



FortiAuthenticator - Alibaba Cloud Deployment Guide

Version 6.1.0



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About FortiAuthenticator on Alibaba Cloud

Overview

FortiAuthenticator is designed specifically to provide authentication services for firewalls, SSL and IPsec VPNs, wireless access points, switches, routers, and servers. FortiAuthenticator includes RADIUS and LDAP server authentication methods, and SAML, which is used for exchanging authentication and authorization data between an Identity Provider and a Service Provider. Authentication servers are an important part of an enterprise network, controlling access to protected network assets, and tracking users' activities to comply with security policies.

FortiAuthenticator is not a firewall; it requires a FortiGate appliance to provide firewall-related services. Multiple FortiGate units can use a single FortiAuthenticator appliance for Fortinet Single Sign-On (FSSO) and other types of remote authentication, two-factor authentication, and FortiToken device management. This centralizes authentication and FortiToken maintenance.

FortiAuthenticator provides an easy-to-configure remote authentication option for FortiGate users. Additionally, it can replace the FSSO Agent on a Windows AD network.

FortiAuthenticator for Alibaba Cloud delivers centralized, secure two-factor authentication for a virtual environment, with a stackable user license for the greatest flexibility. Supporting from 100 to 1 million+ users, FortiAuthenticator for Alibaba Cloud supports the widest range of deployments, from small enterprise right through to the largest service provider.

Instance type support

FortiAuthenticator for Alibaba Cloud can be deployed as VM instances. Supported machine types may change without notice.

Licensing

FortiAuthenticator for Alibaba Cloud supports the bring your own license (BYOL) model. Licenses can be obtained through any Fortinet partner. If you don't have a partner, contact alisales@fortinet.com for assistance in purchasing a license. This license model is stackable, allowing you to expand your VM solution as your environment expands.

For additional information on the FortiAuthenticator stackable license model, see the FortiAuthenticator datasheet.

Deploying FortiAuthenticator on Alibaba Cloud

Overview

This guide provides step-by-step instructions for successful deployment and initial configuration of FortiAuthenticator for Alibaba Cloud:

- Deploying FortiAuthenticator from the Alibaba Cloud Marketplace on page 5
- Connecting to FortiAuthenticator on page 8
- Installing a valid license on page 10
- Upgrading FortiAuthenticator firmware on page 11

Deploying FortiAuthenticator from the Alibaba Cloud Marketplace

- 1. Log in to the Alibaba Cloud Marketplace with your account and search for FortiAuthenticator in your search box.
- 2. Select the Fortinet FortiAuthenticator BYOL Authentication Service option in the results page .

| Marketplace | All Products | User Help Contact Us | | Search | Q | Join as Tech Partner | Seller Help |
|--------------------------|--------------|----------------------|---|--------------------|----------|--|-------------|
| All Products (1 results) | | | | | | | |
| Filtered by: | | FURTIDET | Fortinet FortiAuthenticator (BYC Service ***** (0.0/5) | IL) Authentication | | \$ 0 USD/Montl +Alibaba Cloud Usage F | |
| Pricing Plan | ^ | | Fortinet FortiAuthenticator integrates wit devices to implement authentication and | | | | |
| FREE | | | Delivery Method: Image Base Operation | g System: linux | | | |
| Bring Your Own License | | | Seller:Fortinet, Inc | | | | |
| Monthly | | | | | | | |

- **3.** On the FortiAuthenticator *Service* page, click *Choose Your Plan*. You will be directed to the *Basic Configurations* page.
- 4. Configure the following on the *Basic Configurations* page.
 - a. In Billing Method, select your preferred billing method.
 - b. In Region, choose the region where you want to deploy your VM.
 - **c.** In *Instance Type*, select *X86-Architecture* as the architecture type, any category that matches your need, and an instance family. FortiAuthenticator will not run on under 1GB of RAM, so it at least 2GB of RAM is recommended.

(Although FortiAuthenticator will run on 1GB of RAM, it may encounter performance issues when

| many users ar | e present). | • | | | | | | | | | | | |
|---|-----------------------|--------------------------------|---------------|-------------------------------------|--------------|---------------------------------------|--------------------------------|----------------|------------------|--|----------------------|---------|----------|
| Elastic Compute Service (E | CS) Quick Launch | Custom Launch | | | | | | | | | ③ Purchase History | Pricing | Ga Buy D |
| 1 Basic Configu | rations | 2 Networking | | | 3 System Cor | figurations (| Optional) | 4 0 | Grouping | g (Optional) | 5 Pre | view | |
| Billing Method | | Pay-As-You-Go | | | | | | | his feature | n, click View Details> | | | |
| Region Learn more | | | | | | | | | | | | | |
| Instance Type Current Generation All Generations Instance Type and Selet a configuration Fair Selet a type Search by instance type name, such at Q VO Optimized Indicates whet. ▼ Selet a configuration Instance Type and Archaecture Selet a type Search by instance type name, such at Q VO Optimized Indicates whet. ▼ Selet a configuration Request higher exchanging Archaecture Meterogeneous Computing (CS Bare Metal Instance exchanging | | | | | | | ecommended | | | | | | |
| | 🕜 🛛 Family 🔿 | Instance Type vCPU | Js 🕆 Memory 🕆 | Average Baseline CPU Performance | Clock Speed | Internal Network Bandwidth ‡ | Packet Forwarding Rate ≑ | Storage IOPS 🕥 | IPv6- support | Physical Processor ed | | | • |
| | · | | | | | Gops | | | | | | | > |
| | Burstable Typ | e tó ecs.t6-c1m4.2xlarge 8 vCl | PUs 32 GiB | 40 % | 2.5 GHz | Up to 4 Gbps | 400,000 PPS | | Yes | Intel(R) Xeon(R) Platinum 8269CY | | | |
| | Shared Balan mn4 | ced Type ecs.mn4.small 1 vCl | PUs 4 GiB | | 2.5 GHz | 0.5 Gbps | 50,000 PPS | | No I | Intel Xeon E5-2682v4 / Intel Xeon(Sky | (lake) Platinum 8163 | | 1.1 |
| | O Shared Balan mn4 | ced Type ecs.mn4.large 2 vCl | PUs 8 GiB | | 2.5 GHz | 0.5 Gbps | 100,000 PPS | | No | Intel Xeon E5-2682v4 / Intel Xeon(Sky | (lake) Platinum 8163 | | 4. |
| | | - | | | | Tota | al: \$ 0.119 (| JSD per Hour | Marketpl | lace Image Fees: \$ 0.000 USD per Hou | Next: Netv | rorking | Preview |

- d. In Image, select Marketplace Image.
- e. In *Storage*, click *Add Disk* to add a data disk. A disk is required in order for the FortiAuthenticator-VM to boot successfully. The example below includes a 60 GB data disk, but smaller disk sizes are supported.

If you require regular backups of FortiAuthenticator, you can configure the *Snapshots* sections accordingly.

- f. Click Next: Networking.
- 5. Configure the following on the *Networking* page:
 - **a.** In *Network Type*, either use an existing VPC or create a new one by clicking on the link for the VPC console.
 - **b.** In *Public IP Address*, you **must enable the Public IP Address** field or else FortiAuthenticator will not be reachable from any public network.
 - c. In Bandwidth Billing, select whether you want to Pay-By-Traffic or Pay-By-Bandwidth.
 - **d.** In *Security Group*, add security groups to the instance to limit the type of traffic that can access the instance.
 - e. All remaining configuration options can be left to the default settings.

f. Click Next: System Configurations.

| astic Compute Service (ECS) | Quick Launch | Custom Launch | | | | | 🛇 Purchase History 🔳 Pri | cing 💪 Buy Disk |
|---|--|--|-------------------------------|--|----------------------------------|--|-----------------------------|-----------------|
| Basic Configurations - | | 2 Networking | | 3 System Configurations | (Optional) | 4 Grouping (Optional) | 5 Preview | |
| Network Type Learn more | VPC | | • 0 | VSwitch Zone: Silicon Valley Zone A VSwitch | | O Private IP Addresses Available: 241, | | |
| Public IP Address Bandwidth pricing | Assign Public IP A The system will automa | | on, you can use a more flexil | ole EIP solution. Click here to learn more about t | ow to attach an EIP > | | | |
| Bandwidth Billing | Pay-By-Traffic Bandwidth is billed bas | Pay-By-Bandwidth (| | ount has sufficient balance. | | | | |
| Peak Bandwidth | | 25M 25M : up to 5 Gbit/s protection against DDo s a great deal for reducing the traffic c | | 25M 1 Reinforce Protection P/SLB instances. Buy a data transfer plan>. | 0 100M | - 10 + Mbps | | |
| Security Group Security group limits Learn more | | sg-rj9h6nc313zv6ymutpm7 (contains 1 | 1 instances, and 1989 more i | instances can be added.) | | o the Security Groups page in the ECS console to | | |
| Elastic Network Interface | Default ENI VSwitch andrew-test- | vswitch | | Auto-assign IP Addresses | Release with Instance | | | |
| Bandwidth: 10Mbps Pay-By-Traffi | ic | | Total: \$ 0.125 USD pe | r Hour Marketplace Image Fees \$0.000 USD pe | Internet Traffic Fees () \$ 0.07 | 7 USD per GB Prev: Basic Configurations | Next: System Configurations | Preview |

6. On the *System Configurations* page, you can create a key pair to access FortiAuthenticator via VNC (or use an existing key pair), and you can give your instance a custom name and description.

| Basic Configurations | | 3 System Configurations (Optional) |
|--------------------------|--|---|
| Logon Credentials | Key Pair Password Set Later | |
| Key Pair 🕲 | FAC-QA-KeyPeir1 | O Create Key Peir Learn more. |
| Instance Name | FAC-Test-Instance | Learn how to customize sequential instance names. $$ |
| Description | The name must be 2 to 128 characters in length, and can con | tain letters, digits, periods (), underscores (), colons (), and hyphens (). It must start with a letter. |
| Host 🗇 | | Learn how to customize sequential hostnames. ① must be 2 to 64 characters in length. It can contain several segments delimited by periods (), Each segment can |
| Sequential Suffix | not allowed. The name cannot start or end with a period (.) or Add Sequential Suffix to Instance Name and Hostname | |
| Release Protection | Prevent users from releasing the instance inadvertently b | y using the console or API ① |
| Advanced (based on insta | nce RAM roles or cloud-init) $_{\rm Show}$ | |

7. Click on the *Preview* button to preview the setup and then click on the *Create Instance* button to deploy the instance after accepting the terms of service.

| Elastic Compu | ite Service (ECS) | Quick Launch Custom Launch | | 🕓 Purchase History 🔠 Pricing 🖙 Buy Di |
|---------------|-------------------------------|--|---|--|
| | Basic Configurations | Vetworking | System Configurations (Optional) | – 🕑 Grouping (Optional) — 5 Preview |
| | Configurations Selected | | | |
| | Basic Configurations | Billing Method: Pay-Ac-You-Go Quantify: 1 Units Data Disk: 1 Unit(s) | Region : Silicon Valley Zone A Image : Fortinet FortiAuthenticator (BYOL) Authentication Service 6.0.4 | Instance Type: Shared Balanced Type mod / ecc.mnklarge (2xCPU 8GB) System Disk: Ubra Disk 40GB /helesse with Instance |
| | Networking 🖉 | Network Type : VPC Network Billing Method : Pay-By-Traffic 10Mbps | VPC : Security Group : 1), sg-rj8h6nc313zx6ymutpm7 | VSwitch : |
| | System Configurations | Logon Credentials : Key Pair:FAC-QA-KeyPair1 | Instance Name : FAC-Test-Instance | Description : FAC v6.0.4 Build |
| | | Save as Launch Template 🔿 View Open API 🔿 Save as ROS T | emplate 🗞 🕐 | |
| | Automatic Release | Automatic Release The ECS instance will be released at the time you specified. After the instance is release | ed, its data and IP addresses will not be retained and cannot be retrieved. | |
| | Terms of Service | CCS Terms of Service and Product Terms of Service Image Product Terms of Use | | |
| | | | | |
| | | | | |
| | Bandwidth: 10Mbps Pay-By-Traf | ffic | Total: \$ 0.125 USD per Hour Marketplace Image Free \$ | 0.000 USD per Hote |

Deployment will take approximately 10-15 minutes to complete depending on the number of CPUs and the size of the data disk selected. Once complete, you can access the FortiAuthenticator through its public IP. The default credentials are:

- Username: admin
- Password: <instance ID>

| i accinera: | | |
|------------------------------|---|---|
| E C-) Alibaba Cloud | US (Silicon Val 👻 | Q Search |
| Elastic Compute Service | Instances | |
| Overview | Select an instance attribute or enter a keyword Tags | |
| Events | ▼ Filters: Instance ID: i-rj93j7s X Clear | |
| Tags | | Network Type |
| Resource Orchestration 🖸 📧 | Instance ID/Name Tag Monitoring Zone - IP Address Status - | ✓ Specifications |
| Instances & Images | Ing23g1s Ing23g1s | g VPC 2 vCPU 8 GiB (I/O Optimized) ecs.mn4.large 10Mbps (Peak Value) |
| Instances | Start Stop Restart Reset Password Renew Switch to Subscription Release More. | |
| Elastic Container Instance 🖾 | | |

Connecting to FortiAuthenticator

To connect to the FortiAuthenticator-VM instance, you require the instance's public IP address, the key pair, and an SSH client.

Reviewing the FortiAuthenticator instance state

After launching the FortiAuthenticator-VM instance from the Alibaba Cloud Marketplace, take note of the instance's public IP address.

Connecting to FortiAuthenticator using SSH and key pair from a Linux environment

1. Using SSH, initiate a connection to the FortiAuthenticator-VM with the following command: ssh -i "<keypair_file_location>" admin@<public_IP>

For additional information on connecting to your instance from a Linux environment, see Connecting to Your Linux Instance Using SSH.

Connecting to FortiAuthenticator using SSH and key pair from a Windows environment

This section details how to connect to the FortiAuthenticator-VM using PuTTY, a free SSH client. Before you can connect to the FortiAuthenticator instance, you must convert your private key to (.ppk) format required by PuTTY. For more information, see Convert Your Private Key Using PuTTYgen.

- 1. Open PuTTY.
- 2. In the Category pane, expand Connection, expand SSH, and then click Auth.
- 3. Click Browse, select the .ppk file for your key pair, and then click Open.
- 4. In the Category pane, click Session.
- 5. For Host Name (or IP address), type admin@<ip_address>.
- 6. Ensure Port is set to 22.

| 😰 PuTTY Configurati | on | | ? | × |
|---|------|--|---------------|-------|
| Category: | | | | |
| Session | ^ | Basic options for your PuTTY se | | |
| | | Specify the destination you want to conne Host Name (or IP address) | ct to Port | |
| ···· Keyboard ···· Bell | | admin@54.89.63.116 | 22 | |
| Features | | Connection type: ◯ Raw ◯ Telnet ◯ Rlogin ◉ SSH | I O Se | erial |
| Appearance Behaviour | | Load, save or delete a stored session Saved Sessions | | |
| ···· Translation ···· Selection | | | | |
| Colours | | Default Settings | Load | ł |
| Data Proxy | | | Save | e |
| Telnet | | | Delet | e |
| SSH | | | | |
| ···· Kex ···· Host keys ···· Cipher | | Close window on exit: Always Never Only on cl | ean exit | |
| | ~ | | | |
| About | Help | Open | Canc | el |

- 7. Click Open.
- **8.** PuTTY displays a security alert that asks whether you trust the host you are connecting to. Click **Yes**. The PuTTY SSH terminal window opens.

For additional information on connecting to your FortiAuthenticator-VM instance from a Windows environment, see Connecting to Your Linux Instance from Windows Using PuTTY.

Change the FortiAuthenticator administrator password

Fortinet recommends changing the default admin password after successfully connecting to the FortiAuthenticator-VM. To change the admin password, execute the following command in the open SSH session:

execute restore-admin <new_password>

Connect to FortiAuthenticator UI

- 1. In a web browser, navigate to https://<AC-FAC-Public_IP>.
- 2. When you connect, your web browser might display a security warning related to the certificate not being trusted. This warning is normal and is due to the certificate being self-signed, rather than being signed by a valid certificate authority. Verify and accept the certificate, either permanently or temporarily, and proceed to https://<public_IP>.
- 3. On the Login page, for Username, enter admin. For Password, enter the Alibaba Cloud instance ID.
- 4. Click Login.

Installing a valid license

FortiAuthenticator-VM runs in evaluation mode until it is licensed. Before using the FortiAuthenticator VM you must enter the license file that you download from the Fortinet Support portal upon registration.

Registering and downloading your license

After placing an order for FortiAuthenticator-VM, a license registration code is sent to the email address used in the order form. Use the license registration code provided to register the FortiAuthenticator-VM with Fortinet Support.

Upon registration, download the license file. You will need this file to activate your FortiAuthenticator-VM. You can configure basic network settings from the CLI to complete the deployment. Once the license file is uploaded, the CLI and UI are fully functional.

- 1. Navigate to FortiCloud and create a new account or log in with an existing account.
- 2. In the toolbar, click Asset > Register/Renew to start the registration process.
- 3. In the **Specify Registration Code** field, enter your license activation code and click **Next** to continue registering the product.
- **4.** Enter the **Support Contract number**, **Product Description**, **Fortinet Partner**, and **IP address**. As a part of the license validation process, the IP address of the FortiAuthenticator VM instance is

compared to the IP information in the license file. If a new license has been imported or the IP address has been changed, the FortiAuthenticator VM must be rebooted in order for the system to validate the change and operate with a valid license.

- 5. Click Next.
- 6. The Fortinet Product Registration Agreement page displays. Select the check box to indicate that you have read, understood, and accepted the service contract. Click Next.
- 7. The Verification page displays. Select the checkbox to indicate that you accept the terms. Click Confirm.
- 8. On the **Registration Complete** page, download the license file (.lic) to your computer. You will upload this license to activate the FortiAuthenticator VM.

Note: After registering a license, Fortinet servers can take up to 30 minutes to fully recognize the new license. When you upload the license file to activate the FortiAuthenticator VM, if you get an error that the license is invalid, wait 30 minutes and try again.

Upload the license file to FortiAuthenticator-VM

- 1. Log into the FortiAuthenticator-VM from a browser.
- 2. Navigate to System > Administration > Licensing.
- 3. Click Choose File and locate the license file (.lic) on your computer. Click OK to upload the license file.

The VM registration status appears as valid after the license has been validated.

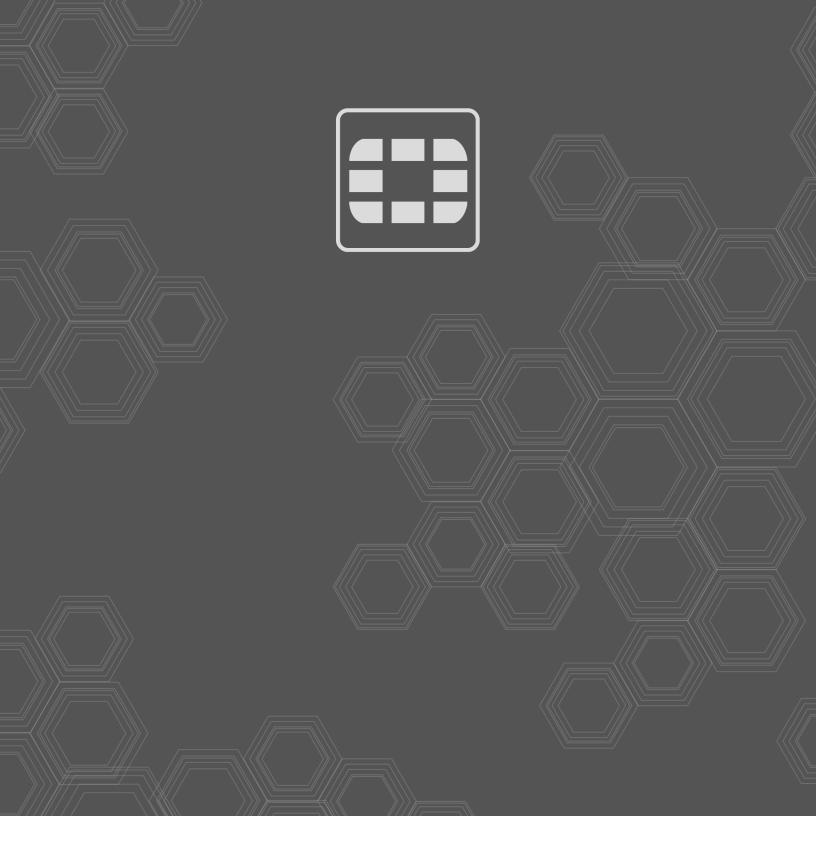
As a part of the license validation process, the IP address of the FortiAuthenticator-VM instance is compared to the IP information in the license file. If a new license has been imported or the IP address has been changed, the FortiAuthenticator-VM must be rebooted in order for the system to validate the change and operate with a valid license.

Upgrading FortiAuthenticator firmware

The FortiAuthenticator image available on Alibaba Cloud Marketplace might not include the latest firmware available for FortiAuthenticator. Upgrade the firmware of your FortiAuthenticator-VM after deployment to ensure that you have the latest features, functionality, and fixes available.

- 1. Log into FortiCloud and download the latest firmware to your local computer.
- 2. Log into the FortiAuthenticator-VM from a browser.
- 3. Navigate to System > Administration > Firmware Upgrade.
- 4. Click Choose File, locate the firmware image on your local computer, and click Open.
- 5. Click OK.

The firmware image uploads from your local computer to the FortiAuthenticator-VM, which will then reboot. For a short period of time during this reboot, the FortiAuthenticator-VM is offline and unavailable for authentication.





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