the initialized project, so that the project can be quickly deployed through an HTTP-triggered function. The project transformation here is usually divided into the following two steps:

- Add the scf\_bootstrap bootstrap file.
- Change the listening address and port to 0.0.0.0:9000 .

The detailed directions are as follows:

1. Create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which

is used to start services and specify the bootstrap port):

```
#!/var/lang/node12/bin/node
require("@nuxt/cli")
.run(["start", "--port", "9000", "--hostname", "0.0.0.0"])
.catch(error => {
require("consola").fatal(error);
require("exit")(2);
});
```

Note

- Here is only a sample bootstrap file. Adjust the specific operations according to your actual business scenario.
- The sample uses the standard node environment path of SCF. When debugging locally, you need to change it to your local path.
- After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

- 3. Log in to the SCF console and click Functions on the left sidebar.
- 4. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 5. Select Create from scratch and configure the options as prompted:
  - Function type: Select HTTP-triggered function.
  - **Function name**: Enter the name of your function.
  - Region: Enter your function deployment region, which is Guangzhou by default.
  - Runtime environment: Select Nodejs 12.16.
  - Submitting method: Select Local folder and upload your local project.
  - Function codes: Select the specific local folder where the function code is.
- 6. Click Complete.

Note :

When you access the URL, the access may fail due to frontend routing. Therefore, you need to remove the

/release path when accessing.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low cost and flexible scaling brought by the serverless architecture.

# Quickly Deploying Django Framework

Last updated : 2023-02-02 11:00:57

## Overview

This document describes how to quickly deploy a local Django project to the cloud through an HTTP-triggered function.

Note :

This document mainly describes how to deploy in the console. You can also complete the deployment on the command line. For more information, see Deploying Framework on Command Line.

## Prerequisites

Before using SCF, you need to sign up for a Tencent Cloud account and complete identity verification first.

### Directions

### Template deployment: Quick deployment of Django project

- 1. Log in to the SCF console and click **Functions** on the left sidebar.
- 2. Select the region and namespace where to create a function at the top of the page and click **Create** to enter the function creation process.
- 3. Select **Template**, enter Django in the search box, select the **Django template**, and click **Next** as shown below:

DjangoDer	no	Learn more	
Category	Function		
Description	A Django demo for APIGW and Pythor Function	13 Web	
Tag	WebFunc Django Python3.6 web		
CA	🔗 Tencent Cloud		
Deploy	7,854 time		

- 4. On the Create page, you can view and modify the specific configuration information of the template project.
- 5. Click **Complete**. After creating the HTTP-triggered function, you can view its basic information on the **Function management** page.
- 6. Click **Trigger management** on the left to view the access path and access your deployed Django project as shown below:

Default trigger Trig	gered alias: Default traffic
Access path 🛈	Public https://service //ī
Supported protocols	HTTP&HTTPS
Request method	ANY
Publishing environment	Publish
Authentication method	No authentication
Tag	Not enabled
You can upgrade to API (	Gateway Standard to use advanced API gateway features. Note that the operation cannot be undone.Learn more 🗹

7. Click the access path URL to access the Django project as shown below:



### Custom deployment: Quick migration of local project to cloud

### Local development

1. Run the following command to confirm that Django has been installed in your local environment.

```
python -m pip install Django
```

2. Create the Hello World sample project locally.

django-admin startproject helloworld && cd helloworld

### The directory structure is as follows:

```
$ tree
. manage.py Manager
|--***
| |-- __init__.py Package
| |-- settings.py Settings file
| |-- urls.py Route
| `-- wsgi.py Deployment
```

3. Run the python manage.py runserver command locally to start the bootstrap file. Below is the sample code:

```
$ python manage.py runserver
July 27, 2021 - 11:52:20
Django version 3.2.5, using settings 'helloworld.settings'
Starting development server at http://127.0.0.1:8000/
Quit the server with CONTROL-C.
```

4. Visit http://127.0.0.1:8000 in a browser, and you can access the sample Django project locally as shown below:



### **Deployment in cloud**

Next, perform the following steps to make simple modifications to the locally created project, so that it can be quickly deployed through an HTTP-triggered function. The steps of project transformation for Django are as follows:

### 1. Install dependencies

2. As the Django dependency library is not provided in the standard cloud environment of SCF, you must install the dependencies and upload them together with the project code. Create the requirements.txt file first with the following content:

Django==3.1.3

#### 3. Run the following command to install:

```
pip install -r requirements.txt -t .
```

Note :

As the initialized default project imports the db.sqlite3 library, install this dependency synchronously or configure comments for the DATABASES field in the setting.py file of the project.

### 2. Add the scf\_bootstrap bootstrap file

The listening port in the HTTP-triggered function must be **9000**, so you need to change the listening address and port in the following way: create the scf\_bootstrap bootstrap file in the project root directory and add the following content to it (which is used to configure environment variables, specify service bootstrap commands, and make sure that your service can be started normally through this file):

```
#!/bin/bash
/var/lang/python3/bin/python3 manage.py runserver 9000
```

3. After the creation is completed, you need to run the following command to modify the executable permission of the file. By default, the permission 777 or 755 is required for it to start normally. Below is the sample code:

chmod 777 scf\_bootstrap

Note :

- In the SCF environment, only files in the /tmp directory are readable/writable. We recommend you select
   /tmp when outputting files. If you select other directories, write will fail due to the lack of permissions.
- If you want to output environment variables in the log, you need to add the <u>-u</u> parameter before the startup command, such as python <u>-u</u> app.py.

4. After the local configuration is completed, run the following command to start the service (with execution in the scf\_bootstrap directory as an example) and make sure that your service can be normally started locally.

Note :

Be sure to change the python path to the local path during local testing.

./scf\_bootstrap

- 5. Log in to the SCF console and click **Functions** on the left sidebar.
- 6. Select the region where to create a function at the top of the page and click **Create** to enter the function creation process.
- 7. Select Create from scratch and configure the options as prompted:
  - Function type: Select HTTP-triggered function.
  - Function name: Enter the name of your function.
  - **Region**: Enter your function deployment region, such as Chengdu.
  - Runtime environment: Select Python 3.6.
  - Submitting method: Select Local folder and upload your local project.
  - **Function codes**: Select the specific local folder where the function code is.

### 8. Click Complete.

### **Development management**

After the deployment is completed, you can quickly access and test your web service in the SCF console and try out various features of SCF, such as layer binding and log management. In this way, you can enjoy the advantages of low



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cost and flexible scaling brought by the serverless architecture as shown below:

django		View release notes for Django 3	1
ajango		view release notes for Django 3	
	The install worked successfully!	Congratulations!	
	You are seeing this page because DE	BUG=True is in	
	your settings file and you have not o URLs.	configured any	
Django Documenta Topics, references, & how	tion Tutorial: A Polling App Get started with Django	Django Community Connect, get help, or contribute	