Solution

Setting Up a WordPress Website

Issue	1.0.0
Date	2023-12-05

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Contents

1 Solution Overview

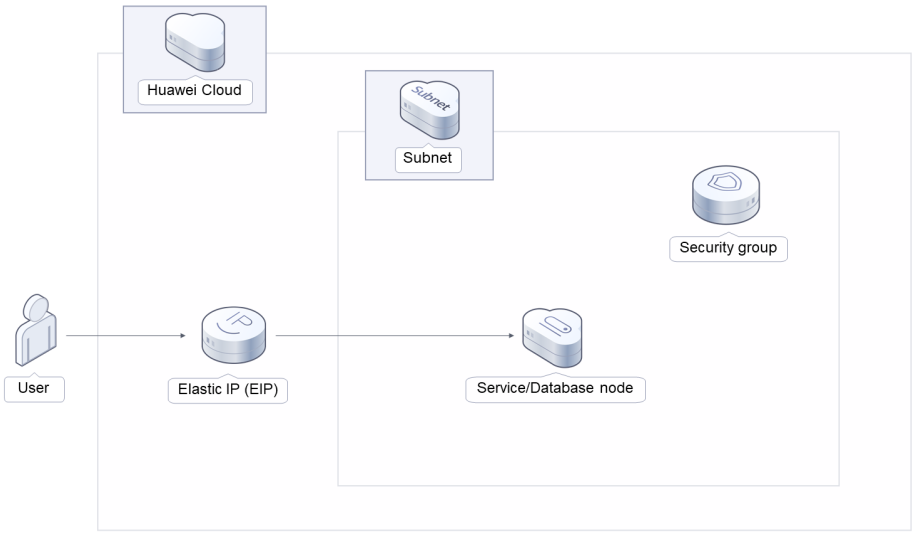
Application Scenario

This solution helps you set up a WordPress website on Huawei Cloud Elastic Cloud Servers (ECSs). WordPress is a free open-source content management system (CMS). It helps you quickly build personal forums, media libraries, member websites, learning management systems (LMSs), and online stores.

Solution Architecture

The solution architecture is illustrated below.

Figure 1-1 Architecture



This solution will:

- Create an ECS, which will be used for running personal websites and database nodes.

- Assign an elastic IP address (EIP) and bind it to the ECS to provide external website access.
- Install WordPress and MySQL on the Linux ECS and complete related configurations.
- Create a security group and configure security group access rules to ensure personal website security.

Advantages

- Low cost

  You can select ECSs of different specifications based on your requirements.

- One-click deployment

  You can create ECSs and deploy personal websites with just a few clicks.

- Open source and customization

  This solution is open-source and free for commercial use. You can also make custom development based on source code.

Constraints

- Before deploying this solution, register a HUAWEI ID, enable Huawei Cloud services, and complete real-name authentication. If you select the yearly/monthly billing mode, ensure that your account has sufficient balance. If you do not have sufficient balance, you can go to the **Billing Center** to manually pay for the order.
- After this solution is successfully deployed, it takes about 20 to 30 minutes to set up a WordPress website. This duration varies depending on ECS specifications and network bandwidth. After the website is set up, you can verify this solution by referring to **Initializing WordPress**.

2 Resource Planning and Costs

This solution will deploy the resources listed in the following table. The costs are only estimates and may differ from the final prices. For details, see **pricing details**.

Table 2-1 Resource planning and costs (yearly/monthly)

Huawei Cloud Service	Example Configuration	Estimated Monthly Cost
Elastic Cloud Server (ECS)	• Region: TR-Istanbul • Billing Mode: Yearly/Monthly • Specifications: x86 | ECS | t6.medium.2 | 1 vCPU | 2 GiB • Image: CentOS 7.6 64bit • System Disk: General Purpose SSD | 40 GiB • Data Disk: General Purpose SSD | 250 GiB • Quantity: 1	$41.83 USD
Elastic IP (EIP)	• Region: TR-Istanbul • Pay-per-Use: $0.09 USD/GB + $0.005 USD/hour (EIP reservation price) • Routing Type: Dynamic BGP • Billed by: Traffic • Bandwidth: 300 Mbit/s • Quantity: 1 • Required Duration: 720 hours	$0.09 USD/GB (public network traffic price)
Total		**$41.83 USD + $0.09 USD/GB (public network traffic price)**

Table 2-2 Resource planning and costs (pay-per-use)

Huawei Cloud Service	Example Configuration	Estimated Monthly Cost
Elastic Cloud Server (ECS)	• Pay-per-use: $0.06 USD/hour • Region: TR-Istanbul • Billing Mode: Yearly/Monthly • Specifications: x86 | ECS | t6.medium.2 | 1 vCPU | 2 GiB • Image: CentOS 7.6 64bit • System Disk: General Purpose SSD | 40 GiB • Data Disk: General Purpose SSD | 250 GiB • Quantity: 1	$ 45.84 USD
Elastic IP (EIP)	• Region: TR-Istanbul • Pay-per-Use: $0.09 USD/GB + $0.005 USD/hour (EIP reservation price) • Routing Type: Dynamic BGP • Billed by: Traffic • Bandwidth: 300 Mbit/s • Quantity: 1 • Required Duration: 720 hours	$0.09 USD/GB (public network traffic price)
Total		**$45.84 USD + $0.09 USD/GB (public network traffic price)**

3 Procedure

3.1 Preparations

(Optional) Creating the rf_admin_trust Agency

Step 1 Access the Huawei Cloud official website, log in to the **console**, hover the mouse pointer over the account name in the upper right corner, and choose **Identity and Access Management**.

Figure 3-1 Console page

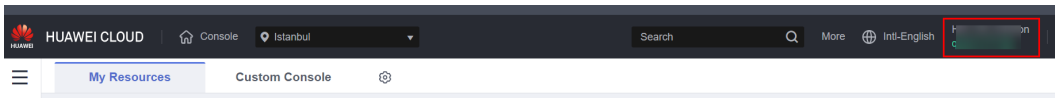
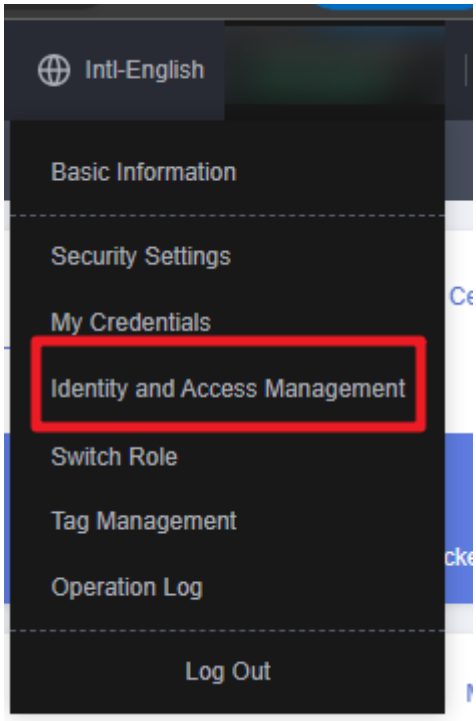
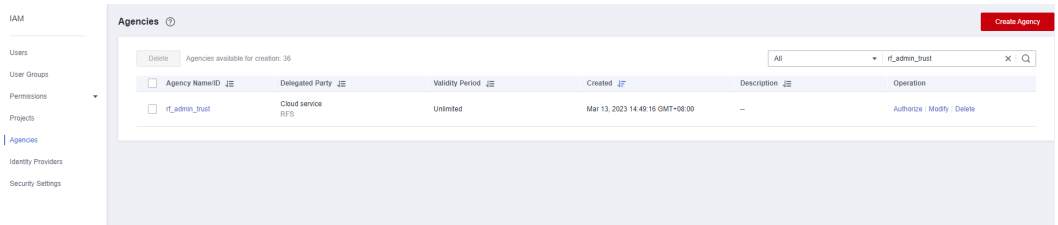


Figure 3-2 Identity and Access Management



Step 2 Choose **Agencies** in the left navigation pane and search for the **rf_admin_trust** agency.

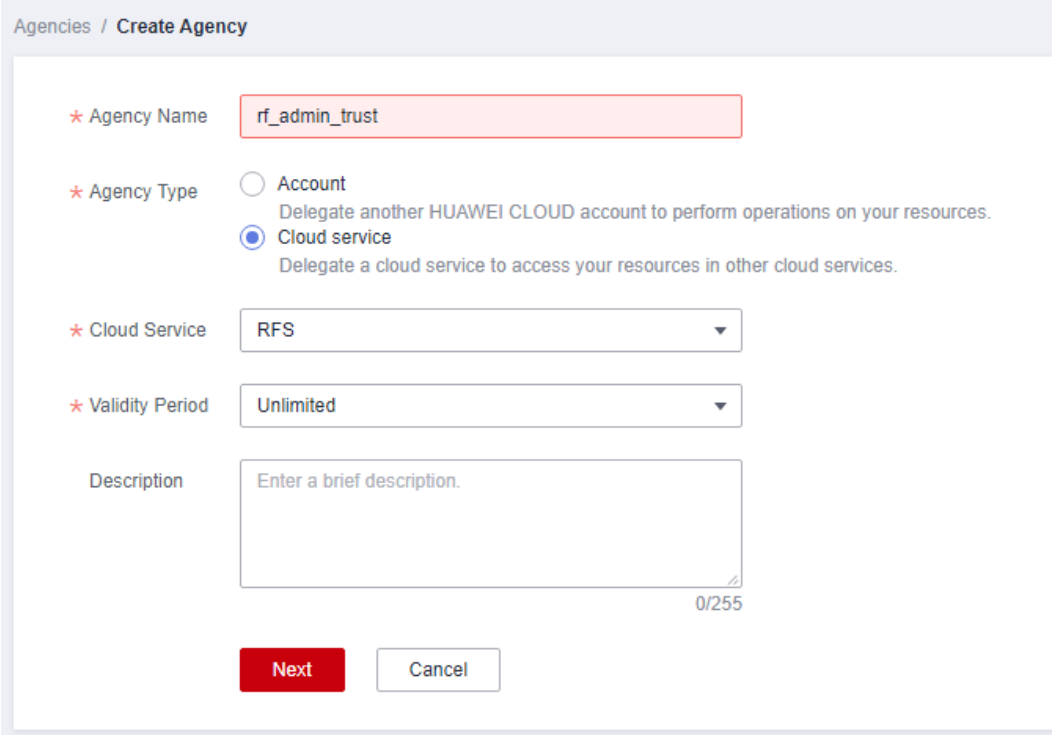
Figure 3-3 Agency list



- If the agency is found, skip the following steps.
- If the agency is not found, perform the following steps.

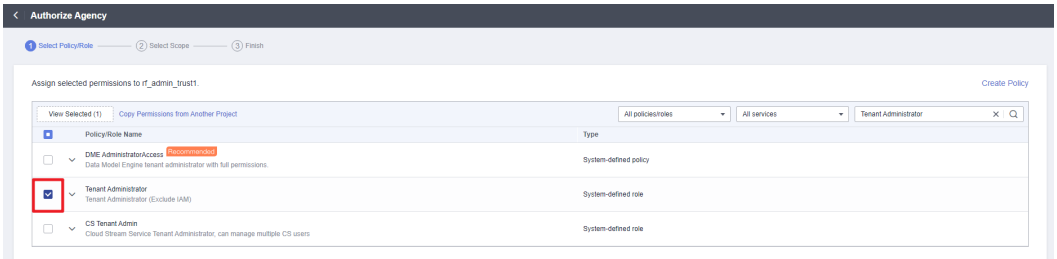
Step 3 Click **Create Agency** in the upper right corner of the page. On the displayed page, enter **rf_admin_trust** for **Agency Name**, select **Cloud service** for **Agency Type**, select **RFS** for **Cloud Service**, and click **Next**.

Figure 3-4 Create Agency



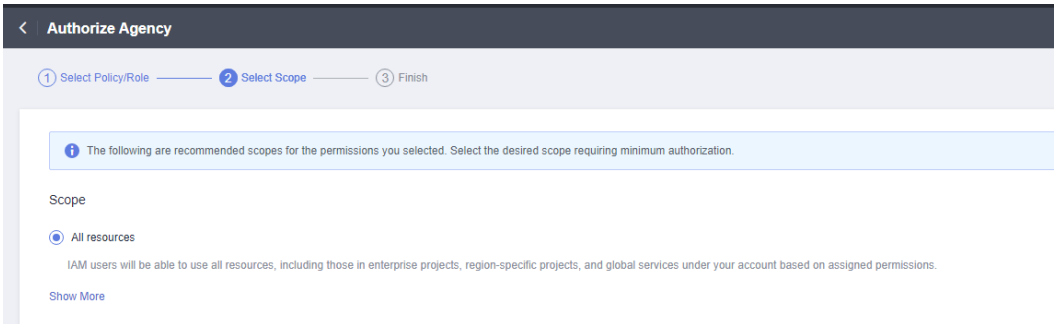
Step 4 Search for **Tenant Administrator** and select it in the search results.

Figure 3-5 Selecting a policy



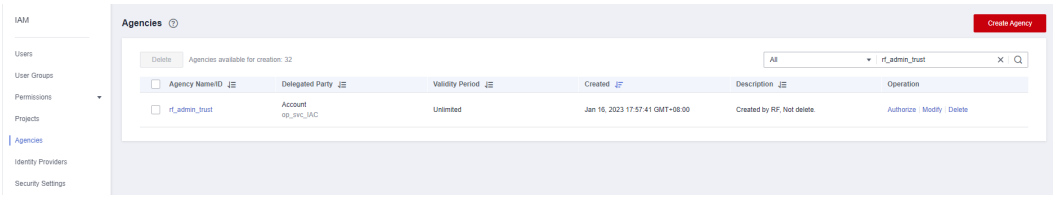
Step 5 Select **All resources** and click **OK**.

Figure 3-6 Selecting a scope



Step 6 Check that the **rf_admin_trust** agency is displayed in the agency list.

Figure 3-7 Agency list



----End

3.2 Quick Deployment

This section describes how to quickly deploy this solution.

Table 3-1 Parameter description

Parameter	Type	Mandatory	Description	Default Value
vpc_name	String	Yes	Virtual Private Cloud (VPC) name. You can select a template and create a VPC with the unique name. The name can include 1 to 57 characters and can contain only letters, digits, underscores (_), hyphens (-), and periods (.).	build-a-personal-website-based-on-wordpress_demo

Parameter	Type	Mandatory	Description	Default Value
secgroup_name	String	Yes	Security group name. A new security group needs to be created. For details about how to configure a security group rule, see **(Optional) Modifying Security Group Rules**. The name can include 1 to 64 characters and can contain only letters, digits, underscores (_), hyphens (-), and periods (.).	build-a-personal-website-based-on-wordpress_demo
ecs_name	String	Yes	Elastic Cloud Server (ECS) name, which must be unique. It can include 1 to 60 characters and can contain only letters, digits, underscores (_), hyphens (-), and periods (.).	build-a-personal-website-based-on-wordpress_demo
ecs_flavor	String	Yes	ECS flavor. For details, see **A Summary List of x86 ECS Specifications**.	t6.medium.2

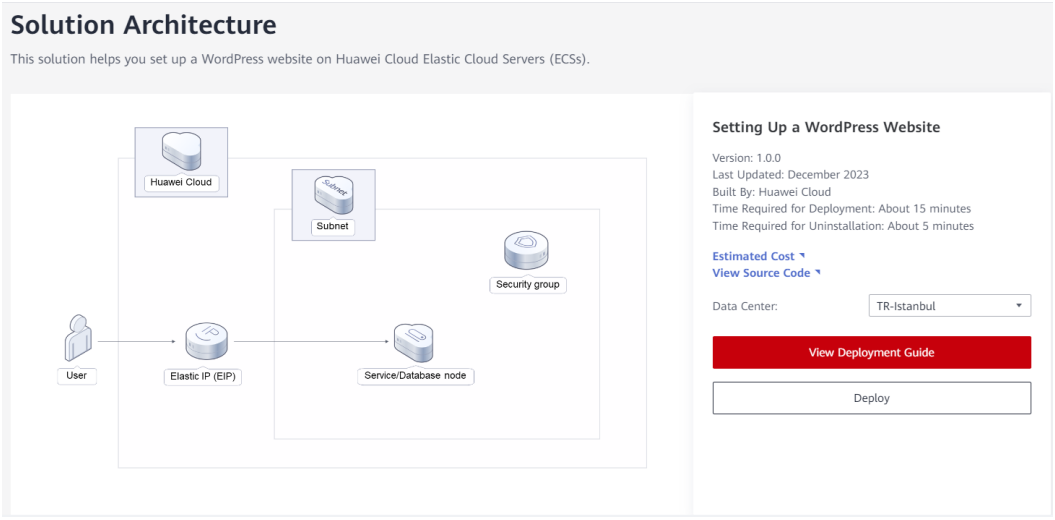
Parameter	Type	Mandatory	Description	Default Value
ecs_password	String	Yes	ECS initial password. After an ECS is created, log in to the ECS console and change the password by referring to **Resetting the Password for Logging In to an ECS on the Management Console**. The password can include 8 to 26 characters and must contain at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters (!@$%^-_=+ [{}]:,./?). The password cannot contain the username or the username spelled backwards. The administrator username is **root**, for example, Huawei@123.	Left blank
system_disk_size	String	Yes	ECS system disk size, in GiB. The value ranges from 40 to 1024. The system disk size cannot be scaled down.	40
data_disk_size	String	Yes	ECS data disk size, in GiB. The value ranges from 10 to 32768.	250

Parameter	Type	Mandatory	Description	Default Value
charging_mode	String	Yes	Billing mode. By default, expenses are automatically deducted. The value can be **prePaid** (yearly/monthly) or **postPaid** (pay-per-use).	postPaid
charging_unit	String	No	Unit of a subscription period. This parameter is mandatory when the **charging_mode** is set to **prePaid** (yearly/monthly). The value can be **month** or **year**.	month
charging_period	number	No	Subscription period. This parameter is mandatory when the **charging_mode** is set to **prePaid** (yearly/monthly). If **charging_unit** is set to **month**, the value ranges from **1** to **9**. If **charging_unit** is set to **year**, the value ranges from **1** to **3**.	1
eip_traffic_size	number	Yes	Elastic IP (EIP) bandwidth size, in Mbit/s. This template uses an EIP billed by traffic. The value ranges from 1 to 300.	300

Parameter	Type	Mandatory	Description	Default Value
mysql_password	String	Yes	Password of the MySQL user **root**. The password can include 8 to 12 characters and can contain only uppercase letters, lowercase letters, digits, and special characters (!@$ %^-_=+[{}]:,./?), for example, Huawei@123.	Left blank
database_sername	String	Yes	Username of the MySQL database. The username can contain 8 to 16 characters, which can be all letters or a combination of letters and digits.	wordprssuser
database_password	String	Yes	Password of the MySQL user **database**. After a MySQL database is created, you can change its password by referring to the deployment guide. The password can include 8 to 12 characters and can contain uppercase letters, lowercase letters, digits, and special characters (@%^-=) , for example, Huawei@123.	Left blank

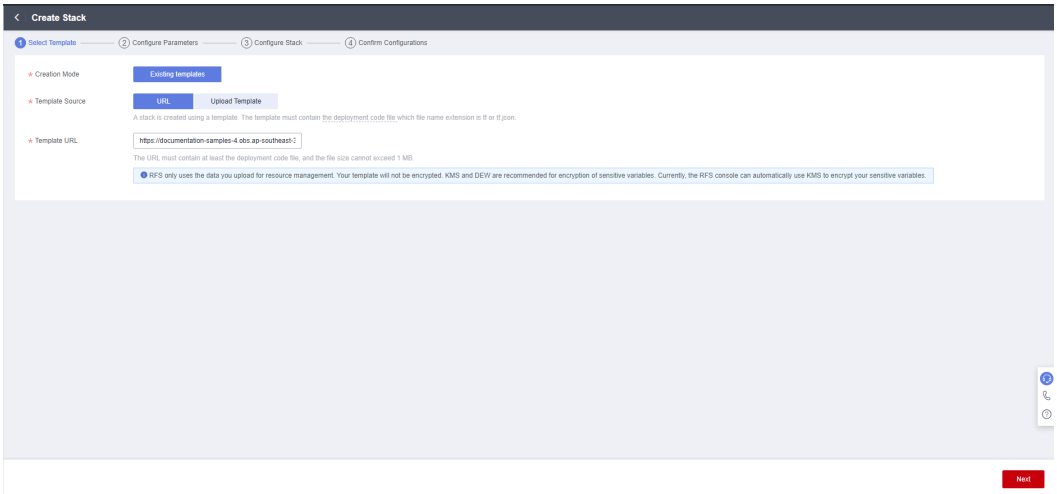
Step 1 Log in to **Practical Application of Huawei Cloud Solutions**, choose **Setting Up a WordPress Website**. Select your desired region from the **Data Center** drop-down list and then click **Deploy**.

Figure 3-8 Selecting a solution



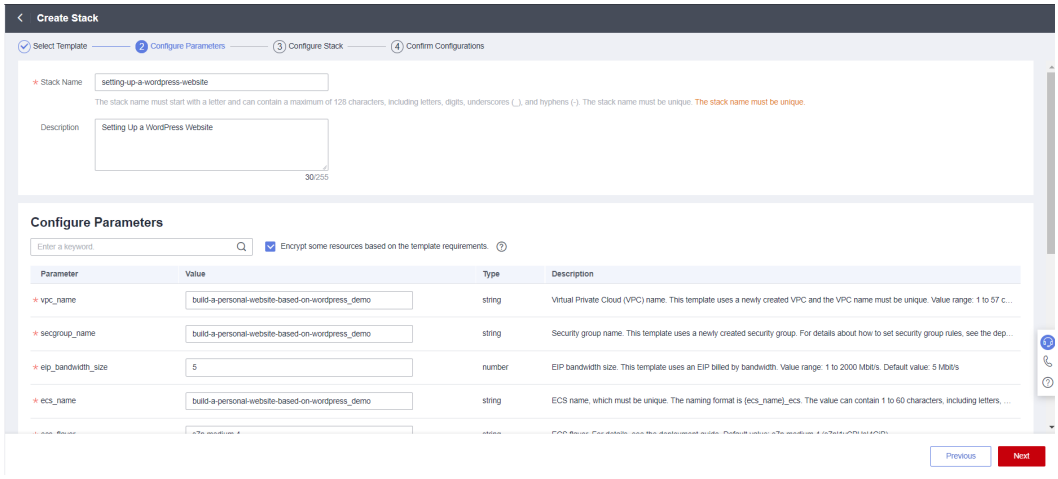
Step 2 On the **Select Template** page, click **Next**.

Figure 3-9 Selecting a template



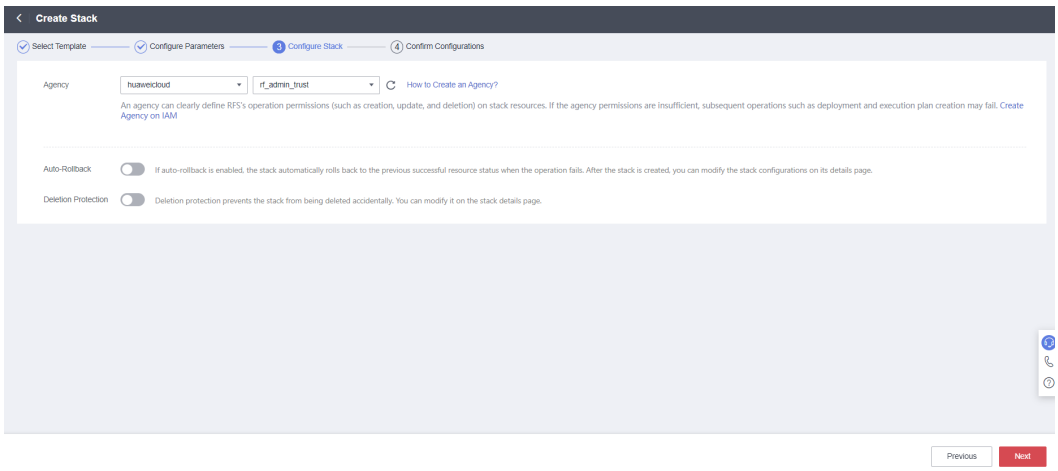
Step 3 On the **Configure Parameters** page, configure parameters by referring to **Table 3-1** and click **Next**.

Figure 3-10 Configure Parameters



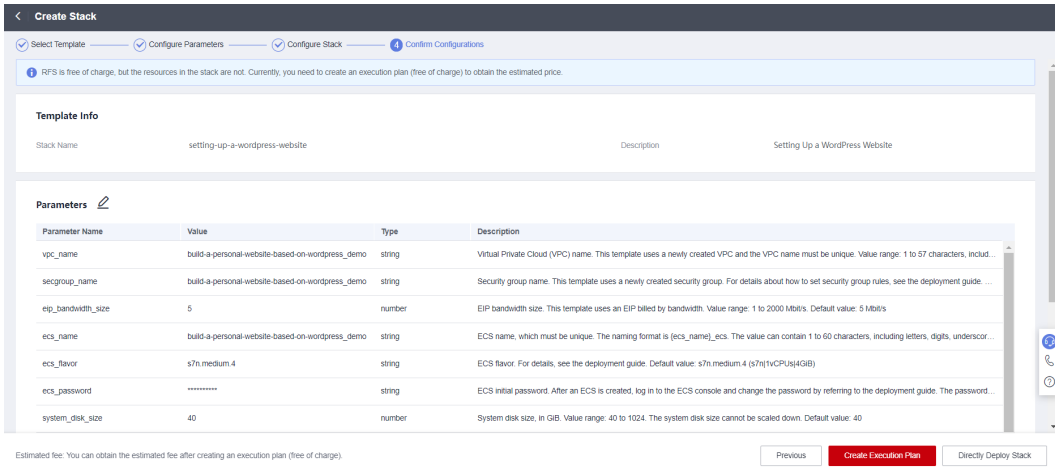
Step 4 On the **Configure Stack** page, select the **rf_admin_trust** agency and click **Next**.

Figure 3-11 Configuring a stack



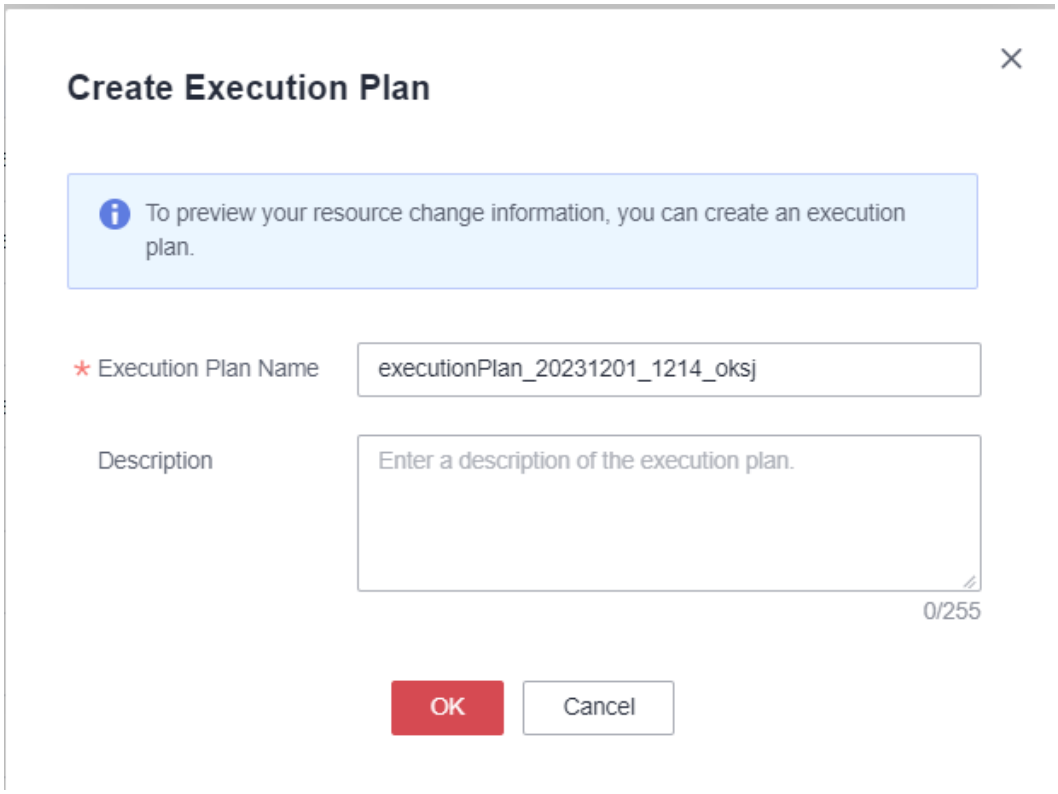
Step 5 On the **Confirm Configurations** page, click **Create Execution Plan**.

Figure 3-12 Confirming configurations



Step 6 In the displayed **Create Execution Plan** dialog box, enter an execution plan name and click **OK**.

Figure 3-13 Creating an execution plan



Step 7 Wait until the status of the execution plan changes to **Available** and click **Deploy** in the **Operation** column. In the displayed dialog box, click **Execute**.

Figure 3-14 Execution plan created

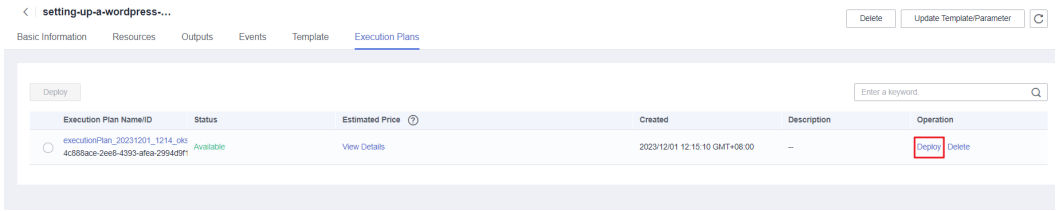
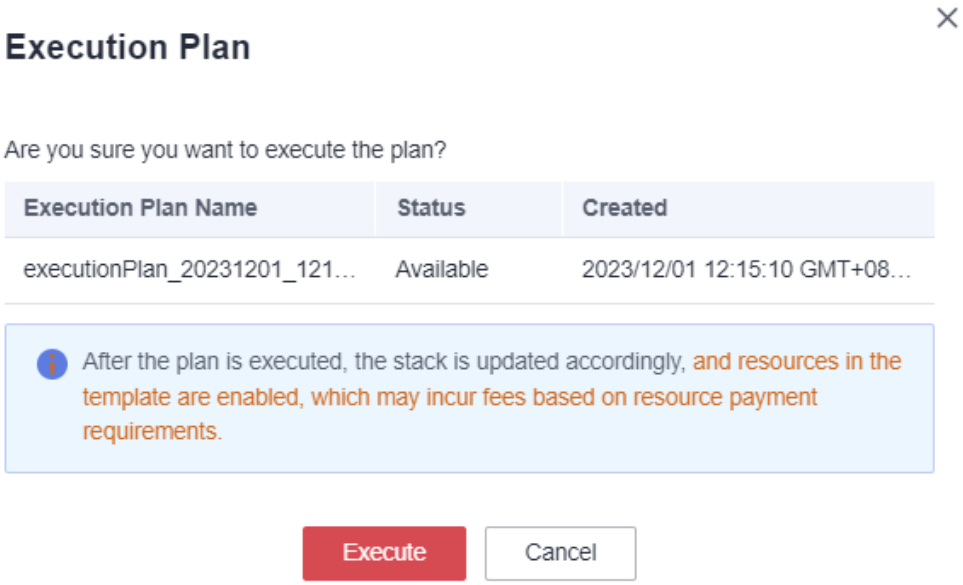
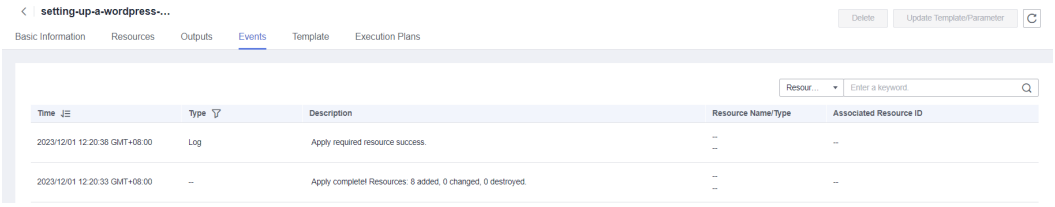


Figure 3-15 Confirming the execution plan



Step 8 (Optional) If you select the yearly/monthly billing mode and your account balance is insufficient, log in to the **Billing Center** to manually pay for the order. You can refer to **Table 1 Resource planning and costs (yearly/monthly)** to see the total price.Click the **Events** tab and check whether the message "Apply required resource success." is displayed. If yes, the solution is successfully deployed.

Figure 3-16 Solution deployed



----End

3.3 Getting Started

(Optional) Modifying Security Group Rules

NOTICE

- This solution uses port 22 to remotely log in to the ECS. By default, the VPC subnet created in this solution allows access from port 22. To configure an IP address whitelist, see **Modifying a Security Group Rule**.

A security group is a collection of access control rules for cloud resources, such as cloud servers, containers, and databases, to control inbound and outbound traffic.

Cloud resources associated with the same security group have the same security requirements and are mutually trusted within a VPC.

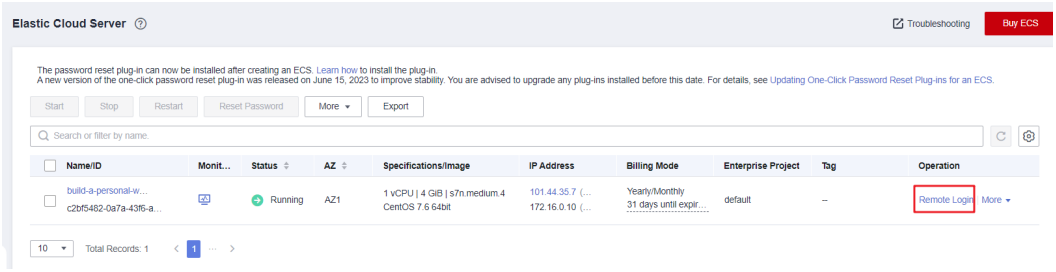
You can modify the security group policy, for example, by adding, modifying, or deleting a TCP port, as follows:

- Adding a security group rule: **Add an inbound rule** and enable a TCP port if needed.
- Modifying a security group rule: Inappropriate security group settings can be a serious security risk. You can **modify security group rules** to ensure the network security of your ECSs.
- Deleting a security group rule: If the source or destination IP address of an inbound or outbound security group rule changes, or a port does not need to be enabled, you can **delete the security group rule**.

(Optional) Changing the MySQL Database Password

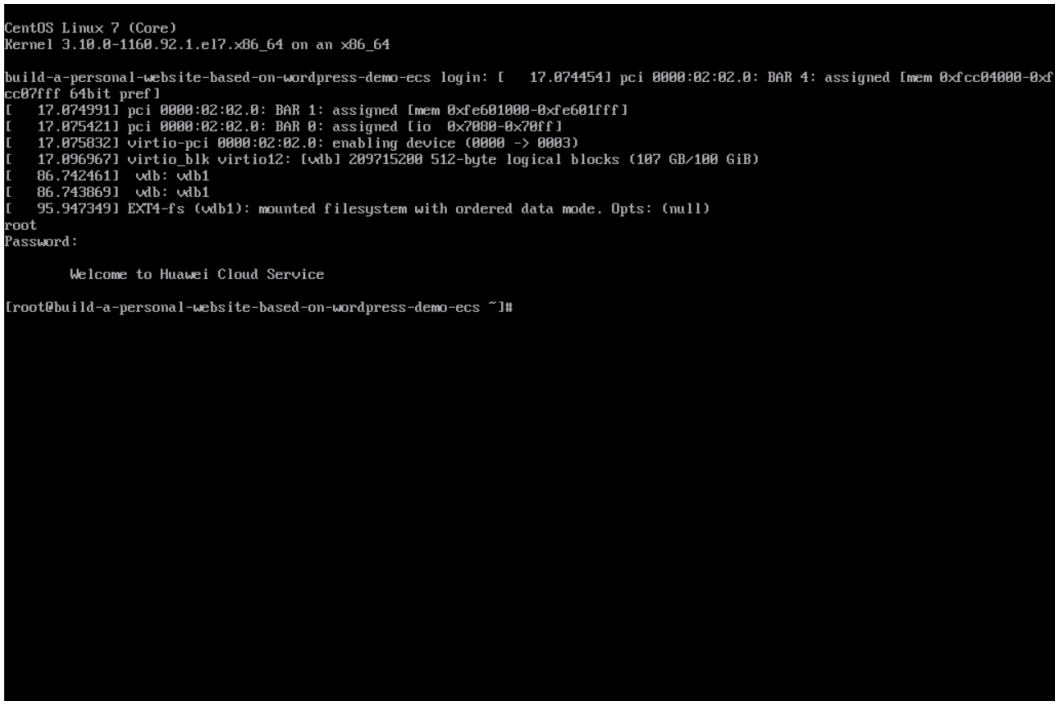
Step 1 Log in to the **ECS console**, locate the created ECS, and click **Remote Login** to log in to the Linux ECS.

Figure 3-17 Remote login



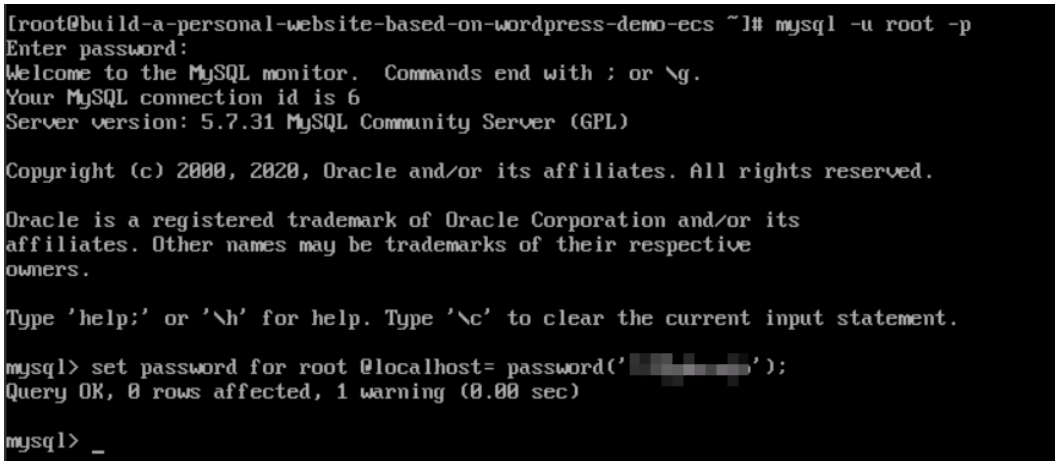
Step 2 On the Linux ECS, enter the username and password and press **Enter**.

Figure 3-18 Logging in to the ECS



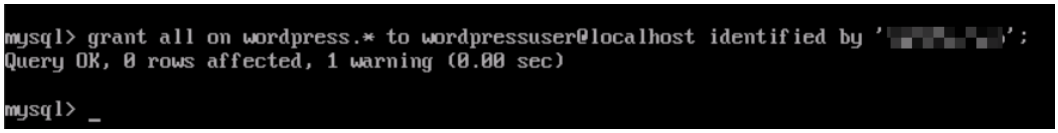
Step 3 Run the **mysql -u root -p** command to log in to the MySQL database as user **root**. Then, press **Enter** and enter the password. Then run the **SET PASSWORD** command to change the password: **set password for root @localhost= password ('new password')**.

Figure 3-19 Changing the password of the MySQL **root** user



Step 4 To change the password of the MySQL user **database**, log in to the MySQL database, enter **grant all on *wordpress*.* to *wordpressuser*@localhost identified by '*new password*';**, and press **Enter**. Then run the **exit** command to exit the MySQL database.

Figure 3-20 Changing the password of the MySQL user **database**



----End

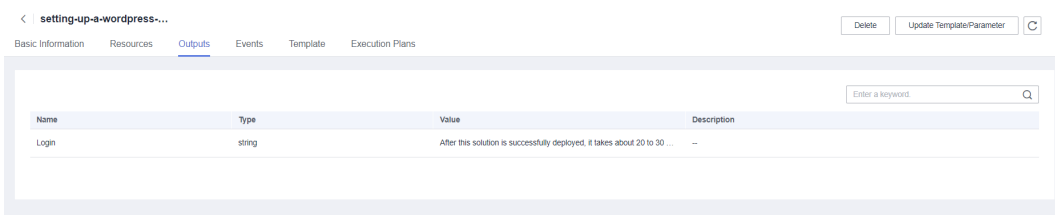
Initializing WordPress

NOTE

To deploy this solution, perform steps 1 to 6. To purchase a domain name, perform steps 7 to 9.

Step 1 Choose **Stack** > **Outputs** on the WordPress page, open Google Chrome, and enter the URL displayed after the deployment is successful. Then the WordPress installation wizard is displayed.

Figure 3-21 Output URL

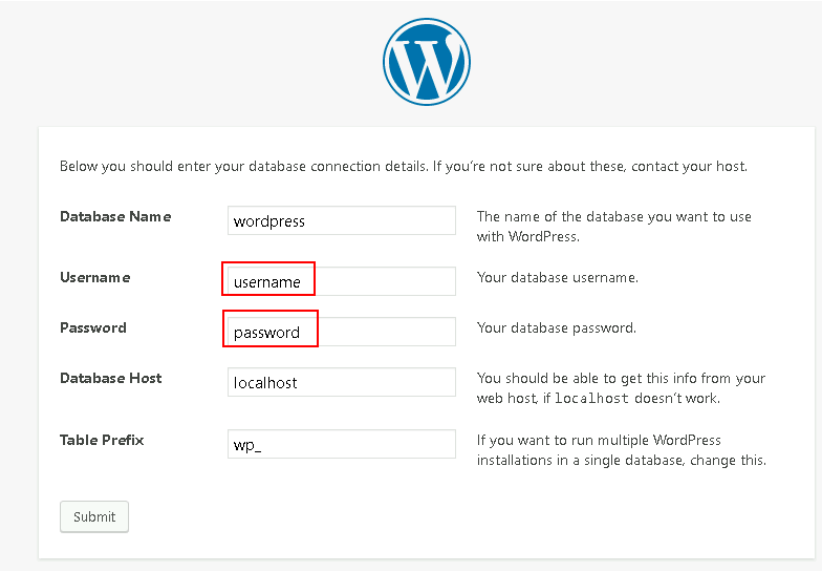


Step 2 Configure the database as prompted and click **Let's go**.

Figure 3-22 Installation wizard

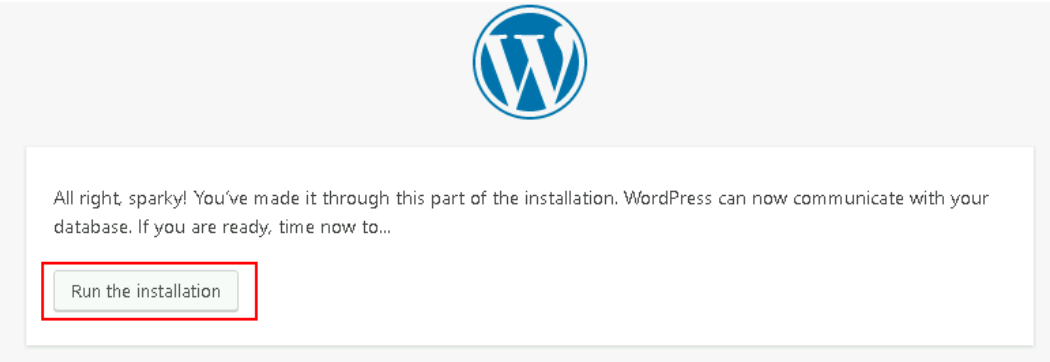
Step 3 In the displayed dialog box, enter the database connection details, such as the username and password, and click **Submit**. The database verification is successful.

Figure 3-23 Database connection details



Step 4 After the verification, the installation page is displayed. Click **Run the installation**.

Figure 3-24 Installation page



Step 5 Set the site title, administrator username, password, and email address. Then, click **Install WordPress**.

Figure 3-25 Setting parameters

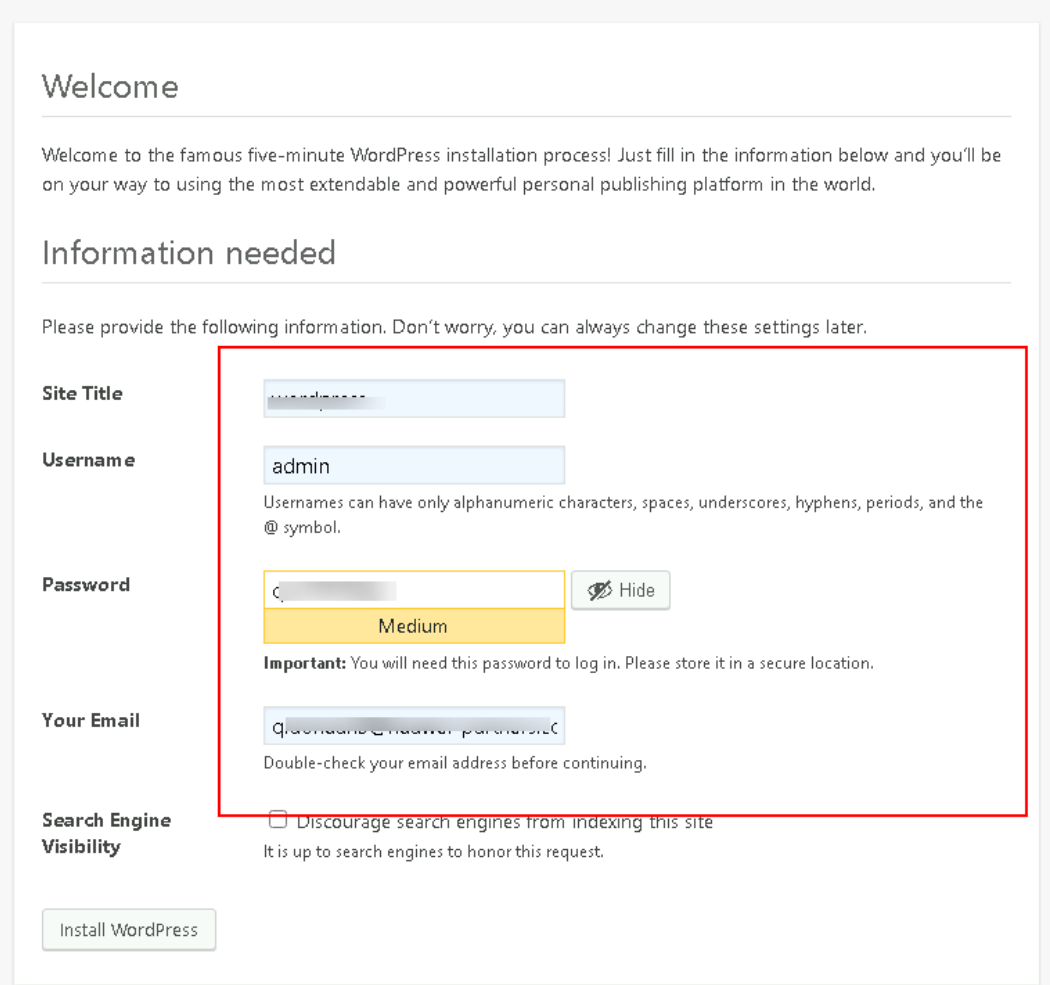
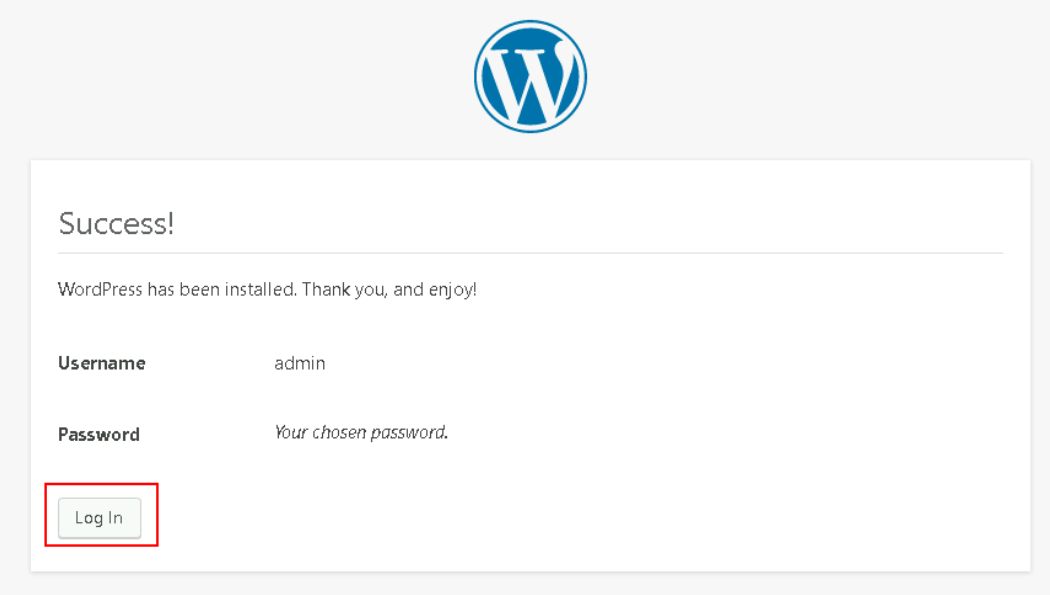


Figure 3-26 Successful installation



Step 6 Click **Log In**. Alternatively, enter **http://***Server IP address***/wordpress/wp-admin** in the address bar of the browser, enter the username and password, and click **Log In**.

Figure 3-27 WordPress login page

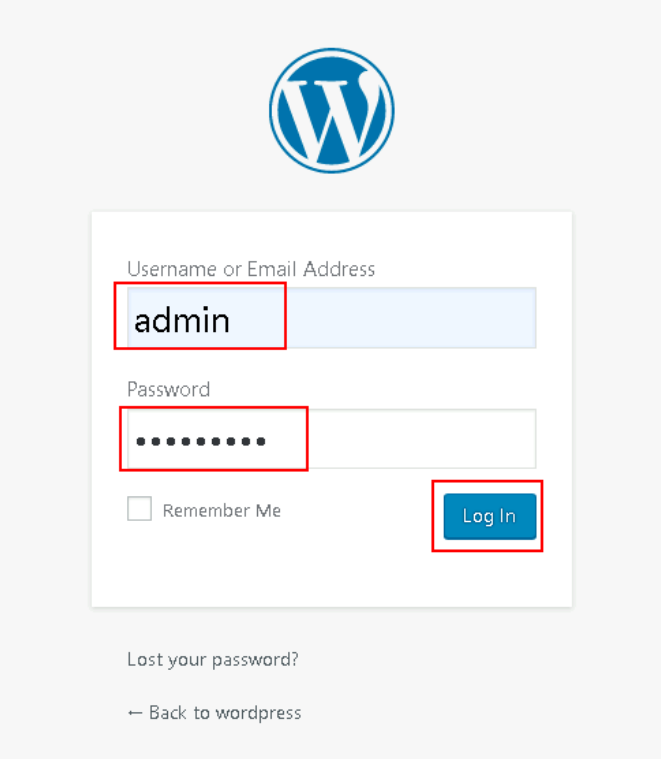
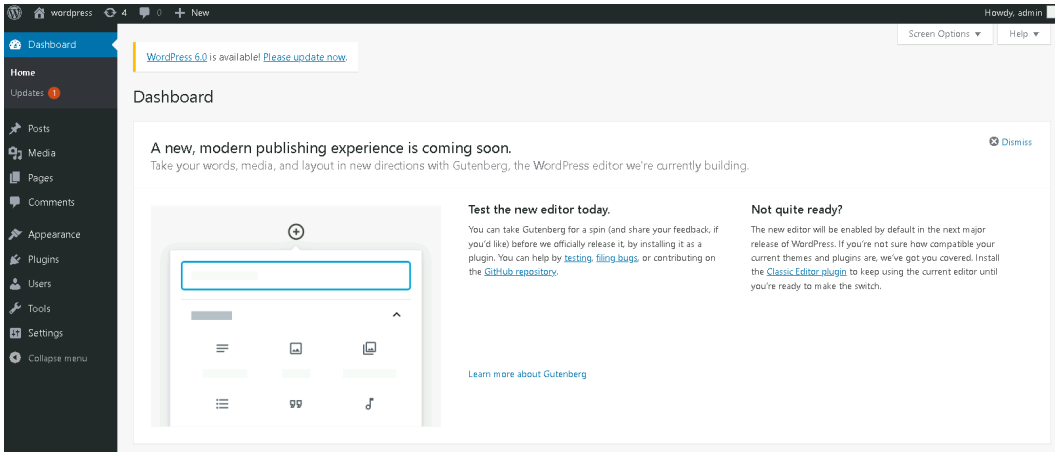


Figure 3-28 WordPress page



Step 7 Purchase a domain name.

To make the website easy to access, configure a unique domain name for the website. You are required to obtain an authorized domain name from the domain name registrar for the website.

Step 8 Complete ICP filing.

If your website does not have an ICP filing and needs to be hosted on Huawei Cloud, use the Huawei Cloud ICP filing system. For details, see **ICP Filing Process**.

Step 9 Configure DNS records.

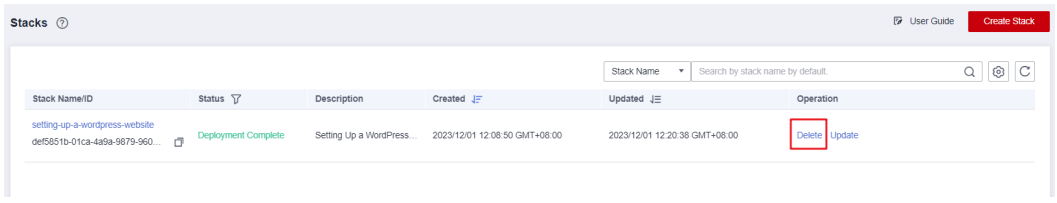
Your website can be visited using the registered domain name only after DNS records are configured. For details, see **Routing Internet Traffic to a Website**. For example, if the domain name is *www.example.com*, enter **http://www.*example*.com** in the address bar of the browser to access the website.

----End

3.4 Quick Uninstallation

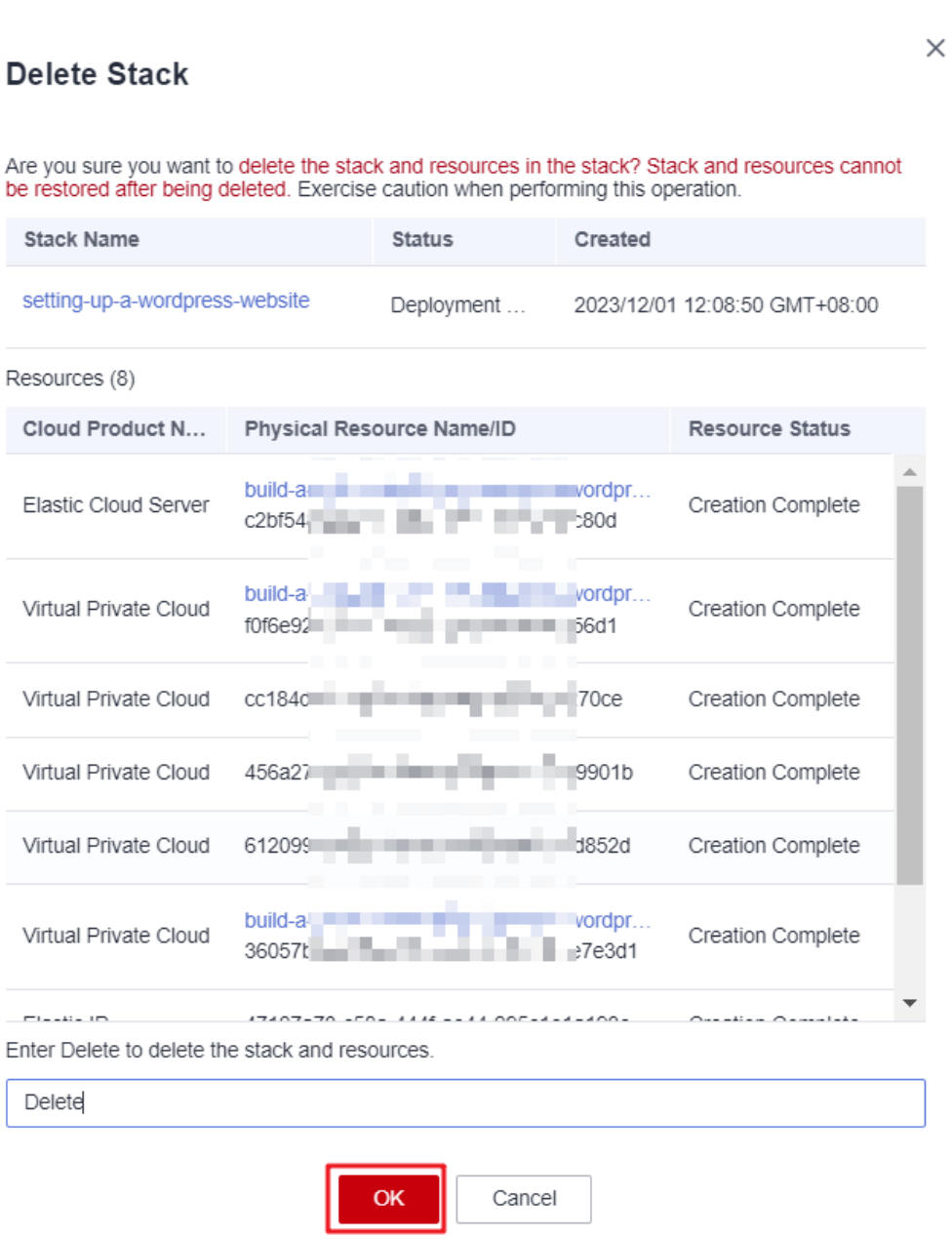
Step 1 Click **Delete** in the row where the solution stack is.

Figure 3-29 Uninstalling the solution



Step 2 Enter **Delete** and click **OK**.

Figure 3-30 Confirming the uninstallation



----End

4 Appendix

Terms

Basic concepts and cloud service introduction

- Elastic Cloud Server (ECS): a scalable and on-demand cloud server. It helps you efficiently set up reliable, secure, and flexible application environments, ensuring stable service running and improving O&M efficiency.
- Elastic IP (EIP): enables your cloud resources to communicate with the Internet using static public IP addresses and scalable bandwidths. You can easily bind an EIP to an ECS, BMS, virtual IP address, load balancer, or NAT gateway, enabling immediate Internet access.

5 Change History

Table 5-1 Change history

Released On	Description
2023-11-30	This issue is the first official release.

