Alibaba Cloud
Container Service

Quick Start

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Generic conventions

Table -1: Style conventions

| Style	Description	Example
⛔	This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results.	⛔ Danger: Resetting will result in the loss of user configuration data.
⚠️	This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results.	⚠️ Warning: Restarting will cause business interruption. About 10 minutes are required to restore business.
📋	This indicates warning information, supplementary instructions, and other content that the user must understand.	ⓘ Notice: Take the necessary precautions to save exported data containing sensitive information.
	This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user.	📋 Note: You can use Ctrl + A to select all files.
>	Multi-level menu cascade.	Settings > Network > Set network type
Bold	It is used for buttons, menus , page names, and other UI elements.	Click **OK**.
`Courier font`	It is used for commands.	Run the `cd  / d   C :/ windows` command to enter the Windows system folder.
Italics	It is used for parameters and variables.	`bae   log   list  -- instanceid` *Instance_ID*
[] or [a|b]	It indicates that it is a optional value, and only one item can be selected.	`ipconfig [-all|-t]`

Style	Description	Example
{} or {a|b}	**It indicates that it is a required value, and only one item can be selected.**	`swich` *{stand | slave}*

Contents

1 Workflow

The complete workflow for Container Service is as follows.
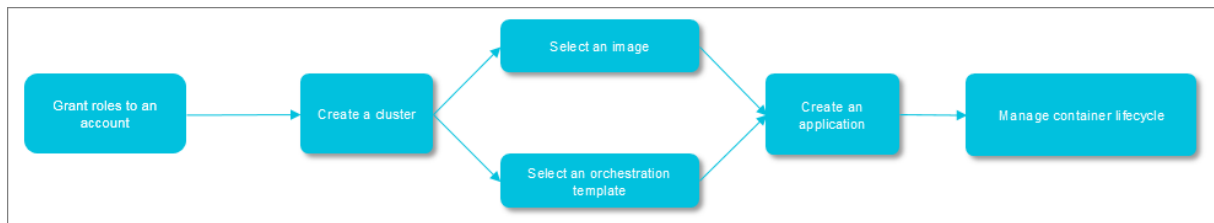
Step 1: Grant roles to an account.

For more information, see #unique_4.

Step 2: Create a cluster.

You can select the network environment of the cluster, and set the number of nodes and configurations for the cluster.

Step 3: Create an application by using an image or orchestration template.

Select an existing image or orchestration template, or create a new image or orchestration template.

If your application is composed of services supported by multiple images, create the application by using an orchestration template.

Step 4: Check the application status and the information of relevant services and containers after the deployment.
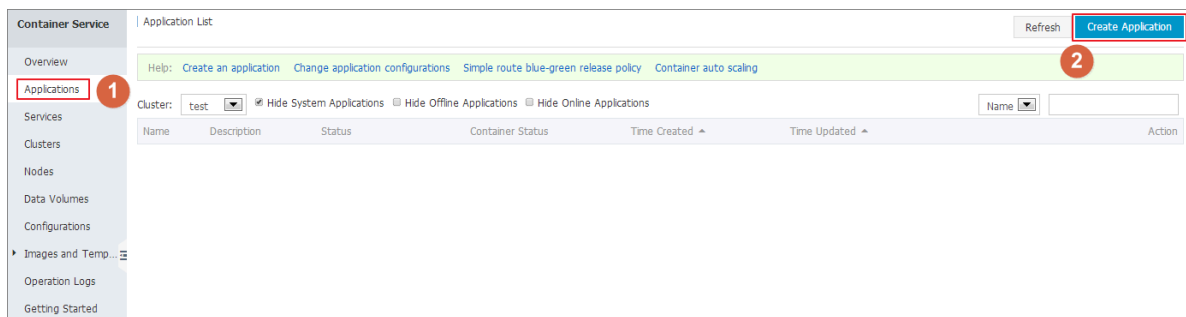
2 Create an Nginx webserver from an image

Prerequisites

> If you have not created a cluster before, create a cluster first. For information about how to create a cluster, see #unique_6.

Procedure

1. Log on to the Container Service console.

2. Click Applications in the left-side navigation pane, and click Create Application in the upper-right corner.

3. Complete the following configurations for the application you are about to create and then click Create with Image.

   · Name: Enter the name of the application. Enter nginx in this example.

   · Version: Enter the version of the application. By default, 1.0 is entered.

   · Cluster: Select the cluster on which the application is to be deployed.

   · Update: The update method of the application. Select `Standard Release` or `Blue - Green Release`. For more information, see #unique_7.

   · Description: Enter the information of the application. The entered description will be displayed on the Application List page.

   · Pull Docker Image: With this check box selected, Container Service pulls the latest Docker image from the repository to deploy the application, even when the image tag does not change.

   > To improve efficiency, Container Service caches the image. When deploying an application, Container Service uses the cached image instead of pulling the image from the repository if the image tag is the same as that of the local cache. Therefore, if you modify your codes and image but do not modify the image tag for the convenience of upper business, Container Service will use the old image

cached locally to deploy the application. With this check box selected, Container Service ignores the cached image and re-pulls the image from the repository when deploying the application to make sure the latest image and codes are always used.

4. Click Select image. Select nginx under the Popular tab and click OK.

   Container Service uses the latest version of image by default. To use another version of image, click Select image version. The Image version dialog box appears. Select the version and click OK.
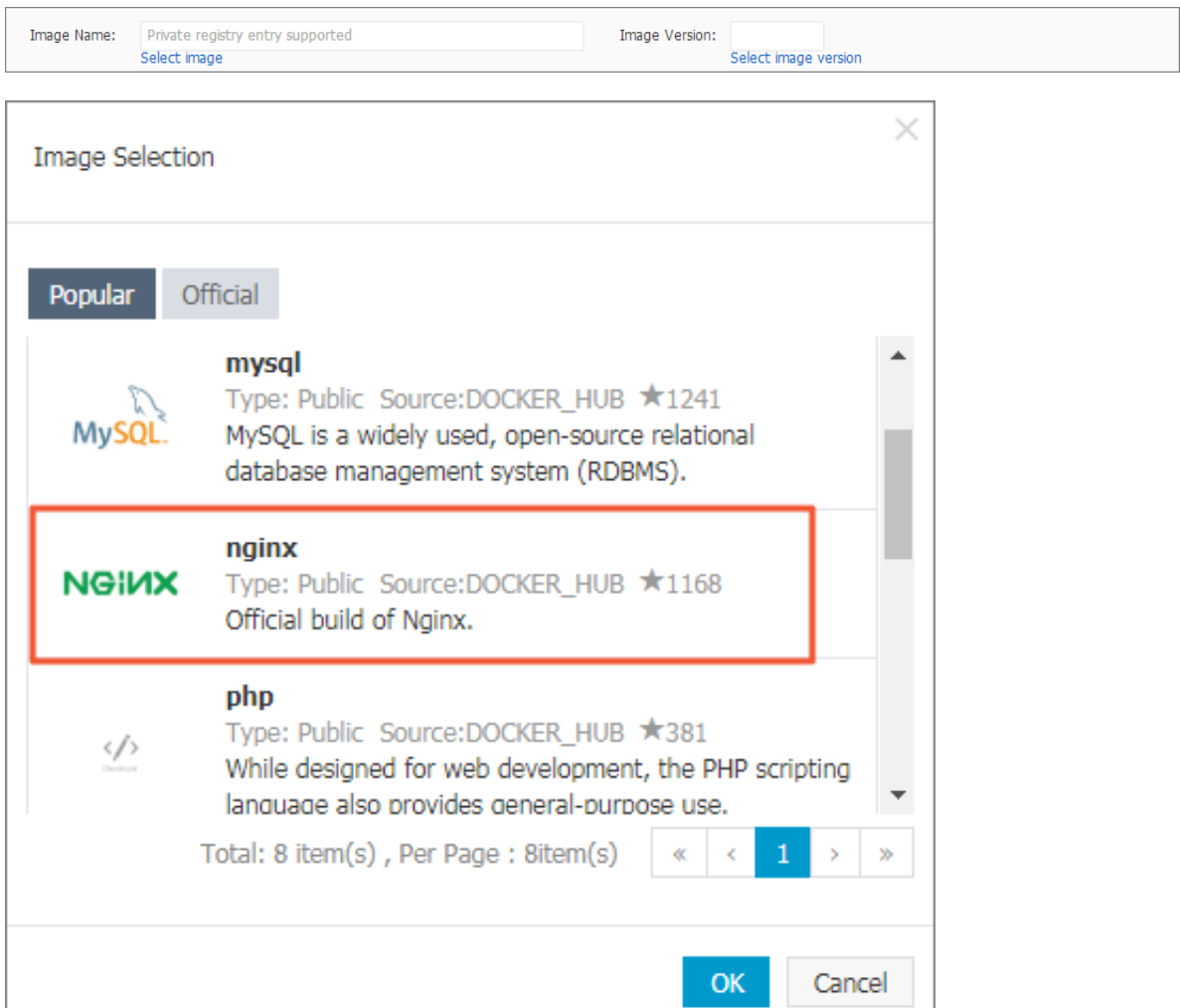
5. Configure the port mapping of host and container in Port Mapping. To enable access to the Nginx server in the container by means of Internet, configure the Web Routing.

    a) Click the plus icon next to Port Mapping and add two port mappings by entering 80 and 443 in the Container Port field respectively. The host port is not specified in this example.

    b) Configure the Web Routing.

- Click the plus icon next to Web Routing.
- Enter 80 in the Container Port field, indicating to access port 80 on the Nginx container.
- Enter nginx in the Domain field. Only the domain name prefix `nginx` is entered. If the domain name prefix is `XXX`, you get the domain name `XXX.$cluster_id.$region_id.alicontainer.com` for test. In this example, you get the test domain name `nginx . c9b424ed59  1eb4892a2d  18dd264a6f  dfb . cn - hangzhou . alicontain  er . com .`

> 📋 **Note:**
> You can also enter your own domain name. For how to add your own domain name, see #unique_8. For how to configure the container port used for routing and the domain name of HTTP services, see routing in #unique_9. For information about how the routing service forwards requests to the container, see #unique_10.

6. Click Create. Container Service creates the application nginx according to the preceding settings.

7. A page indicating the application is created appears. Click View Application List or Back to Application List on the page or click Applications in the left-side navigation pane. Click the application name nginx to view the application details..

8. Click the service name nginx under Services to view the service details.

9. Click the access endpoint of the service nginx. The Nginx server default welcome page is displayed.

📋 **Note:**

If you cannot access this page, see #unique_11.

3 Create WordPress with an orchestration template

Prerequisites

If you have not created a cluster before, create a cluster first. For information about
how to create a cluster, see #unique_6.

Procedure

1. Log on to the Container Service console.

2. Click Applications in the left-side navigation pane and then click Create
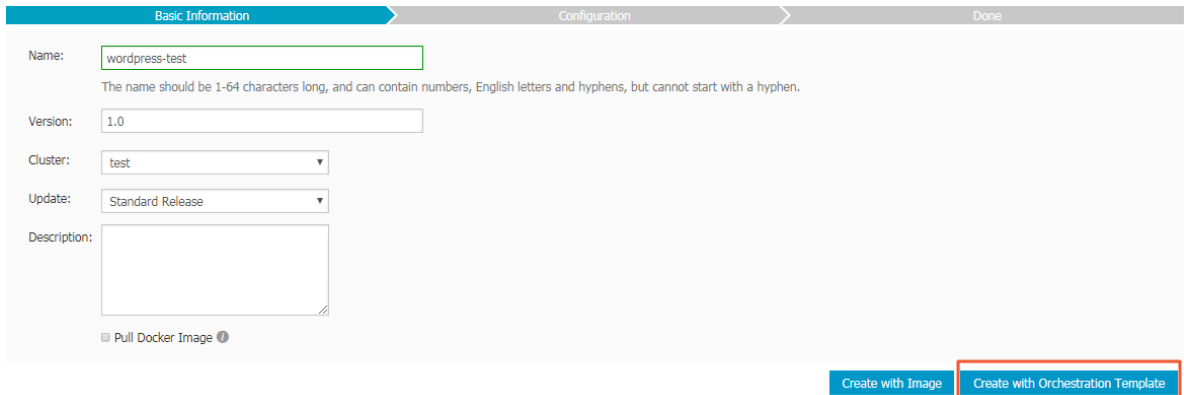   Application in the upper-right corner.
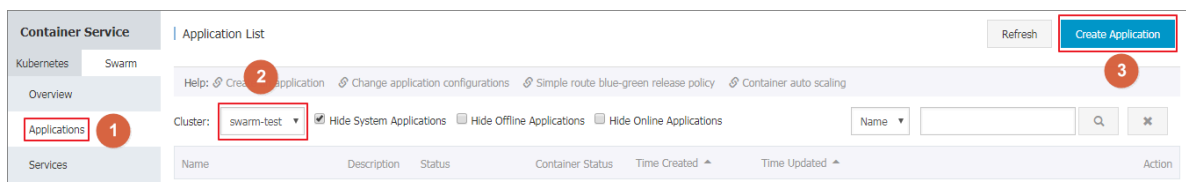
3. Complete the following configurations for the application you are about to create
   and then click Create with Orchestration Template.

   · Name: Enter the name of the application. Enter wordpress-test in this example.

   · Version: Enter the version of the application. The default version is 1.0.

   · Cluster: Select the cluster on which the application is to be deployed.

   · Update: The update method of the application. Select Standard Release or Blue-
     Green Release. For more information, see #unique_7.

   · Description: Enter the information of the application. The entered description
     will be displayed on the Application List page.

   · Pull Docker Image: With this check box selected, Container Service pulls the
     latest Docker image from the repository to deploy the application, even when
     the image tag does not change.

     To improve efficiency, Container Service caches the image. When deploying
     an application, Container Service uses the cached image instead of pulling the
     image from the repository if the image tag is the same as that of the local cache.
     Therefore, if you modify your codes and image but do not modify the image tag
     for the convenience of upper business, Container Service will use the old image
     cached locally to deploy the application. With this check box selected, Container

Service ignores the cached image and re-pulls the image from the repository when deploying the application to make sure the latest image and codes are always used.

4. Click Use Existing Orchestration Template, and click Select next to the wordpress template.
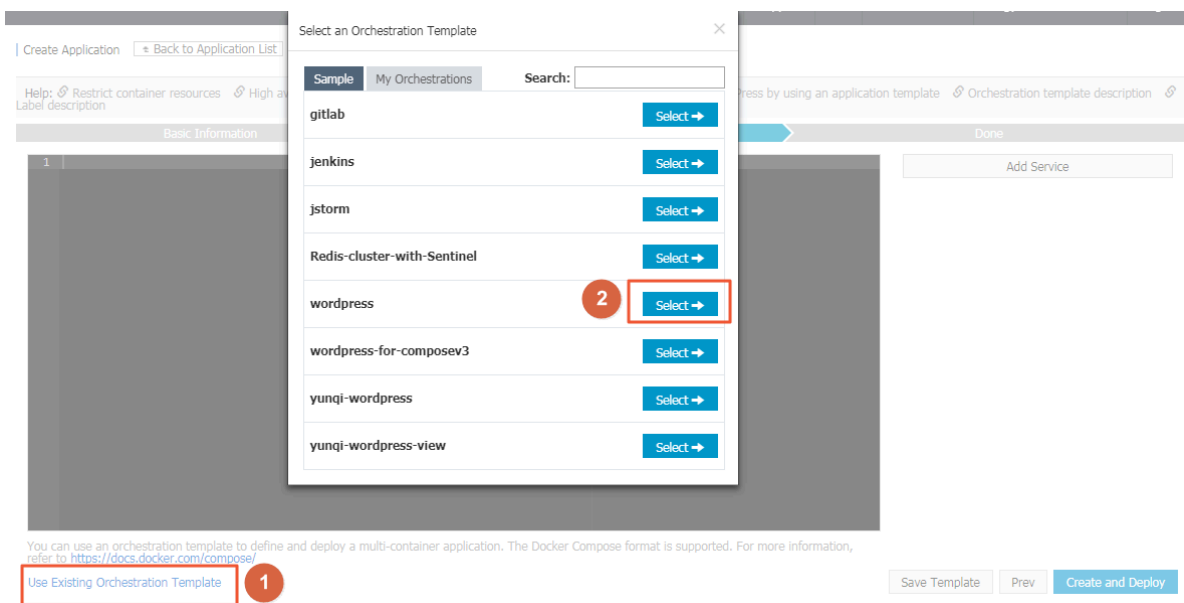
5. Modify the corresponding configurations

by making modifications in the template directly or clicking Edit to edit the services.

`aliyun . routing . port_80 :  http :// wordpress` indicates that requests from `http :// wordpress .$ testDomain` are forwarded to port 80 on the container after the container has run successfully.

6. Click Create and Deploy.

7. A page indicating the application is created appears. Click View Application List or Back to Application List on the page or click Applications in the left-side navigation pane. Click the application name wordpress-test to view the application details.

8. Click the service name web under Services to view the service details.

9. Click the access endpoint, the domain name for access, of the service web.

Note:

· The domain name in this example is only used for test. Bind your own domain name.

· If you cannot access the endpoint, see #unique_11 to troubleshoot the issue.

4 Connect to a cluster by using Docker tools

Container Service is fully compatible with the Docker Swarm API. You can access and manage Docker clusters by using common Docker tools, such as Docker client and Docker Compose.

Install a certificate

1. Obtain the access address.

   a. Log on to the Container Service console.

   b. Under Swarm, click Clusters in the left-side navigation pane. In the cluster list,
      click Manage at the right of a cluster.
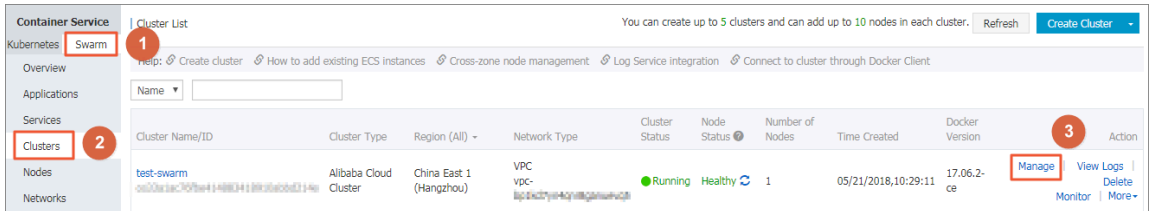
   As shown in the following figure, the cluster connection information is
   displayed.

2. Download and save the TLS certificate.

    Configure a TLS certificate before you use the preceding access address to access the Docker cluster.

    Click Download Certificate in the cluster details page to download the TLS certificate. The `certFiles . zip` file is downloaded. In the following example, the downloaded certificate is saved to the `~/. acs / certs / ClusterNam  e /` directory. `ClusterNam  e` indicates the name of your cluster. You can save the certificate to a different directory, but we recommend that you use the `~/. acs / certs / ClusterNam  e /` directory for easy management.

    ```
    mkdir  ~/. acs / certs / ClusterNam  e / # Replace   ClusterNam  e
      with   your   cluster   name
    cd  ~/. acs / certs / ClusterNam  e /
    cp  / path / to / certFiles . zip  .
    unzip   certFiles . zip
    ```

    The certFiles.zip file contains `ca . pem` , `cert . pem` , and `key . pem` files.

Manage clusters

Use Docker client to manage clusters

You can use Docker client to access the container clusters of Container Service. To do this, you must configure a certificate and an access address by using:

· Command-line parameters

    ```
    docker  -- tlsverify  -- tlscacert =~/. acs / certs / ClusterNam
    e / ca . pem  -- tlscert =~/. acs / certs / ClusterNam  e / cert .
    pem  -- tlskey =~/. acs / certs / ClusterNam  e / key . pem  \
    - H = tcp :// master2g1 . cs - cn - Qingdao . aliyun . com : 11599
    ps  # Replace   ClusterNam  e   and   tcp :// master2g1 . cs - cn -
    Qingdao . aliyun . com : 11599   with   the   actual   path   and
    access   address .
    ```

· Environment variables

    ```
    export   DOCKER_TLS  _VERIFY =" 1 "
    export   DOCKER_HOS  T =" tcp :// master2g1 . cs - cn - Qingdao
    . aliyun . com : 11599 " # Replace   tcp :// master2g1 . cs - cn
    - Qingdao . aliyun . com : 11599   with   the   actual   access
    address
    export   DOCKER_CER  T_PATH =~/. acs / certs / ClusterNam  e  #
    Replace   ClusterNam  e   with   the   actual   path
    ```

```
docker    ps
```

The preceding two examples show how to run the `docker    ps` command in the
cluster. You can replace `ps` with any other Docker command. For example, you
can run the `docker    run` command to start a new container.

Use Docker Compose to manage clusters

Docker Compose supports declaring an access address and a certificate by using
environment variables.

```
export   DOCKER_TLS  _VERIFY =" 1 "
export   DOCKER_HOS  T =" tcp :// master2g1 . cs – cn – Qingdao .
aliyun . com : 11599 "
export   DOCKER_CER  T_PATH =~/. acs / certs / ClusterNam  e
docker – compose   up
```

Revoke a certificate

If your downloaded certificate is accidentally leaked during usage, revoke the
certificate as soon as possible. Click Revoke Downloaded Certificate in the cluster
details page to revoke the downloaded certificate. Then, you can download a new
certificate.

> Note:
>
> Clicking Revoke Downloaded Certificate makes the downloaded certificate
> unavailable.