FileWave Server Setup

What server type is best for me?

The first step to begin your FileWave Evaluation is to determine your FileWave Server hosting preference. FileWave offers both a Cloud-Hosted server and an on-premise virtualized server appliance for either Hyper-V or VMWare.

Cloud-Hosted Server

If you desire a FileWave Cloud-Hosted server and have not already received the login information, please request a Cloud-Hosted server from your dedicated FileWave SE and they will provide you with the server's Address, Username, and Password. The FileWave Cloud-Hosted Server will be a "production" server so that any progress you make during the evaluation will persist if you choose to purchase FileWave.

Please note that choosing a Cloud-Hosted Server may be an additional cost depending on the licensing structure selected at the time of your purchase. Also, to better manage the cost incurred by FileWave during your evaluation, your FileWave SE will discuss your organization's timeline to determine the best possible start date and expiration date for your evaluation. Thank you in advance for your understanding in regards to these matters.

Pros of FileWave's Cloud-Hosted Server

- Near instant availability with limited setup time required
- Managed public fully qualified domain name and SSL certificate
- Ability to manage devices on any network with Internet connection
- Free "hands-off" upgrades of FileWave
- Guaranteed server uptime
- Automated Backups
- Low maintenance

On-Premise Server

If you desire to host the FileWave Server on-premise by installing on a macOS machine or virtualizing our pre-built appliance in Hyper-V or VMWare, please continue to read the following section.

Requirements

Most steps required for an on-premise server will be in regards to your local network's infrastructure including virtual environment, DNS, and Firewall/Content Filter. If you do not have direct access to these systems, please coordinate with your Network Administrator or other qualified personnel before proceeding.

Before importing the FileWave Server virtual appliance we recommend setting aside a static IP and DNS name for it. This will make it easier to move the server to another IP in the future and possible to manage off-premise devices over the Internet. Although technically possible, it is highly unrecommended to only use an IP address to reference the FileWave Server so please configure a valid and potentially publicly-resolvable fully qualified domain name (FQDN) for the FileWave Server.

Note that the FQDN selected must be resolvable on all network segments you plan to manage the client devices from. If you want to manage devices both on and off your network then the same FQDN must be resolvable both on and off your network. Inside your LAN this FQDN will resolve to the internal IP address of your FileWave server. Externally that same FQDN will resolve to the public IP address of the internet router in front of the FileWave Server. With mobile devices like iPhones and iPads that have a high possibility of leaving your LAN, it is essential that they be able to access the FileWave Server at all times, especially when they are off-network.

Off-Premise device management via Internet

A static IP allows you to easily forward the ports used by the FileWave server to its internal IP on your LAN, ensuring that requests from client devices are still able to reach it even when they are off-network. The following ports must be forwarded to the FileWave Server. Some of the ports such as 20016 and 20446 are optional if IT staff will only be accessing the FileWave Admin while on the LAN. A full listing of FileWave ports and port diagrams are available here.

FileWave Server Installation

The FileWave Server can installed onto any macOS 10.13+ machine with minimum specs of 8GB RAM / 4 CPU or virtualized in either Hyper-V or VMWare using our pre-built virtual appliance based on CentOS or Debian. If virtualization is available, we highly recommend using our pre-built server appliance versus a macOS machine because of the flexibility to extend allotted server resources. When choosing a virtualization platform for your FileWave Server virtual appliance, we recommend a server platform such as vSphere or Hyper-V over a client platform like VMware Workstation/Fusion or VirtualBox. A VM server platform does not require that you be logged into a user session for the VM to be running. Also in the event the physical system hosting the VM server restarts

the VMs hosted on it can also be configured start up automatically also.

Software Downloads

All software downloads outlined in the following steps can be found here. Please always select the latest version of FileWave unless instructed otherwise by your FileWave SE.
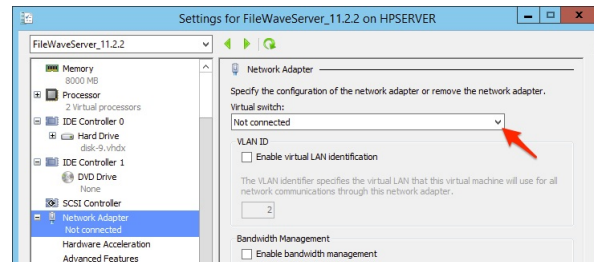
macOS

1. Mount the FileWave_macOS_XX.X.X.dmg downloaded from the FileWave Software Downloads page.
2. Double click the FileWave Server.pkg
3. Click Continue and then Agree to the license.
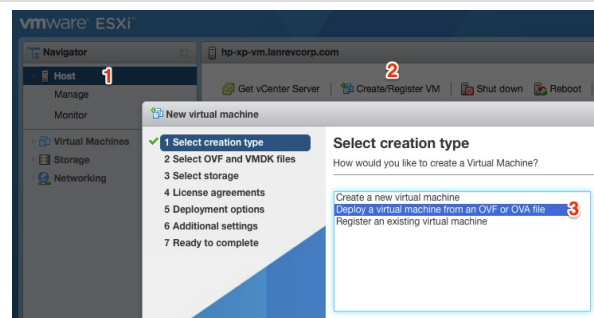4. Click Install and enter your admin credentials to complete the installation.

Hyper-V Linux Appliance Import

1. Extract the contents of the FileWaveServer_XX.X.X_VHD.zip file to a convenient location, like your desktop, on your Hyper-V system.
2. Launch Hyper-V Manager, highlight your server on the left-hand pane, and go to Action > Import Virtual Machine.
3. Click Next, then Browse, select the folder that the FileWave Server virtual appliance was extracted to (e.g. FileWaveServer_XX.X.X), and click the Select Folder button. If it reports that it can't file a VM to import follow the instructions here.
4. Keep clicking Next until you reach the Choose Import Type screen. Select Copy the virtual machine (create a new unique ID).
5. Continue to click Next and then Finish to complete the VM import.
6. Select the FileWave server VM in the list of VMs and go to Action > Settings.
7. Click Network Adapter in the list of Hardware settings for the VM and click the Virtual switch pull-down to connect it to your network.
8. If there is no virtual switch available go to Action > Virtual Switch Manager to add one. For the connection type be sure to select External network.
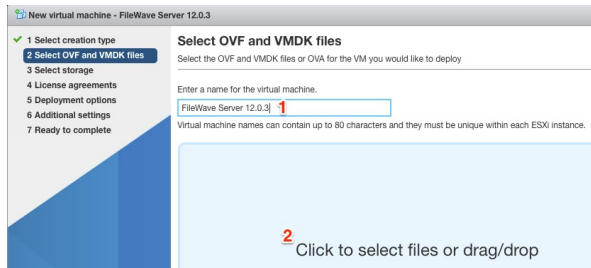

VMware ESXi Linux Appliance Import

1. Log into the VMware web console on your ESXi sever, go to Host on the left, choose Create/Register VM on the right, select Deploy a virtual machine from an OVF or OVA file, and click the Next button.
2. At the Select OVF and VMDK files screen enter a display name for your VM.
3. Drag the FileWaveServer_.ova file into the blue field at the lower right and click Next.
4. Select the datastore where you want to import the VM to and click Next.
5. At the Deployment options screen select your VM Network and choose "Thin" for Disk provisioning.
6. Click Finish to begin the VM import. You can monitor the import by watching the Recent tasks pane in the Hosts area of the vSphere web console. After the Upload disk and Import vApp tasks are done your VM should appear in the list of Virtual Machines on the left-hand Navigator pane.
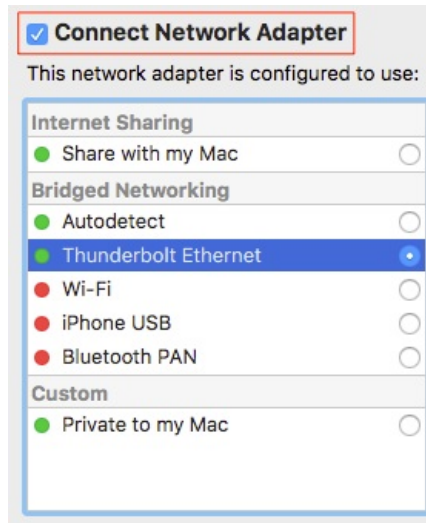
🗔 New virtual machine - FileWave Server 12.0.3

✓ 1 Select creation type
2 Select OVF and VMDK files
3 Select storage
4 License agreements
5 Deployment options
6 Additional settings
7 Ready to complete

Select OVF and VMDK files
Select the OVF and VMDK files or OVA for the VM you would like to deploy

Enter a name for the virtual machine.

| FileWave Server 12.0.3| **1** |

Virtual machine names can contain up to 80 characters and they must be unique within each ESXi instance.
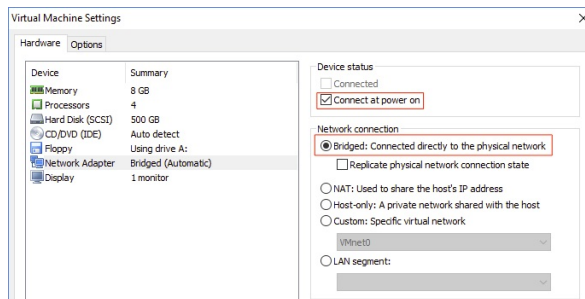
2 Click to select files or drag/drop

VMware Fusion Linux Appliance Import

1. Launch Fusion and go to File > Import > Choose File.
2. Select the FileWave_Server.ova file and click Open and then Continue.
3. Choose the path where you would like to copy the VM to and click Save.
4. Click the Customize Settings button at the Finish screen to bring up the settings screen for the VM.
5. In the Network Adapter section ensure that Connect Network Adapter is checked and then select an Ethernet based option under Bridged Networking.

☑ **Connect Network Adapter**

This network adapter is configured to use:

Internet Sharing
🟢 Share with my Mac ○

Bridged Networking
🟢 Autodetect ○
🟢 Thunderbolt Ethernet ◉
🔴 Wi-Fi ○
🔴 iPhone USB ○
🔴 Bluetooth PAN ○
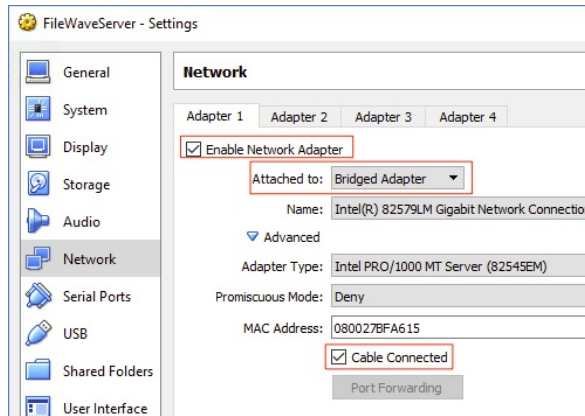
Custom
🟢 Private to my Mac ○

VMware Workstation Linux Appliance Import

1. Launch VMware Workstation and click Open a Virtual Machine in the Home tab. Alternatively you can also go to File > Open.
2. Browse to the FileWave_Server_.ova file and click Open.
3. Change the storage path for the VM if desired and click Import.
4. Edit the network settings for the VM and ensure that that Connect at power on is checked and that Bridged: Connected directly to the physical network is selected.
5. Click OK.

Virtual Machine Settings ✕

Hardware | Options

Device	Summary
🖩 Memory	8 GB
🖥 Processors	4
🖴 Hard Disk (SCSI)	500 GB
💿 CD/DVD (IDE)	Auto detect
💾 Floppy	Using drive A:
🖧 Network Adapter	Bridged (Automatic)
🖥 Display	1 monitor

Device status
☐ Connected
☑ Connect at power on

Network connection
◉ Bridged: Connected directly to the physical network
☐ Replicate physical network connection state
○ NAT: Used to share the host's IP address
○ Host-only: A private network shared with the host
○ Custom: Specific virtual network
  VMnet0
○ LAN segment:

VirtualBox Linux Appliance Import

1. Launch VirtualBox, go to File > Import Appliance, select the FileWave_Server_.ova file, and click Open.
2. Check Reinitialize the MAC address of all network cards and click Import.
3. Select your the FileWave server VM and click the Settings icon in the icon bar.
4. In the Adapter 1 tab ensure that Enable Network Adapter and Cable Connected are checked and that Attached to is set to Bridged Adapter.
5. Click OK when you are done.

😺 FileWaveServer - Settings

	Network
General	
System	Adapter 1 · Adapter 2 · Adapter 3 · Adapter 4
Display	☑ Enable Network Adapter
Storage	Attached to: Bridged Adapter ▼
Audio	Name: Intel(R) 82579LM Gigabit Network Connection
Network	▽ Advanced
Serial Ports	Adapter Type: Intel PRO/1000 MT Server (82545EM)
USB	Promiscuous Mode: Deny
Shared Folders	MAC Address: 080027BFA615
User Interface	☑ Cable Connected
	Port Forwarding

Debian (not appliance)

In the case maybe you need to setup your own Debian OS. This is fine to do. Refer to the Debian section of the latest version of FileWave that is on the Downloads page to see the commands to run to install or upgrade. It's the same commands. One thing to note is that Webmin won't be installed, but you could download and easily install it if desired. Aside from Webmin there is not much different between a stock install and our Appliance.

Check the Downloads page for the most recent. Below is an example:

```
# login via ssh as root or use sudo for every line
below
# OS Upgrades:
sudo apt update -y
sudo DEBIAN_FRONTEND=noninteractive apt-get
upgrade -y -o Dpkg::Options::="--force-confold"
# Download and Install:
wget
https://fwdl.filewave.com/15.2.1/fwxserver_15.2.1_
amd64.deb
sudo dpkg -i ./fwxserver_15.2.1_amd64.deb
# If dependencies are not met then the below will
install them allowing for the FW server to
```

```
install:
sudo apt-get install -f
# If you needed to use the above command for
dependencies then run the next line again.
# It will succeed once all dependencies are
handled which can take a couple of tries:
sudo dpkg -i ./fwxserver_15.2.1_amd64.deb
sudo reboot
```

Configuring the Linux Appliance Network Settings

Once you are done importing the FileWave Server Linux appliance, please power it on and configure the network settings using one of the guides below. Once the network settings have been configured, please create an internal DNS A-Record to set a fully qualified domain name (FQDN) for your FileWave Server that points to the Static IP Address configured below. If you plan on managing devices off-network, please ensure the FQDN is resolvable via the Internet and that you have the ability to obtain an SSL certificate that can protect your FQDN.

You will find two sections below, Command Line and Webmin GUI. Please select only one of the two sections based on your preference to configure the settings.

Please disregard this section if using a macOS FileWave Server as you will configure macOS System Preference to configure Static IP address.

Debian Command Line

▼ Debian Command Line Networking

Access FileWave Server's Command Line Interface (CLI) via direct console access or SSH using the "fwadmin" user and password "filewave" and you will be prompted to change the password. (For FileWave prior to 15.5.0 the user was root.)

SSH into FileWave Server

```
ssh fwadmin@192.168.1.85
```

Change the FileWave Server's password when prompted and take note of it in a secure location. You will not see password being typed, press Enter when finished.

Changing the IP address in Debian 12, which uses `systemd-networkd` for network management, involves different steps compared to CentOS. The following guide is tailored for Debian 12 servers using `systemd-networkd` but you could also use Webmin on your server assuming the server comes online initially with DHCP.

⚠️ For Webmin know that you will need to go to Webmin -> Webmin Configuration -> Operating System and Environment and make sure it's set to Debian 12.4 (Or whatever version we are at when you set up your system. You can see this with `cat /etc/debian_version` on the server.

1. Locate Network Interface:
   First, identify the network interface you wish to configure. You can list all network interfaces using:
   ```
   networkctl list
   ```

   ```
   # networkctl list
   IDX LINK    TYPE      OPERATIONAL SETUP
     1 lo      loopback  carrier     unmanaged
     2 ens160  ether     routable    unmanaged

   2 links listed.
   ```

   In this example, the identified network interface is 'ens160', but this could differ per FileWave Server instance.
2. Configure Network Settings:
   `systemd-networkd` uses individual `.network` files for each network interface, located in `/etc/systemd/network/`. Create or edit the network configuration file for your interface, named as `10-eth0.network` (replace `eth0` with your interface name).
   ```
   sudo nano /etc/systemd/network/10-eth0.network
   ```

   From the above example of ens160, this would be:
   ```
   sudo nano /etc/systemd/network/10-ens160.network
   ```

3. Configure IP Address:
   In the `.network` file, add or modify the following sections:

```
[Match]
Name=eth0

[Network]
Address=192.168.1.100/24
Gateway=192.168.1.1
DNS=8.8.8.8
DNS=8.8.4.4
LinkLocalAddressing=no
IPv6AcceptRA=no
```

Replace `eth0` with your actual network interface name. From the example above, this would be ens160.
Modify the `Address` with your new IP and subnet mask (e.g., `/24` for a 255.255.255.0 netmask).
Set the `Gateway` and `DNS` entries as per your network configuration.

4. Remove DHCP Configuration:

   You'll also want to edit `/etc/network/interfaces` because the currently defined port is setup for DHCP. That's how you might have gotten to it via Webmin for instance. Edit the file to put a # before the 2 lines including the defined port. Those 2 lines in the file will look like this after editing, again using the example above of ens160:

```
# The primary network interface
#allow-hotplug ens160
#iface ens160 inet dhcp
```

5. Reload and Restart systemd-networkd:
   After making changes, enable the Networkd service so interfaces come up at boot time, and reload the daemon and restart the network:

```
sudo systemctl enable systemd-networkd
sudo systemctl daemon-reload
sudo systemctl restart systemd-networkd
```

6. Verification:
   Check the status of your network interface to ensure the new settings are active:

```
networkctl status eth0
```

Once more using the example of ens160 the command would look like:

```
networkctl status ens160
```

IP configuration may also be viewed with `ip addr show eth0`. Again, swap out 'eth0' with the active interface name. Re-running the command to list interfaces should now show the interface as configured and for the example of 'ens160' would look like:

```
# networkctl list
IDX LINK    TYPE      OPERATIONAL SETUP
  1 lo      loopback  carrier     unmanaged
  2 ens160  ether     routable    configured

2 links listed.
```

Webmin GUI

> ⚠️ For Webmin on Debian know that you will need to go to Webmin -> Webmin Configuration -> Operating System and Environment and make sure it's set to Debian 12.4 (Or whatever version we are at when you set up your system. You can see this with `cat /etc/debian_version` on the server.

1. At the login screen note the URL to remotely manage the server, ex: https://myorg.filwave.net:10000

- If there is no IP address specified because DHCP is not available on the subnet for your FileWave Linux Appliance, login with the username "fwadmin" with password "filewave" and in prior versions of FileWave it was username "root" with the same password.
- Run "nmtui" at the command prompt to launch the Network Manager Text UI so you can configure the networking for the FileWave VM appliance. You'll need to reload the IP stack with "service network restart". Skip the network configuration steps later in the Webmin.

3. Browse to this URL and log in with username "fwadmin" and password "filewave". We will change this password later.
4. Browse to Hardware > System Time on the left, pick the Change timezone tab on the right, pick your time zone and click Save. North American time zones all start with "America".
5. Go to System > Change Passwords on the left and select the "root" account on the right from the list of usernames. Enter a new root password, confirm it, and click Change. Note that this will change the default password for the root account used to log into the server from "filewave" to whatever you choose so enter a secure password that is easy for you to remember.
6. Choose Networking > Network Configuration on the left, and Network Interfaces on the right. Click the blue link labeled "ens160" or "ens32" for the Ethernet adapter. Change the IPv4 address settings to "Static configuration", enter a static IP, enter a subnet mask, and click Save at the bottom to continue configuring the DNS and routing.
7. You will no longer be able to access the Webmin UI for the FileWave servers via its old DHCP IP address. Change the address in your browser's address bar to use the new static IP address for the FileWave server that you configured in the previous step. Browse to Networking > Network Configuration on the left, and Hostname and DNS Client on the right. Enter the IP address for your DNS server and click Save.
8. Select Networking > Network Configuration on the left, and Routing and Gateways on the right. Pick "ens160" or "ens32" from the Default routes pull-down, enter the default gateway address for the subnet the FileWave server is hosted on, and click Save.
9. Go to S_ystem > Bootup and Shutdown_ on the left, scroll to the bottom on the right, and click the Reboot System button. When asked to confirm if you want to reboot the system with "shutdown -r now" click the Reboot System button again.

Boot Time Interface Parameters

Name: *ens160*

Activate at boot? ● Yes ○ No

IPv4 address

○ No address configured
○ From DHCP
○ From BOOTP

● Static configuration

IPv4 address	10.10.10.40
Netmask	255.255.255.0
Broadcast	● Automatic ○ 10.10.10.255

IPv6 addresses

○ IPv6 disabled
● From IPv6 discovery

○ Static configuration

IPv6 address	Netmask
	64

MTU: ● Default ○ [ ]

Virtual interfaces 0 (Add virtual interface)

● Save   ● Save and Apply   ● Delete and Apply   ● Delete

DNS Client Options

Hostname: localhost.localdomain

☑ Update hostname in host addresses if changed?

Resolution order:
- Hosts file ⇕
- DNS ⇕
- Local hostname ⇕
- [ ] ⇕
- [ ] ⇕

DNS servers:
10.10.10.1
[ ]

Search domains: ● None ○ Listed ..

● Save

Routing and Gateways

Boot time configuration   Active configuration

This section allows you to configure the routes that are activated when the system boots up, or when network settings are fully re-applied.

Routing configuration activated at *boot time*

	Interface	Gateway	IPv6 gateway
Default routes	ens160	10.10.10.1	

Act as router? ○ Yes ● No

	Interface	Network	Netmask	Gateway
Static routes				

	Interface	Network	Netmask
Local routes			

✓ Save

☐   **webmin**   Start or stop the Webmin server

☑ Select all   ⤺ Invert selection   ⊕ Create a new systemd service

▶ Start   ■ Stop   ⟳ Restart   ━● Start On Boot

○━ Disable On Boot   ━● Start Now and On Boot

○━ Disable Now and On Boot

⟳ Reboot System   Click on this button to immediately reboot the system. All currently logged in users will be disconnected and all services will be re-started.

⏻ Shutdown System   Click on this button to immediately shutdown the system. All services will be stopped, all users disconnected and the system powered off (if your hardware supports it).