FileCloud Server Version 23.232

Installation Guide

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Table of Contents

Copyright Notice 2
Installation Steps 5
Installation 7
Direct Installation 7
Virtual Machine Installation 26
Microsoft Azure Installation 35
Amazon Web Services (AWS) Installation 59
Amazon GovCloud AWS Installation 97
FileCloud Docker installation 110
Oracle Cloud Installation 115
Post Installation 120
Delete the Installation Folder 121
FAQs 122
Verify Your Installation 122
Install the FileCloud License 135
Configure the Managed Storage Path 143
Enable MongoDB Bind IP and Authentication 147
SSL Configuration 154
Changing a Default Port or Web Server Setting 188
Installation Troubleshooting 191
FileCloud Server not starting on Windows 191
Mod Rewrite Setup Check Fails during Install 194
Mount a Share that FileCloud Can Access 195
FAQ's 195
Mounting Scenarios 195
Mount a CIFS Share on Linux for FileCloud 196
Mount an NFS share on Linux for FileCloud 198
Mount CIFS Shares from Windows Command Line 199

Storage and Client Application Limits 200
Mounting CIFS and NFS Shares 202
How to Mount CIFS Shares from Windows Command Line 202
How to properly mount a CIFS share on Linux for FileCloud 202
How to properly mount a NFS share on Linux for FileCloud 204

Installation Steps

Use the following outline to understand how the installation process works.

Make sure to read the Requirements and Storage and Client Application Limits first.

Step 1: Install FileCloud Software

- **WINDOWS**: Install FileCloud using the installer on Windows (Windows 64 bit) (or)
- **LINUX** (Ubuntu, RedHat)

- Other options
  - Install FileCloud using the provided Virtual Machine (VMWare / VirtualBox etc)
  - Manual install from scratch on Ubuntu or RedHat/Fedora
  - Install FileCloud on Amazon AWS
  - Install FileCloud on Amazon GovCloud AWS

After installation, if Apache will not start, see FileCloud not starting on Windows.

Step 2: Verify the FileCloud Installation

- Open the FileCloud Install page at http://<site>/install (typically http://127.0.0.1/install) and go through the BASIC and EXTENDED checks.
  Note that some checks might fail, but you can resolve them later in the Admin Portal Settings.

Go to Verify Your Installation

Step 3: Log in to the Admin Portal

- Open the FileCloud Admin website at http://<site>/ui/admin/index.html
- Admin Username is **admin,** Admin Password is **password**

Go to Extended Checks, Step 6

Step 4: Install Your License

Your FileCloud license is a document that provides legally binding guidelines on the use and distribution of your newly installed FileCloud software.

Go to Install the FileCloud License

Step 5: Set the Managed Storage Path

Set the storage path where FileCloud stores its all its files. This only applies if you are using Local Storage.
If you are going to use OpenStack or Amazon S3, then you don't need to set this path.

Go to Configure the Managed Storage Path

Step 6: Proceed to Site Setup

Use the Administrator Guide to get your site ready for users to log onto and use.

Go to the Administrator Guide

Windows Defender October 2020

Microsoft has changed some rules for virus detection. As a result, some files are now falsely identified as viruses.

This can lead to the following errors in FileCloud:

- New file uploads fail.
- Files that have already been uploaded are quarantined or deleted so that users can no longer access them.

We recommend **excluding the following directories from the scan in Windows Defender** or other AV programs:

- FileCloud temporary folders **C:\xampp\tmp** and **C:\xampp\htdocs\scratch** (If you installed FileCloud on a different drive, please use that instead of C:\)
- Managed Storage Location (if you do not use object storage / S3): (FileCloud Admin Portal -> Settings -> Storage -> Storage Path)

You may also refer to the following URL for more information on excluding folders in Windows Defender: https://support.microsoft.com/en-us/help/4028485/windows-10-add-an-exclusion-to-windows-security

Are you migrating to FileCloud?
No matter which edition of FileCloud you are using, it is easy to transfer your data after your FileCloud site is setup.

For more information, read:

About FileCloud for Administrators

About FileCloud for Users

Installation

Use the following links to install a new instance of FileCloud Server.

Make sure to read the Requirements first.

- WINDOWS: Install FileCloud using the installer on Windows (Windows 64 bit) (or)
- LINUX: Installation of FileCloud on Linux Using the Repository

Installation Options

- Direct Installation
- Virtual Machine Installation
- Microsoft Azure Installation
- Amazon Web Services (AWS) Installation
- Amazon GovCloud AWS Installation
- FileCloud Docker installation
- Alibaba Cloud Installation
- Oracle Cloud Installation

Direct Installation

This section explains the procedure to install FileCloud in your system.

Select your system from the links below.

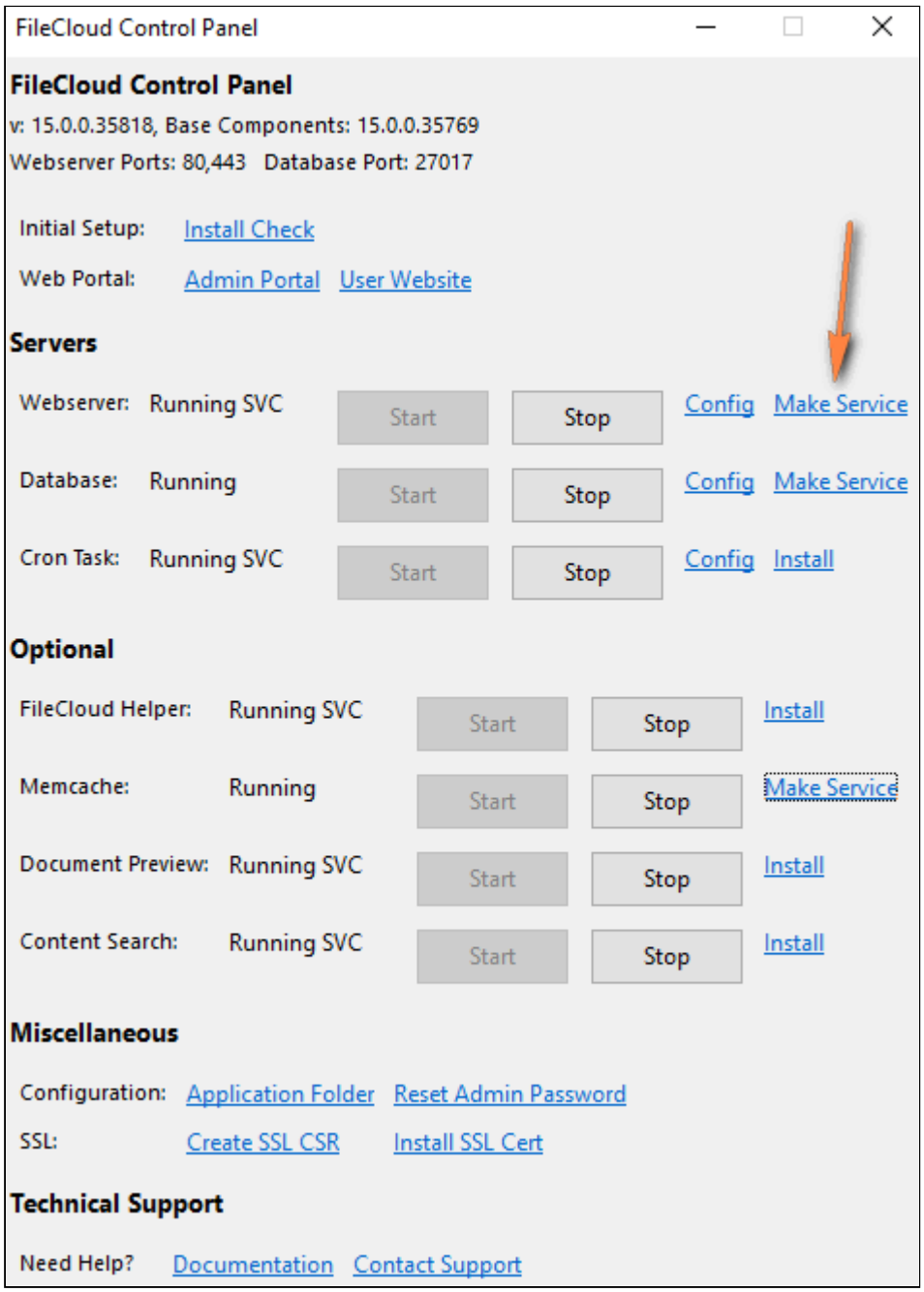
- Install FileCloud Server on Windows.
- FileCloud RPM Package Installation
- Installation of FileCloud on Linux
- Installation of FileCloud on Linux Using the Repository

Install Webserver as Service for Windows

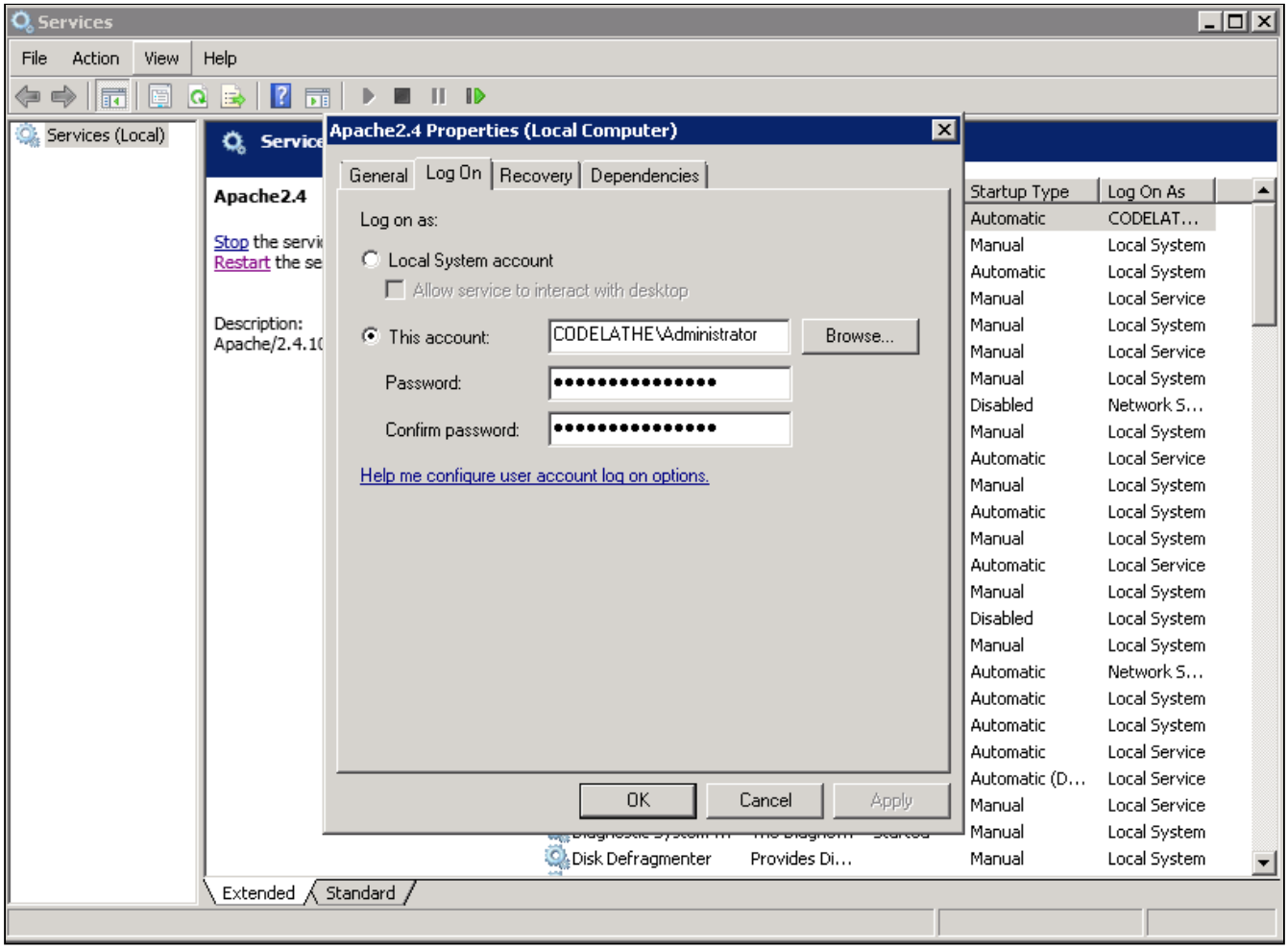
By default, the Webserver that is shipped part of the FileCloud installation runs as a normal process. If the user running the application logs out the application will exit. To prevent this, you can run FileCloud Webserver as a service.

Install as a Service

Click on "Make Service" link in the Control Panel. It will be installed as a service. You can then click on "Start" to start the service.



Note, if you are making existing network shares accessible to FileCloud, we suggest you modify the service "Log on" permissions to run as an user account with full privileges to the network share (See screenshot below).



Alternate way to install as a service, open an administrator command prompt

> cd c:\xampp\apache\bin
> httpd.exe -k install

```
c:\xampp\apache\bin>httpd.exe -k install
Installing the Apache2.4 service
The Apache2.4 service is successfully installed.
Testing httpd.conf....
Errors reported here must be corrected before the service can be started.

c:\xampp\apache\bin>
```

Remove Apache Service

cd c:\xampp\apache\bin
httpd.exe -k uninstall

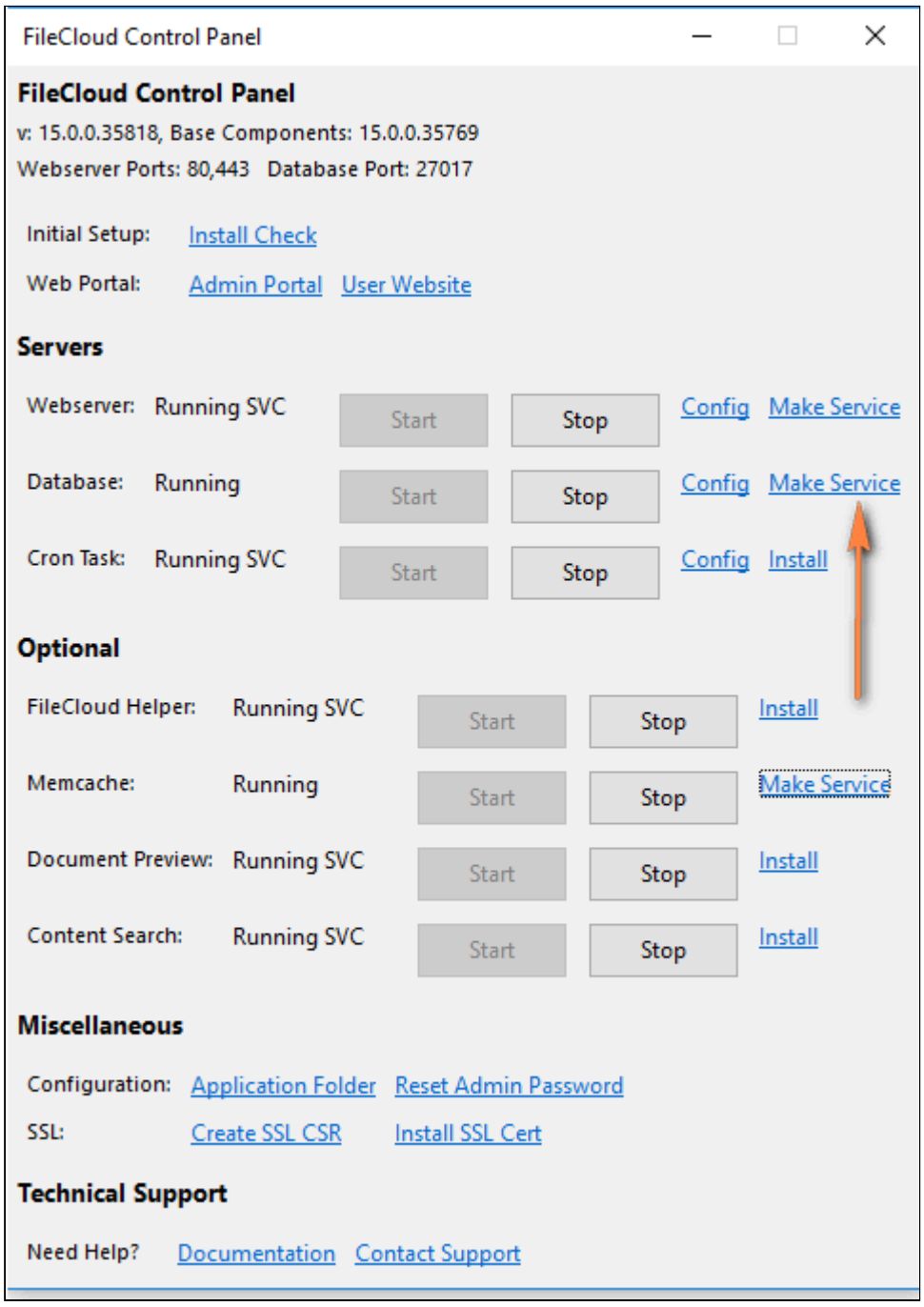
Install MongoDB as service in Windows

By default MongoDB in Windows runs as a process. If the user running the application logs out, the database process will exit. To prevent this, you can run the mongodb database as a service.

Install FileCloud

Before making MongoDB as a service, install FileCloud using the windows installer. By default FileCloud will be installed under C:\xampp. If you have manually installed FileCloud or installed FileCloud on a different path, update the paths accordingly in the next steps.

Make MongoDB run as Windows Service



Alternate Installation Method Step 1: Create MongoDB Config File

Update a file called mongodb.conf under C:\xampp\mongodb\bin, and use absolute paths for the locations of **logpath** and **dbpath** to be absolute paths.

It is important when running mongodb as a service that the dbpath and the logpath are provided as full paths instead of relative paths. ie c:\xampp\mongodb\bin\data

Mongodb configuration file

```
# mongodb.conf

# Where to store the data.
dbpath=C:\xampp\mongodb\bin\data

#where to log
logpath=C:\xampp\mongodb\bin\log\mongodb.log

#append log
logappend=true

#ip address
bind_ip = 127.0.0.1
port = 27017

# Enable journaling, http://www.mongodb.org/display/DOCS/Journaling
journal=true

# Don't show mongodb http interface
nohttpinterface=true

# Enable mongodb rest interface
rest=false

#quiet mode
quiet=true
```

Here update values of logpath and dbpath if necessary.

Alternate Installation Method Step 2: Create MongoDB Service

To install MongoDB as a service, open a command prompt with administrator access (this is important), and run the following command.

Creating MongoDB Service

```
C:\> cd C:\xampp\mongodb\bin
C:\xampp\mongodb\bin> mongod.exe --config C:\xampp\mongodb\bin\mongodb.conf --install
```

You can start the MongoDB service using the FileCloud Control Panel.
Now the service will start automatically on machine reboots.

Remove MongoDB Service

Removing MongoDB Service

```
C:\xampp\mongodb\bin>mongod.exe --remove
```

FileCloud Watchdog Service

FileCloud Watchdog Service is an service for Windows that automatically monitors the availability of Apache Webserver and the MongoDB Databases and can restart them if they become unavailable or unresponsive.

- FileCloud watchdog service is only available starting from v12.0
- FileCloud watchdog service monitors OpenOffice service starting from v13.0

Installation

1. Open a Windows Administrator Command Prompt
2. Navigate to c:\xampp folder (change it to the path XAMPP folder exists)
3. Run the following to register the service

```
cloudwatchdog.exe /registerService /displayName="FileCloud Watchdog Service"
```

4. Start the service

```
net start cloudwatchdog
```

Uninstall

1. Open a Windows Administrator Command Prompt
2. Navigate to c:\xampp folder (change it to the path XAMPP folder exists)
3. Run the following to register the service

```
net stop cloudwatchdog
```

4. Start the service

```
cloudwatchdog.exe /unregisterService
```

Default Configuration

To change parameters related to the watchdog, adjust the values in the cloudwatchdog.ini file in the xampp folder.

frequency (in seconds) controls how fast the watchdog checks the availability of services
serverurl determines the URL to use to check availability

```
; Settings for FileCloud Watchdog
[settings]
frequency=60
serverurl=http://127.0.0.1
```

OpenOffice Configuration

To monitor the open office service, add the following entries to the ini file and adjust accordingly:
Make sure the oowatchdogcheck.php and oowatchdogsample.txt files are present in the resources\backup folder.

```
; Settings for FileCloud Watchdog
[settings]
frequency=60
serverurl=http://127.0.0.1
ooservicename=ooservice
ooscriptpath=c:\xampp\htdocs\resources\backup\oowatchdogcheck.php
```

Troubleshooting

A log for FileCloud Watchdog Service is inside the XAMPP folder under the filename 'cloudwatchdog.log'

Windows Setup Wizard

The installation process on Windows includes the following steps:

1. Run the Setup Wizard
2. Use the FileCloud Control Panel to configure servers
3. Use the FileCloud Control Panel to configure optional components
4. Complete Post Installation Steps

Use these steps to install FileCloud on a Windows 64-bit system.

- During installation you will be asked to install the Microsoft Visual C++ Redistributable Package if it does not already exist.
- This installs runtime components of Visual C++ Libraries required to run applications developed with Visual C++ on a computer that does not have Visual C++ installed.

⚠ You can only install FileCloud on the root of the hard drive.

To install FileCloud directly:

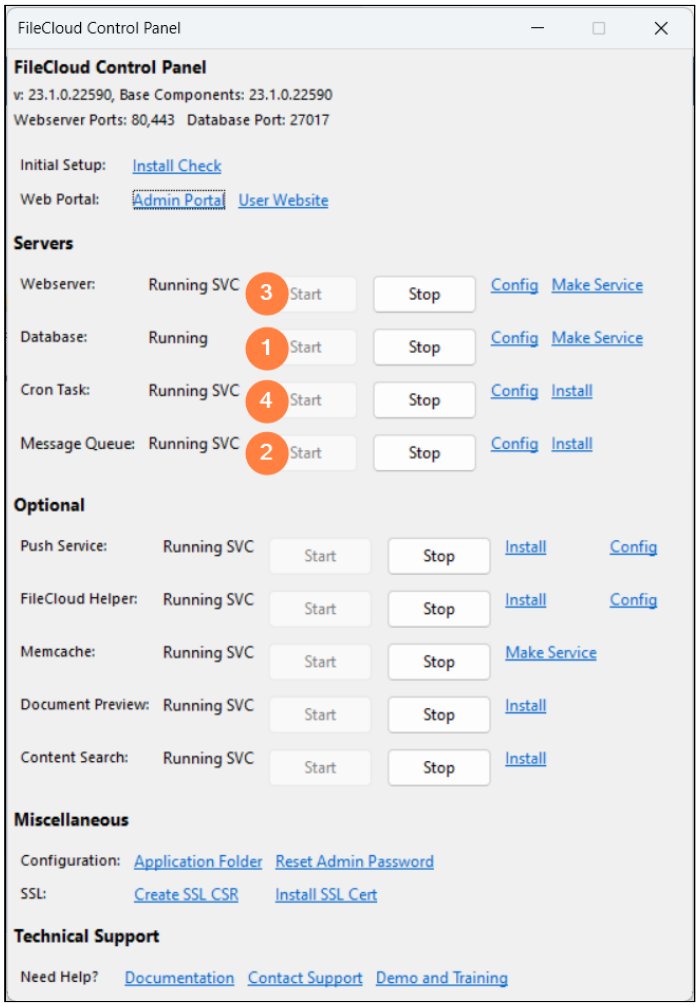
1. Download the installer.
2. Locate the FileCloudSetup.exe file and run it.
3. On the Welcome screen, click Next.
4. In the select Installation drive box, verify that the root of the hard drive is listed, and then click Install. (For example, the location can either be c:\xampp, or d:\xampp etc).
5. If a dialog pops up during installation and asks you to install VC_redist.x64.exe, click Install.
6. After installation is complete, the FileCloud Control Panel opens.

Configuring Servers with the FileCloud Control Panel

The installation process on Windows includes the following steps:

1. Run the Setup Wizard
2. Use the FileCloud Control Panel to configure servers
3. Use the FileCloud Control Panel to configure optional components
4. Complete Post Installation Steps

When the Setup Wizard finishes successfully, the FileCloud Control Panel opens so that you can configure the servers that FileCloud requires to function.



The order you should start and configure these servers is:

1. Make and Start the *Database Service*
2. Configure and Start the *Message Queue*
3. Make and Start the *Webserver*
4. Configure and Start the *Cron Task*

By default the Database and Webserver run as a process.

If the user running the application logs out, the process will exit.

To prevent this, you can run these servers as a service.

Start the Database Server

FileCloud Server uses MongoDB as the database server.

MongoDB is a cross-platform document-oriented database program.

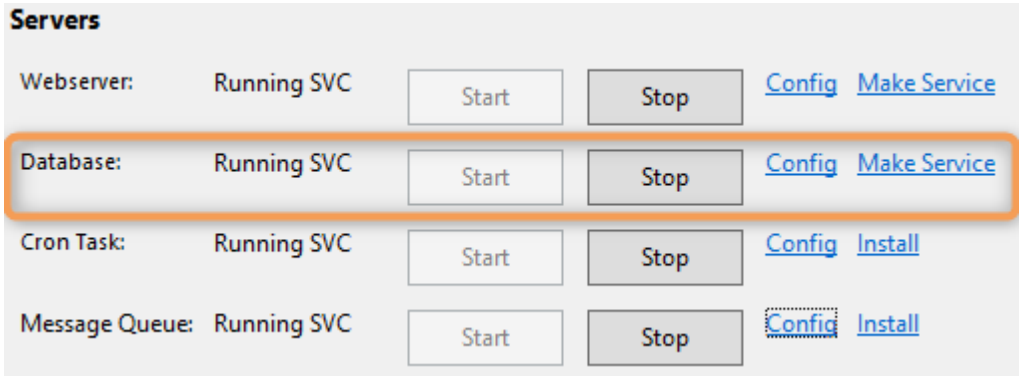
- Classified as a NoSQL database program because instead of storing information in tables, as with traditional relational databases, MongoDB stores structured information in JSON format with dynamic schemas
- This makes integrating information in applications much easier and faster
- For more details, visit the MongoDB web site

This software is installed by the FileCloud installation wizard, you only need to configure it and start it.

- A PHP-MongoDB driver is also installed with FileCloud Server to provide a minimal API for core driver functionality
- By default MongoDB in Windows runs as a process
- It is recommended that you run MongoDB as a service instead of a process

- If the user running the application logs out, the database process will exit. To prevent this, you should run the MongoDB database as a service.

⚠ FileCloud requires MongoDB. You must make this service and start it running before moving on to the next step.



To make and start the Database service:

1. In the *FileCloud Control Panel*, in the *Server* section, for *Database*, click the *Make Service* link.
2. On the *Service Installed OK* window, click *OK*.
3. In the *FileCloud Control Panel*, in the *Server* section, for *Database*, click the *Start* button.
4. In the *FileCloud Control Panel*, in the *Server* section, for *Database*, next to *Database*, verify it says *Running*.

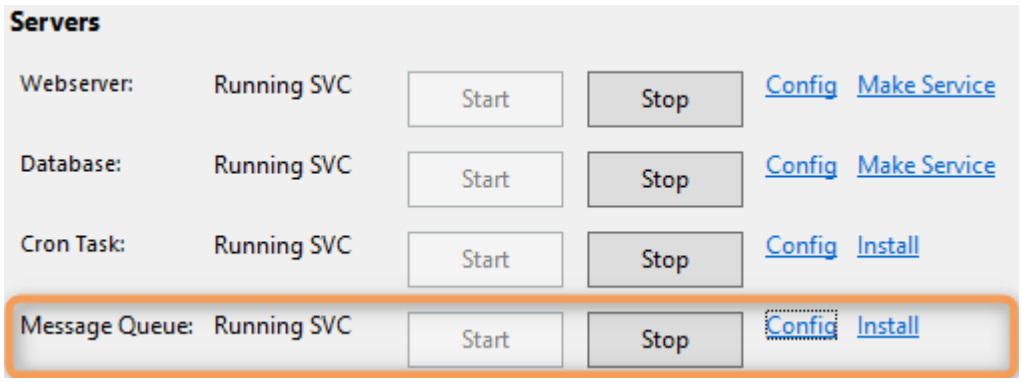
✓ If the Database service doesn't start, then another process could be using that port.
To check which program is using that port, you can follow the instructions here.

Start the Message Queue

A message queue is a form of service-to-service communication that is not concurrent.

- Message queues are used in serverless and microservices architectures.
- Messages are stored in the queue until they are processed and deleted.
- Each message is processed only once.
- Message queues can be used to separate heavyweight processing workloads
- Message queues can buffer work or process work in batches
- Message queues can smooth spiky workloads

⚠ FileCloud requires MongoDB. You must make this service and start it running before moving on to the next step.



To configure and start the Message Queue service:

1. In the *FileCloud Control Panel*, in the *Server* section, for *Message Queue*, click the *Install* link.
2. In the *FileCloud Control Panel*, in the *Server* section, for *Message Queue*, click the *Start* button.
3. On the *Service Started OK* window, click *OK*.
4. In the *FileCloud Control Panel*, in the *Server* section, for *Message Queue*, next to *Database*, verify it says *Running*.

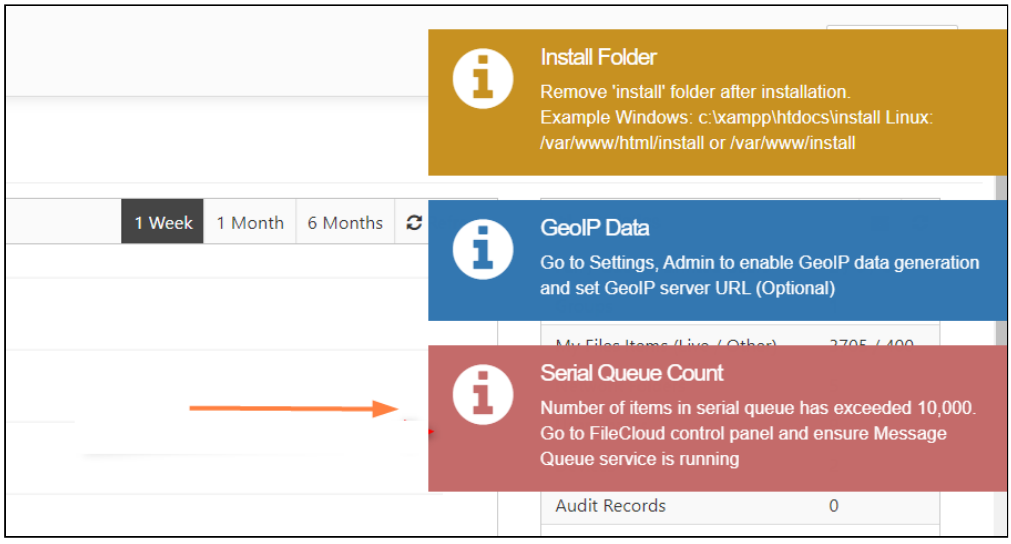
When you make a change to the configuration file

Each time you make a change to the FileCloud configuration file (cloudconfig.php) you must restart the message queue (click **Stop**, and once the service stops, click **Start**).

Indicators that the message queue is not running or clearing

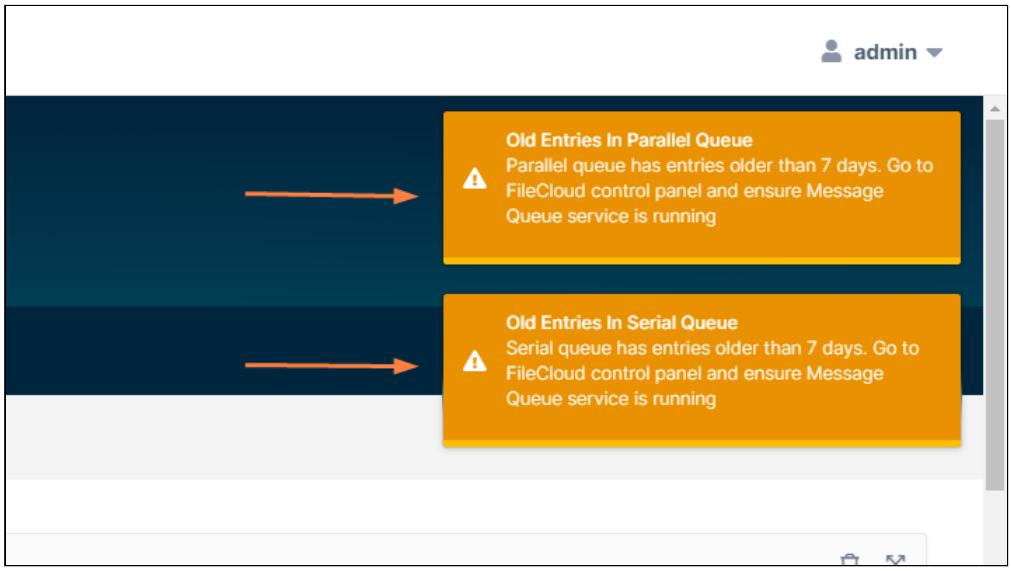
If the message queue is not running or clearing, when you log in to FileCloud or refresh it, you may see a message that there are a large number of items in the message queue or that the message queue has entries older than 7 days (or a custom number of days).

The **Serial Queue Count** alert appears when there are more than 10,000 items in the serial queue; the **Parallel Queue Count** alert appears when there are more than 100,000 items in the parallel queue.



Serial Queue Count alert

The Old Entries messages appear when one of the queues has message that are older than 7 days. To change the number of days triggering the message, please Contact FileCloud Support.

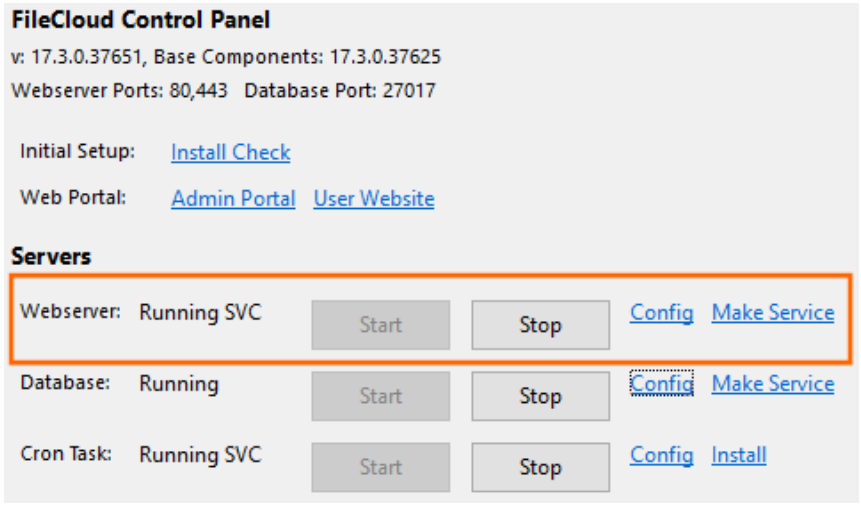


Old Entries alerts.

In either case, begin troubleshooting by confirming that the FileCloud control panel indicates that the Message Queue service has been started. If it has not been started, click **Start** (see the above image). It may take some time for the alert to disappear since the message queue must delete all previously processed messages before starting again.

Start the Webserver

> ⚠ FileCloud requires Apache Webserver. You must make this service and start it running before moving on to the next step.



To make and start the Webserver service:

1. In the FileCloud Control Panel, for the Webserver, click the Make Service link.

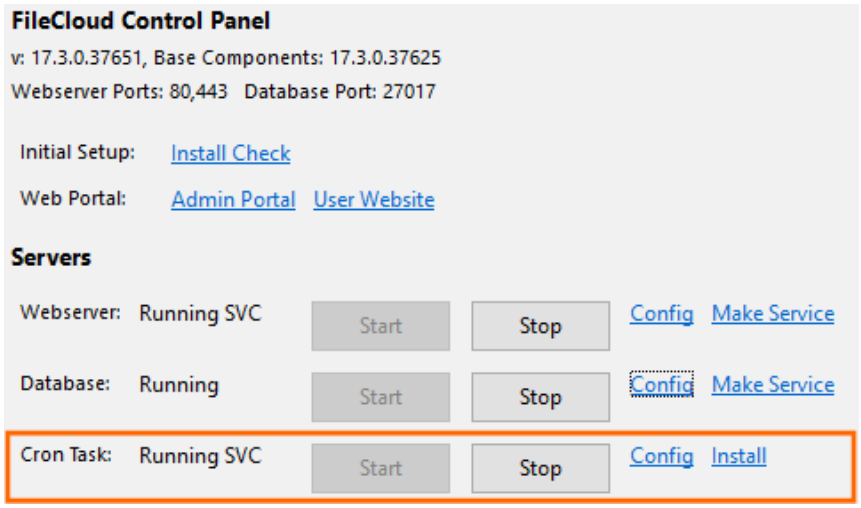
2. On the Service Installed OK window, click OK.
3. In the FileCloud Control Panel, for the Webserver, click the Start button.
4. In the control panel, next to Webserver, verify it says Running SVC.

If the WebServer service doesn't start, then another process could be using that port.
To check which program is using that port, you can follow the instructions here.

Install and Start the Cron Task

When the Setup Wizard finishes successfully, the FileCloud Control Panel opens so that you can complete the installation steps. During installation you will be warned that Cron Task is only needed if a FileCloud Scheduled Task is not already setup. However, Cron Task is required. if you try to run the Installation Check or log into the Admin Portal without installing Cron task and try to enable Team Folders, for example, the process will fail. Other components on the FileCloud server rely on the Cron Task as well, so this must be installed and started.

FileCloud requires the Cron Task. You must Install this service and start it running before moving on to the next step.



To install and start the Cron Task service:

1. In the FileCloud Control Panel, for Cron Task, click the Install link.
2. On the Confirmation Installation window, click Yes.
3. On the Service Installed OK window, click OK.
4. In the FileCloud Control Panel, for Cron Task, click the Start button.
5. In the control panel, next to Cron Task, verify it says Running SVC.

Configuring Optional Components

The installation process on Windows includes the following steps:

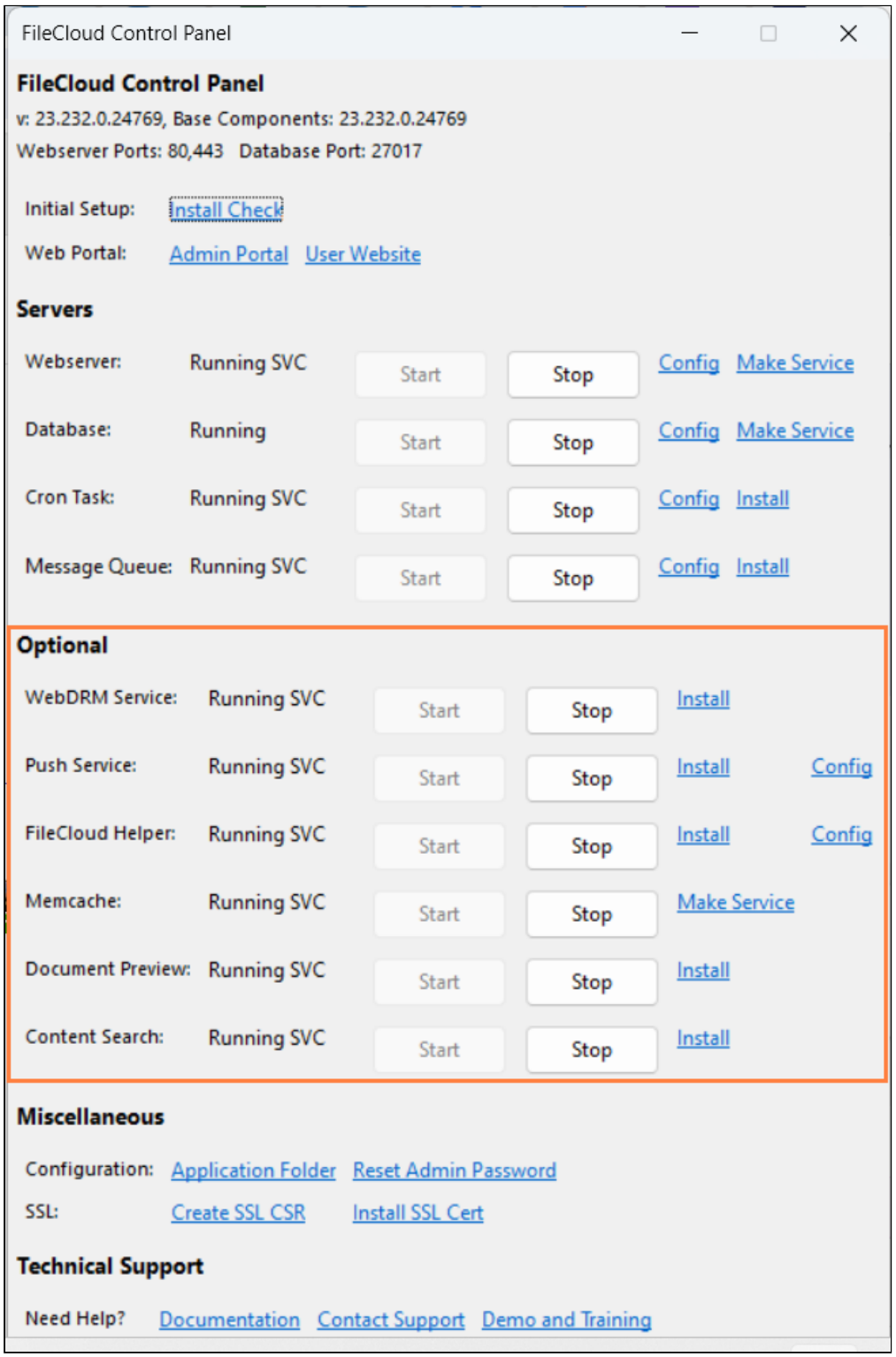
1. Run the Setup Wizard
2. Use the FileCloud Control Panel to configure servers
3. Use the FileCloud Control Panel to configure optional components
4. Complete Post Installation Steps

Install Optional Components

After a successful installation check, the basic FileCloud service is ready.

Before running post-installation checks on everything that is installed, you can add any of the following optional services to include them in the post-installation verifications:

- **WebDRM Service** - Runs the WebDRM server for digital rights management.
- **Push Service** - Opens two-way connection for certain client-server processes to improve response time.
- **FileCloud Helper** - Enables certain searches and NTFS checks on Network Folders.
- **Memcache** - Improves performance when using Network Folders with NTFS permissions.
- **Document Preview** - Enables previewing of document contents.
- **Content Search** - Enables you to index and search the contents of files.



Because these components are optional, they can be added or removed at any time from the FileCloud Control Panel.

Install Content Search

Administrators can enable content search to provides users with the following features:

- Content search for file types such as txt, pdf, doc, docx, xls, xlsx, ppt, pptx
- Regex support for file/folder name searches

Content Search uses Solr, and Solr in turn uses Java.

⚠ Before installing Content Search, you must install the correct Java Development Kit (JDK).

Installing Content Search

Install Helper, memcache, or doc preview

FileCloud Helper, Memcache, and Document preview do not require any pre-installation steps.

To install and start any of these optional services:

1. In the FileCloud Control Panel, click the **Install** or **Make Service** link next to the service.
2. On the **Service Installed OK** window, click **OK**.
3. In the FileCloud Control Panel, click the **Start** button for the service.
4. In the control panel, verify that **Running** or **Running SVC** appears next to the service.

Post-Installation Steps

The installation process on Windows includes the following steps:

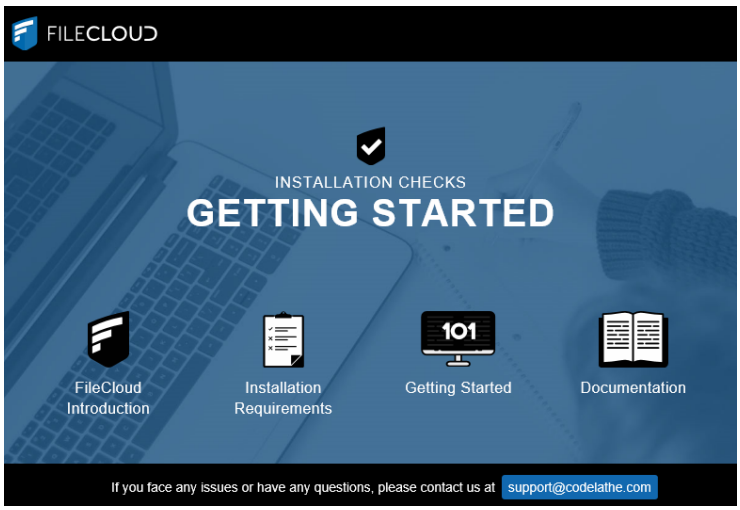
1. Run the Setup Wizard
2. Use the FileCloud Control Panel to configure servers
3. Use the FileCloud Control Panel to configure optional components
4. Complete Post Installation Steps

Complete Post Installation Steps

At this point, the basic FileCloud service is ready to be tested. Before logging in to the Admin Portal, you should verify that are no port conflicts or issues with Apache, Mongo DB, or Cron Task. Unless these required services are running you will not be able to complete tasks in the Admin Portal. Therefore, use the following steps to verify that what you have is installed is running without issues.

To perform an post-installation checks:

1. In the FileCloud Control Panel, next to Webserver, verify it says Running SVC.
2. In the FileCloud Control Panel, next to Database, verify it says Running.
3. In the FileCloud Control Panel, next to Cron Task, verify it says Running SVC.
4. In the FileCloud Control Panel, next to Initial Setup, click Install Check.
5. If successful, you should see the Getting Started screen.
6. Follow the instructions in Post Installation to complete your cloud setup.



Installation of FileCloud on Linux Using the Repository

Beginning in FileCloud 23.1, Linux installation and upgrades moved to a new repository system.
The OS's we currently support are:
Ubuntu 22.04 LTS
RHEL 9.x

If the Linux server is not in a isolated environment where regular users are prevented from using SSH login, we recommend enabling authentication for the MongoDB service to prevent unauthorized access through port forwarding.

MongoDB 6.0 requires use of the AVX instruction set, which is available on select Intel and AMD processors.
If your CPU doesn't have the AVX instruction set, MongoDB 6 will not run.
To check whether your CPU has the instruction set, run:
#lscpu | grep -i avx"

Note: FIPS 140-3 modules are still in review for Ubuntu 22.04 and RHEL 9.
If you want to install FileCloud with FIPS, please wait until the OS vendors officially announce they are supporting FIPS.
Ubuntu information
RHEL information

Installation instructions for each operating system

Installation for Ubuntu 22.04 LTS

To install FileCloud on Ubuntu 22.04, complete the following steps:

Enter the following commands:

```
curl -fsSL https://pgp.mongodb.com/server-6.0.asc | sudo gpg -o /usr/share/keyrings/
mongodb-server-6.0.gpg --dearmor

curl -fsSL https://repo.filecloudlabs.com/static/pgp/filecloud.asc | sudo gpg -o /usr/
share/keyrings/filecloud.gpg --dearmor

echo "deb [ arch=amd64,arm64 signed-by=/usr/share/keyrings/mongodb-server-6.0.gpg ]
https://repo.mongodb.org/apt/ubuntu jammy/mongodb-org/6.0 multiverse" | sudo tee /etc/
apt/sources.list.d/mongodb-org-6.0.list

echo "deb [ arch=amd64 signed-by=/usr/share/keyrings/filecloud.gpg ] https://
repo.filecloudlabs.com/apt/ubuntu jammy/filecloud/23.232 main" | sudo tee /etc/apt/
sources.list.d/filecloud.list

apt-get update -y

apt-get install apache2 mongodb-org pigz -y
apt install -y --no-install-recommends php8.2*
ACCEPT_EULA=Y  apt-get install filecloud -y
```

Installation for RHEL 9

To install FileCloud on RHEL 9, complete the following steps:

Enter the following commands:

```
dnf module disable httpd -y
dnf module disable php -y

cat <<EOF > /etc/yum.repos.d/filecloud-23.232.repo
[filecloud-23.232]
name=FileCloud 23.232
baseurl=https://repo.filecloudlabs.com/yum/redhat/\$releasever/filecloud/23.232/x86_64/
gpgcheck=1
enabled=1
gpgkey=https://repo.filecloudlabs.com/static/pgp/filecloud.asc
module_hotfixes=true
EOF
```

```
cat <<EOF > /etc/yum.repos.d/mongodb-org-6.0.repo
[mongodb-org-6.0]
name=MongoDB Repository
baseurl=https://repo.mongodb.org/yum/redhat/\$releasever/mongodb-org/6.0/x86_64/
gpgcheck=1
enabled=1
gpgkey=https://pgp.mongodb.com/server-6.0.asc
EOF

yum update -y --allowerasing
yum install yum-utils -y
yum-config-manager --enable filecloud-23.232
yum install mongodb-org -y

ACCEPT_EULA=Y yum install filecloud -y
```

Virtual Machine Installation

MongoDB 6 requires use of the AVX instruction set, which is available on select Intel and AMD processors. If your CPU doesn't have the AVX instruction set, MongoDB 6 will not run.

Virtual Machine Installation

FileCloud is provided as a Virtual Machine (in OVF format) so that it is easy to get started without doing any configuration or setup. The virtual machine also allows customers to quickly evaluate and try FileCloud in other non-Linux environments.

The FileCloud Virtual Machine has the following specifications :

Operating System	Ubuntu 22.04 LTS with Desktop
Disk Size	100 GB
RAM	8 GB

The following is the OS user login information

Username	cloud
Password	cloud

The following is the FileCloud Admin login information

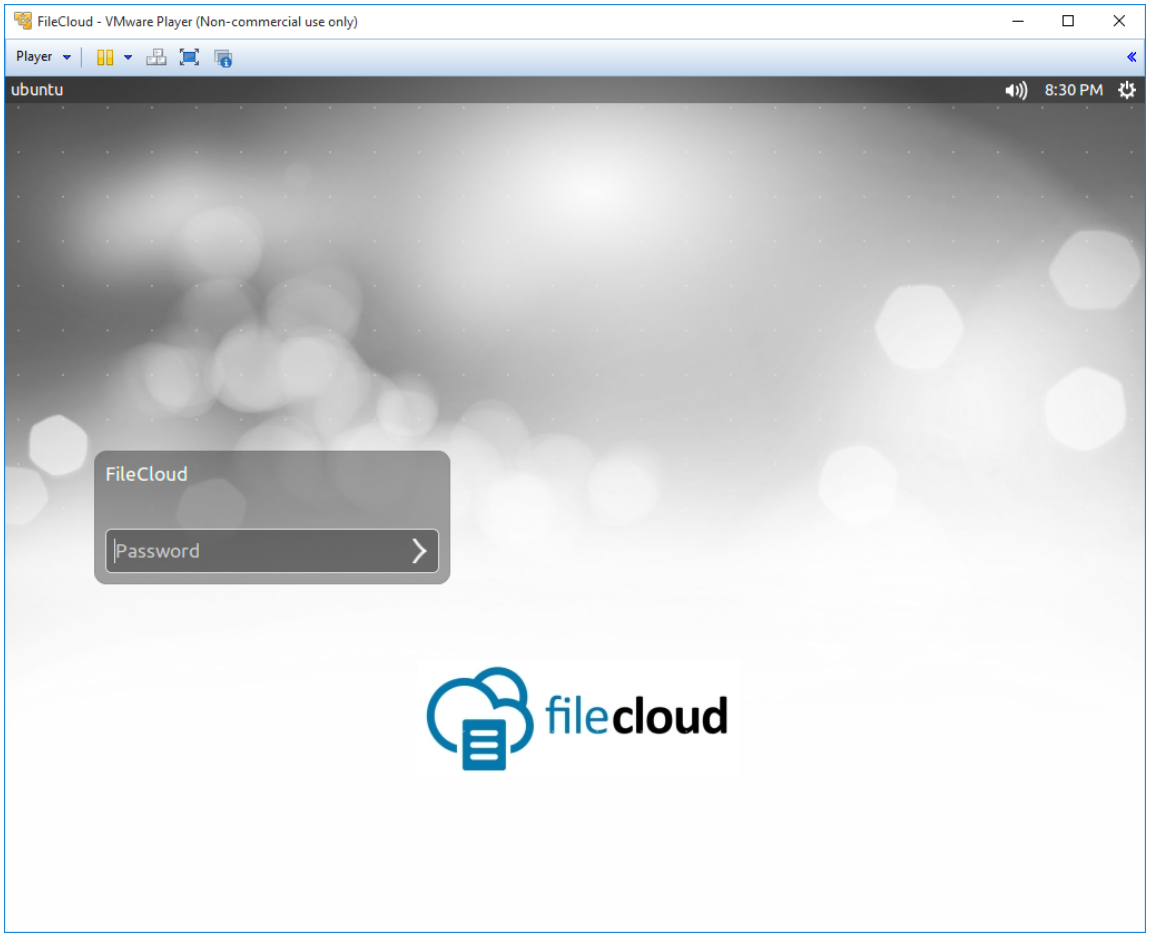
Username	admin
Password	password

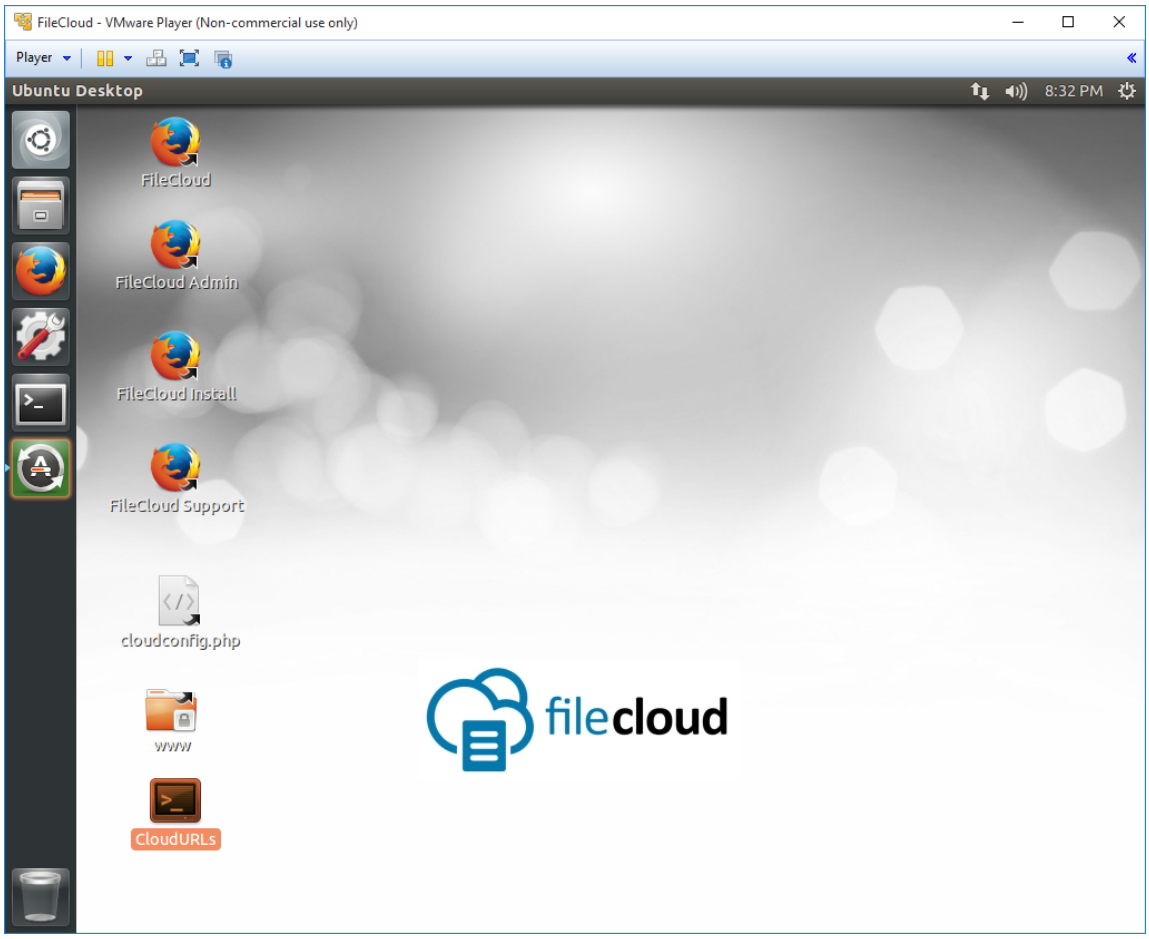
Installing Virtual Machine

1. Download the FileCloud OVF zip using the provided link.
2. Unzip the zip file with all the contents into your hard disk
3. See for VMWare Player Install Instructions
4. See for VirtualBox Install Instructions

Running the Virtual Machine

1. On startup, enter "cloud" as the password to login into the system.
2. After login, you will see the desktop with several icons.
3. Refer to shortcuts section for more details on the icons and how to use them.

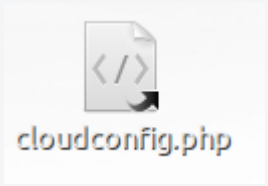
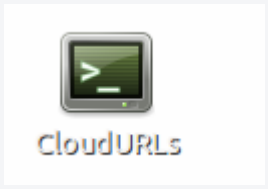




Shortcuts

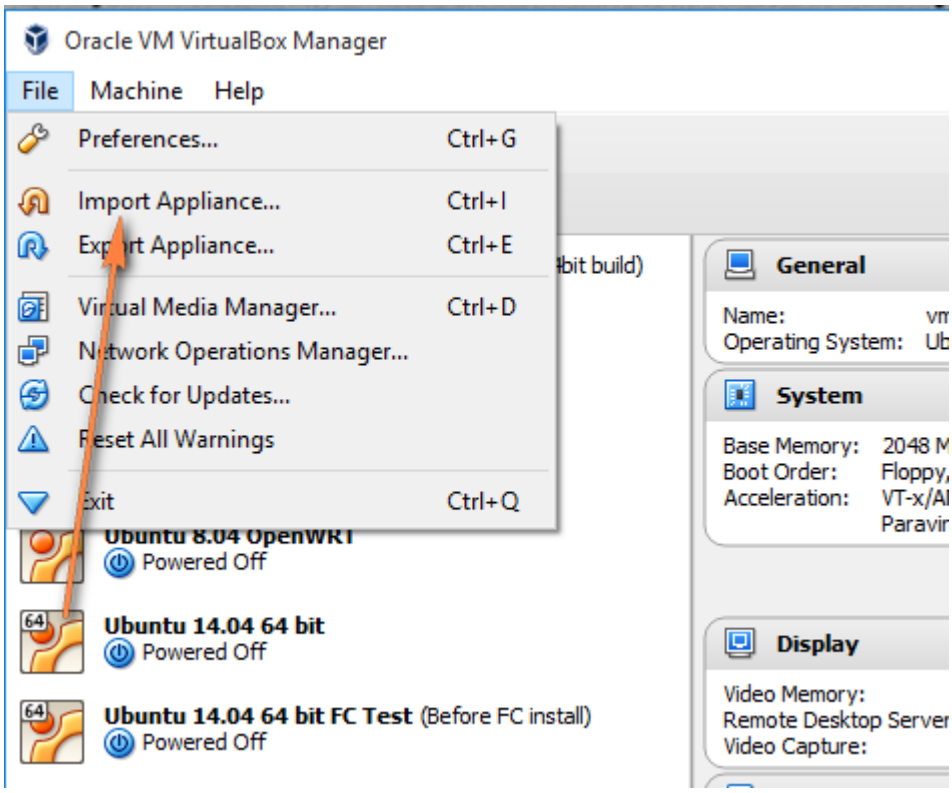
Here's the information on each shortcut and it's function.

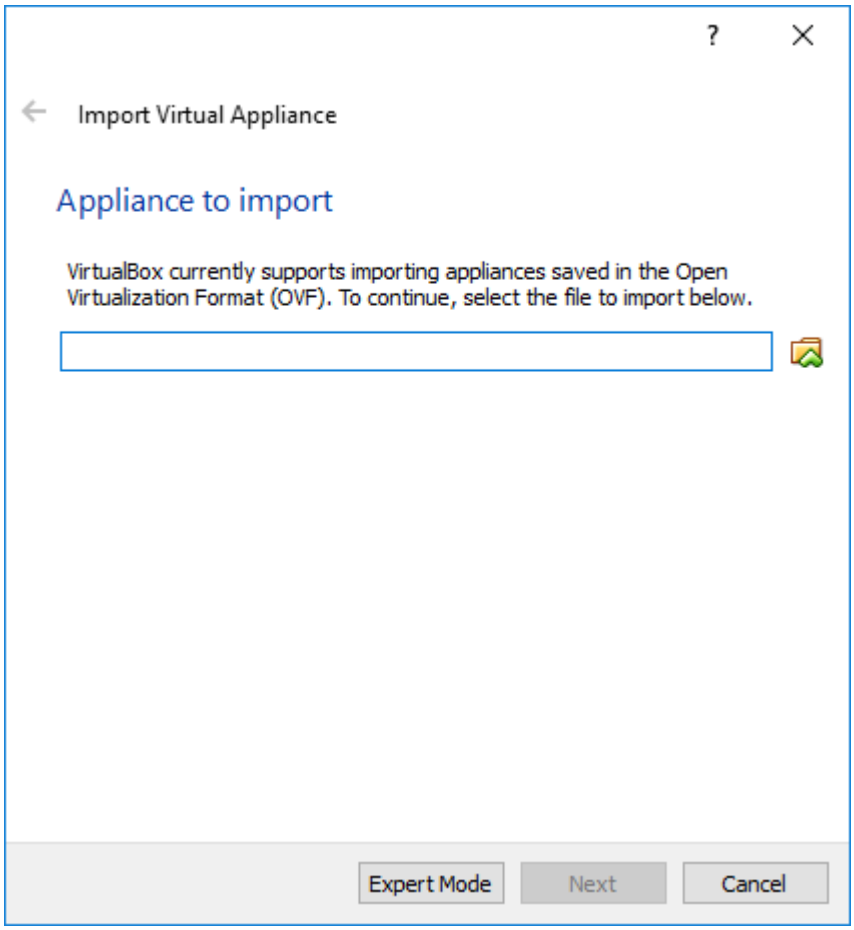
ICON	Details
	Opens the main FileCloud User Portal.

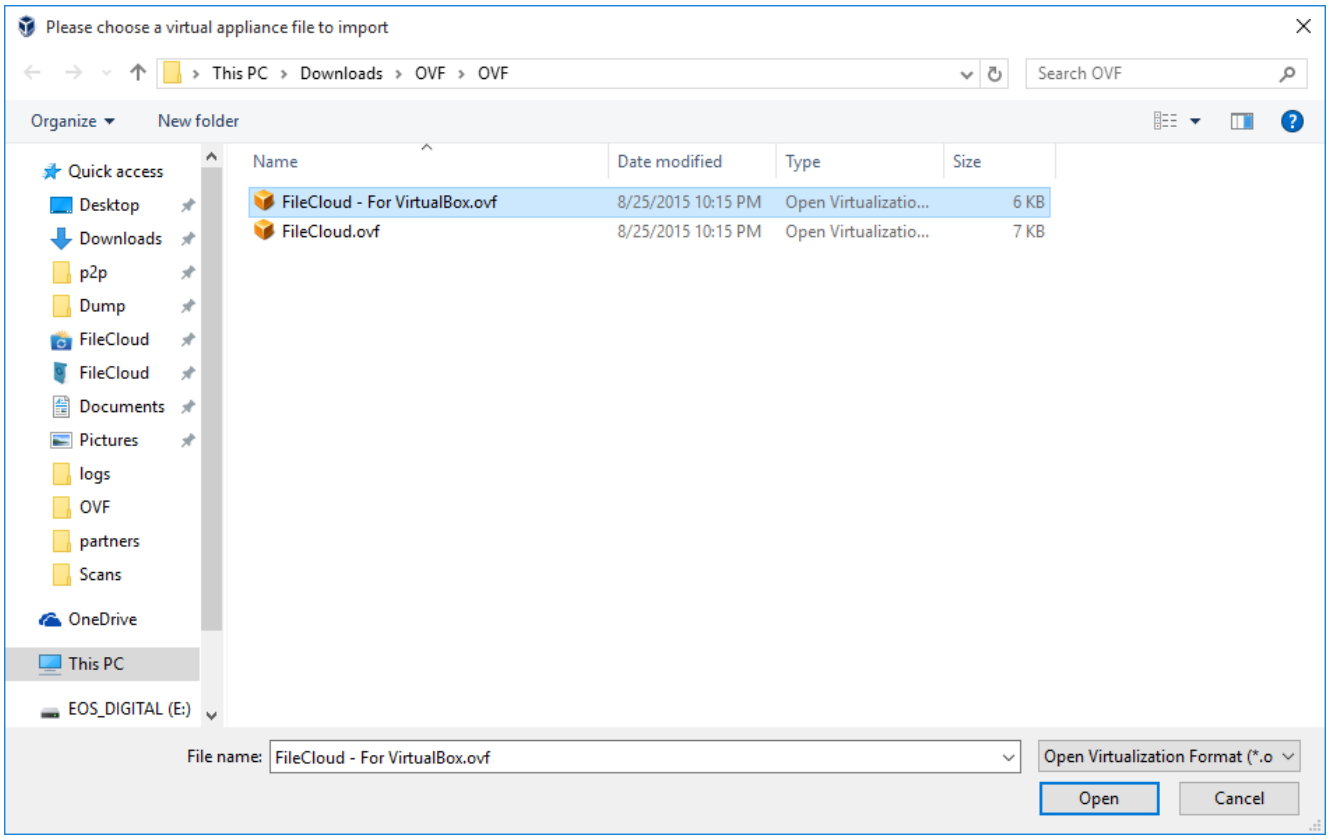
	Opens the FileCloud Admin Portal User name: **admin** Default Password: **password**
	Opens the FileCloud Install Check Page
	Shortcut to the general cloud configuration file (cloudconfig.php).
	Shortcut to the FileCloud support documentation.
	Click the icons to generate the URLs that can be used to access the FileCloud from outside the virtual image. Note: Depending on the network configuration, these links can be used to access FileCloud from anywhere on the local network (Bridged configuration) or from within the host (host-only or NAT configuration)
	Shortcut to the folder containing all cloud files.

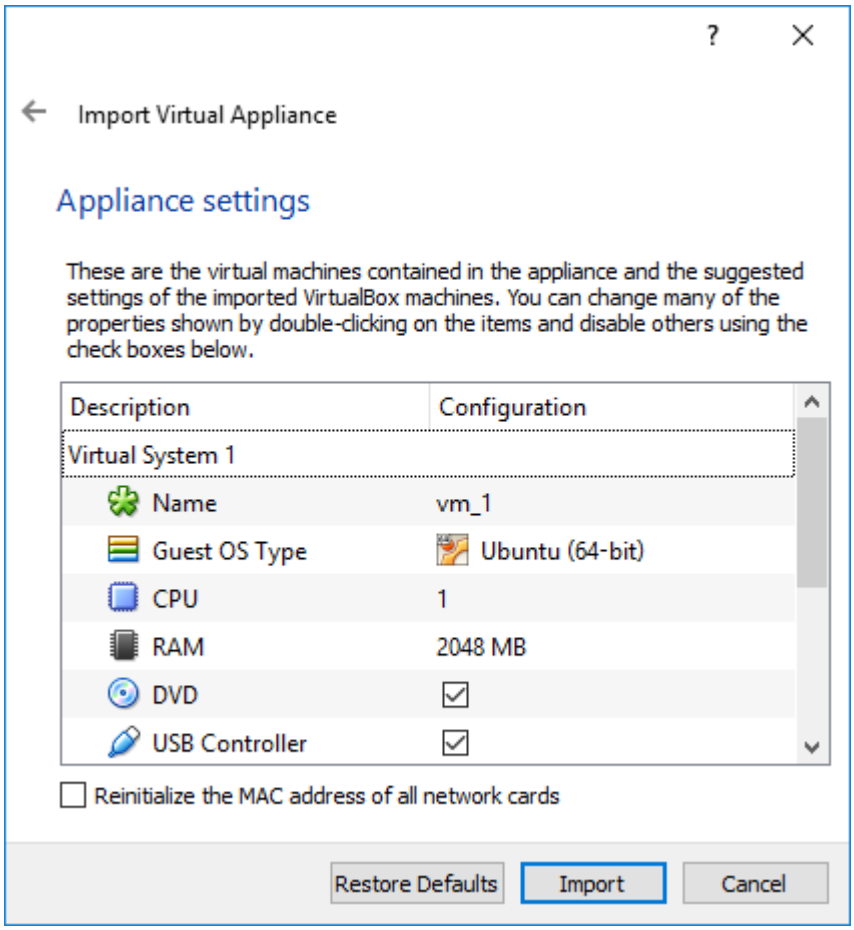
VirtualBox

For **Virtual Box:** Click on File->Import Appliance and then select the "FileCloud - For VirtualBox.ovf" file, then hit "Next" and then "Import". The virtual machine will be imported and available to start.


Oracle VM VirtualBox Manager
File
Machine
Help
Preferences... Ctrl+G
Import Appliance... Ctrl+I
Export Appliance... Ctrl+E
Virtual Media Manager... Ctrl+D
Network Operations Manager...
Check for Updates...
Reset All Warnings
Exit Ctrl+Q
Ubuntu 8.04 OpenWRT
Powered Off
Ubuntu 14.04 64 bit
Powered Off
Ubuntu 14.04 64 bit FC Test (Before FC install)
Powered Off
General
Name:
Operating System:
System
Base Memory:
Boot Order:
Acceleration:
Display
Video Memory:
Remote Desktop Server
Video Capture:


Import Virtual Appliance
Appliance to import
VirtualBox currently supports importing appliances saved in the Open Virtualization Format (OVF). To continue, select the file to import below.
Expert Mode
Next
Cancel


Please choose a virtual appliance file to import
This PC › Downloads › OVF › OVF
Search OVF
Organize
New folder
Quick access
Desktop
Downloads
p2p
Dump
FileCloud
FileCloud
Documents
Pictures
logs
OVF
partners
Scans
OneDrive
This PC
EOS_DIGITAL (E:)
Name
Date modified
Type
Size
FileCloud - For VirtualBox.ovf
8/25/2015 10:15 PM
Open Virtualizatio...
6 KB
FileCloud.ovf
8/25/2015 10:15 PM
Open Virtualizatio...
7 KB
File name:
FileCloud - For VirtualBox.ovf
Open Virtualization Format (*.o
Open
Cancel



VMware ESXi

If you have issues starting up the Virtual Machine in your VMware ESXi 5.1 infrastructure: You might need to do the following.

- Open a console to ESXi host.
- Run this command to load the multiextend module

```
#vmkload_mod multiextent
```

- Convert the vmdk image, by going to the location of the virtual machine and then run the following command

```
#vmkfstools -i ./TonidoCloud-disk1.vmdk ./newdiskimage.vmdk -d zeroedthick
```

- Delete the original disk

```
#vmkfstools -U ./TonidoCloud-disk1.vmdk
```

- Rename the cloned disk to the original disk name

```
#vmkfstools -E ./newdiskimage.vmdk ./TonidoCloud-disk1.vmdk
```

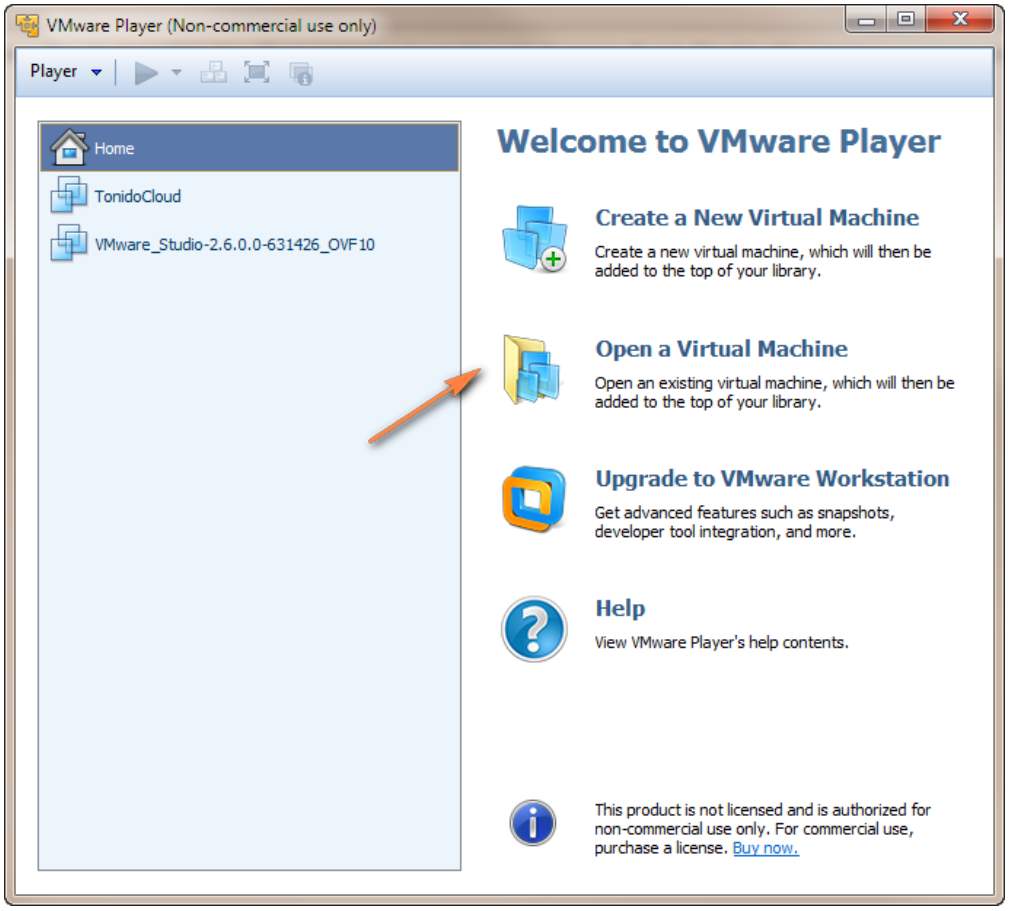
- Unload the multiextent module

```
#vmkload_mod -u multiextent
```

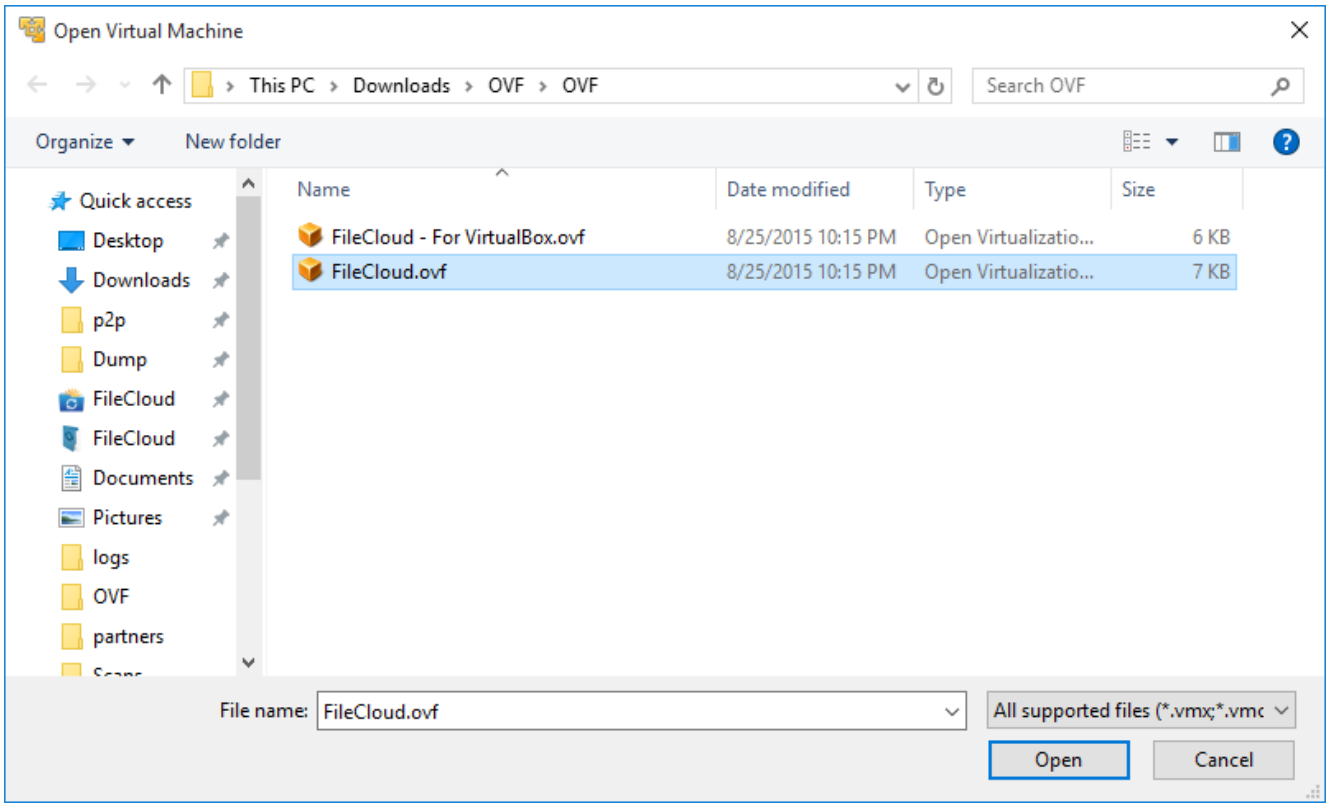
For more information see http://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2036572

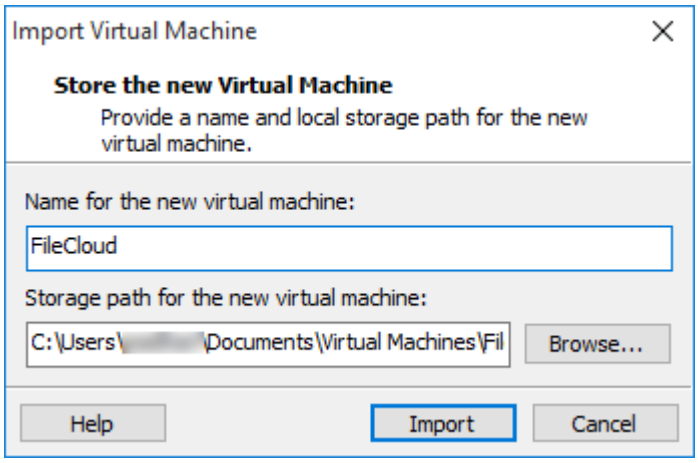
VMware Player

For **VMWare Player:** Click on "Open a Virtual Machine" and then select the TonidoCloud.ovf file and hit "Import". The virtual machine will be imported and be available to start.



1 vmwareplayer1.png





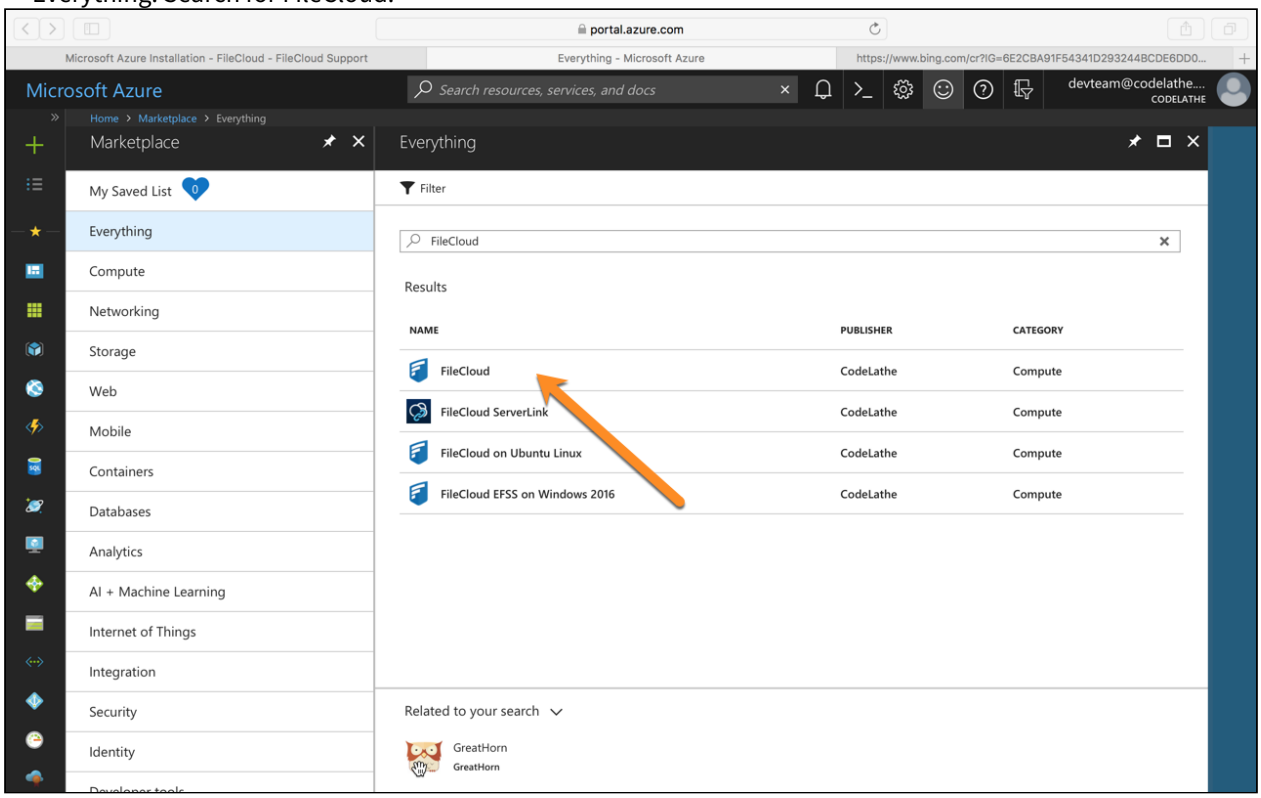
Microsoft Azure Installation

FileCloud Virtual Machine is currently available via Azure Marketplace.

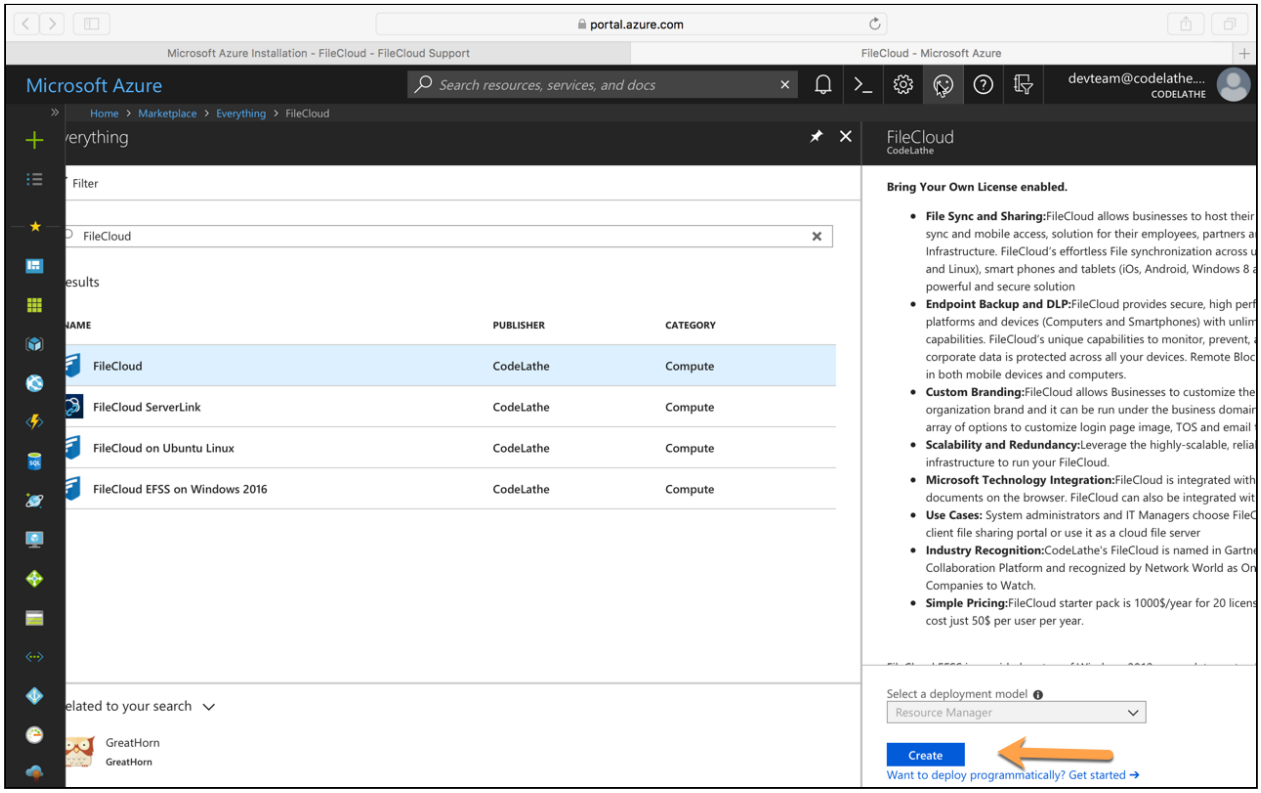
Using FileCloud VM on Azure, one can host their own file share sync and mobile access solution for their organization in less than 10 minutes. The FileCloud Virtual Machine is built on top of Windows Server 2016 Data Center Edition. FileCloud stores the metadata information in MongoDB which is already pre-configured in the FileCloud Virtual Machine. The actual files can be stored in the VM Disk or Azure Files depending on your requirement. We recommend to take periodic snapshots of your running instance for disaster recovery.

Steps To Launch FileCloud Virtual Machine on Azure

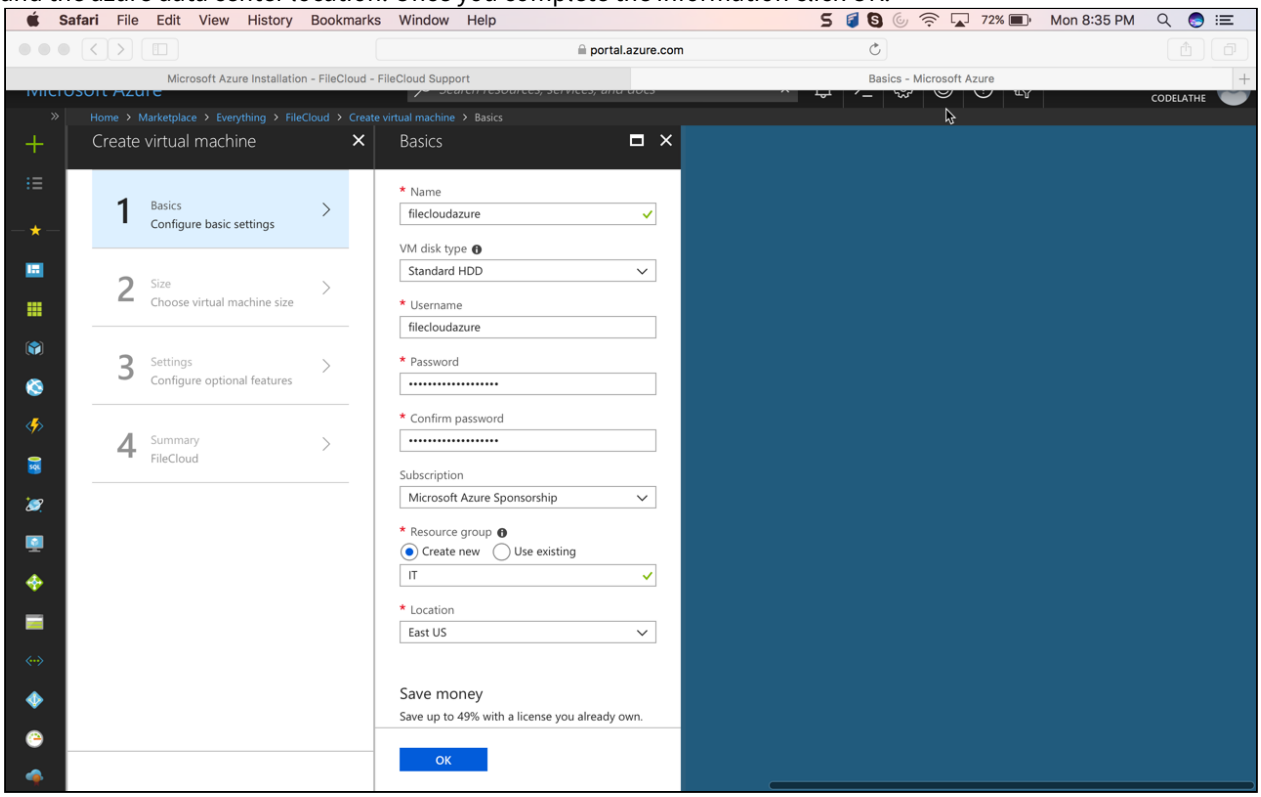
1. Login to https://portal.azure.com using your azure account. Upon successful login, go to Home>> Marketplace >> Everything. Search for FileCloud.



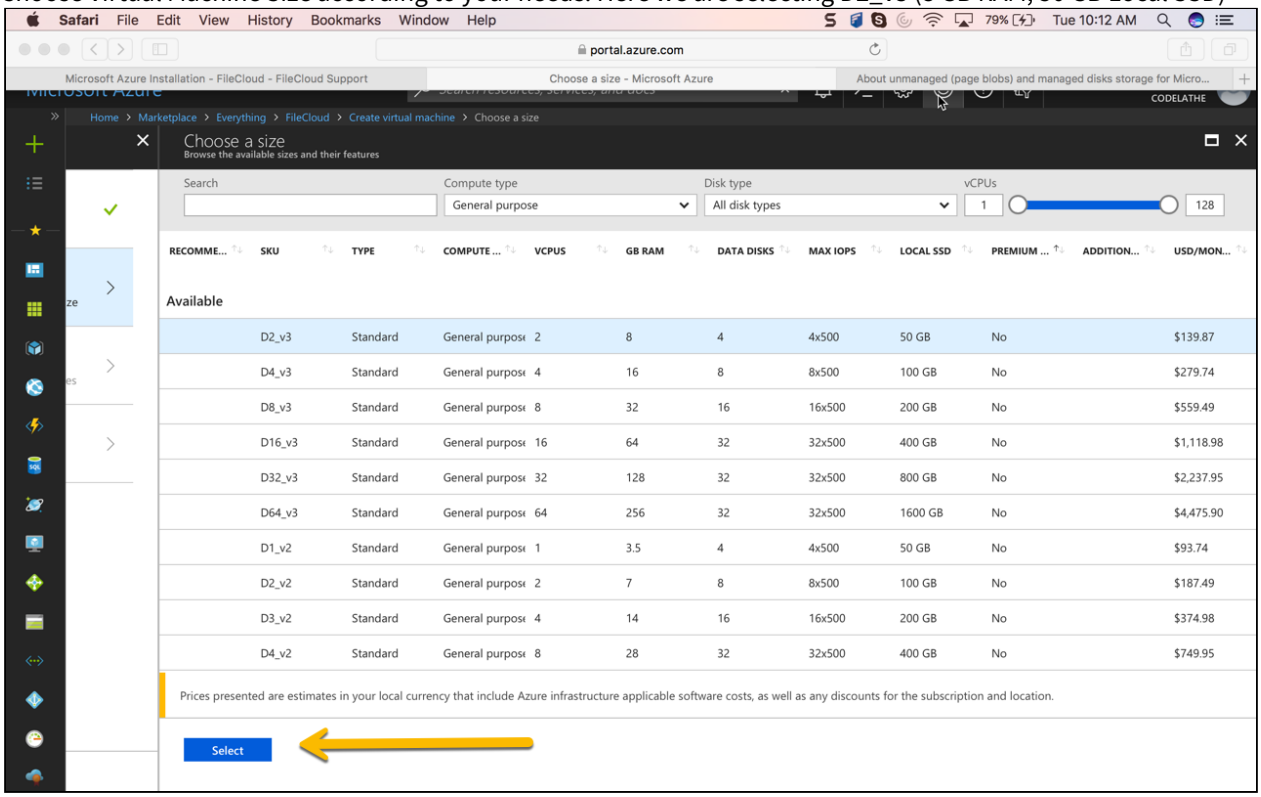
2. Select FileCloud and Click Create



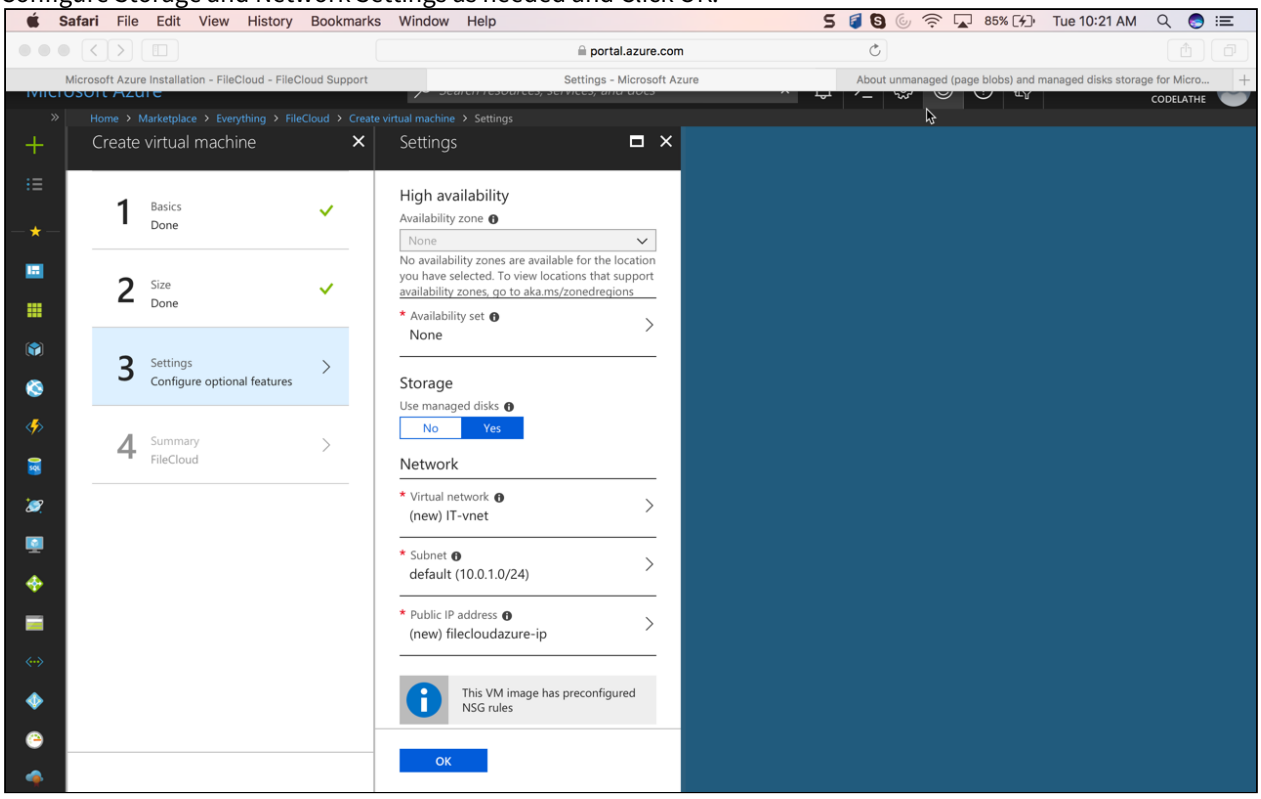
3. Configure Basic Settings: Choose your Windows VM name, user name, password, subscription, resource group and the azure data center location. Once you complete the information click OK.



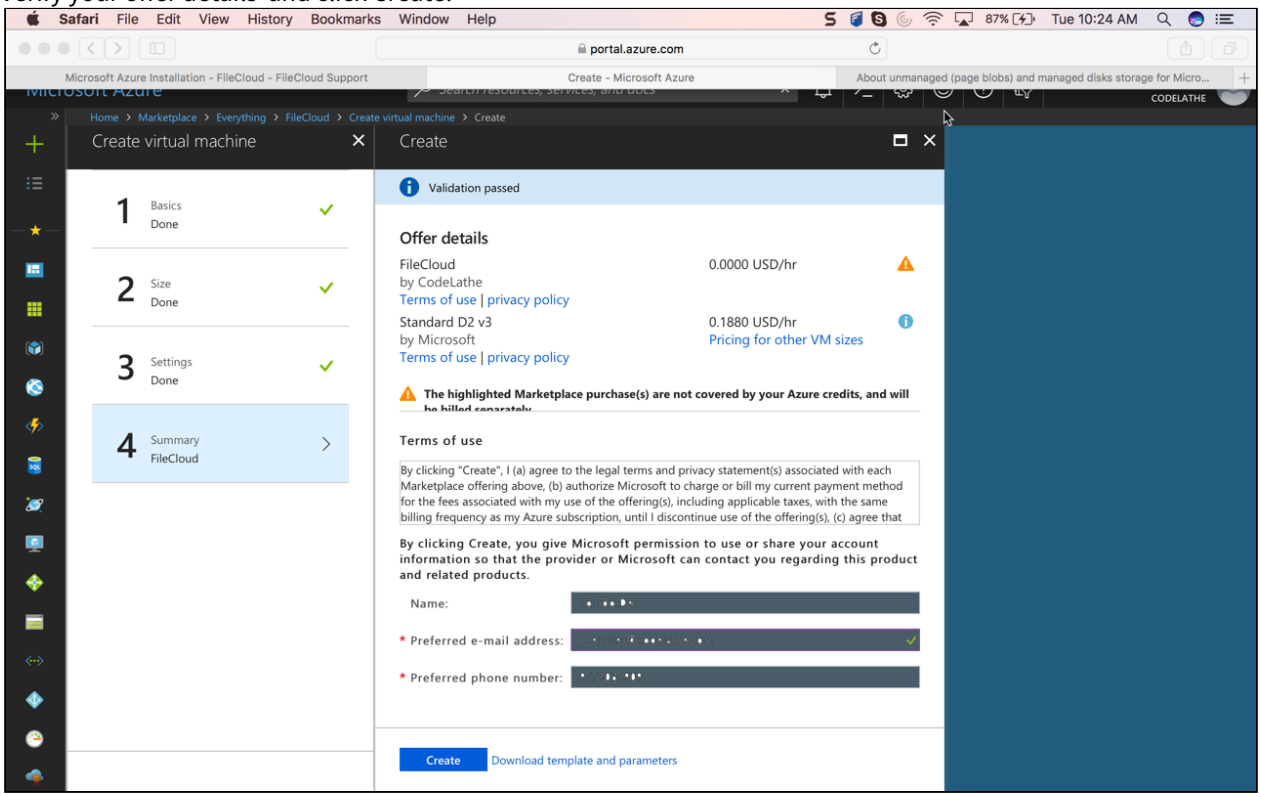
4. Choose Virtual Machine Size according to your needs. Here we are selecting D2_v3 (8 GB RAM, 50 GB Local SSD)



5. Configure Storage and Network Settings as needed and Click OK.

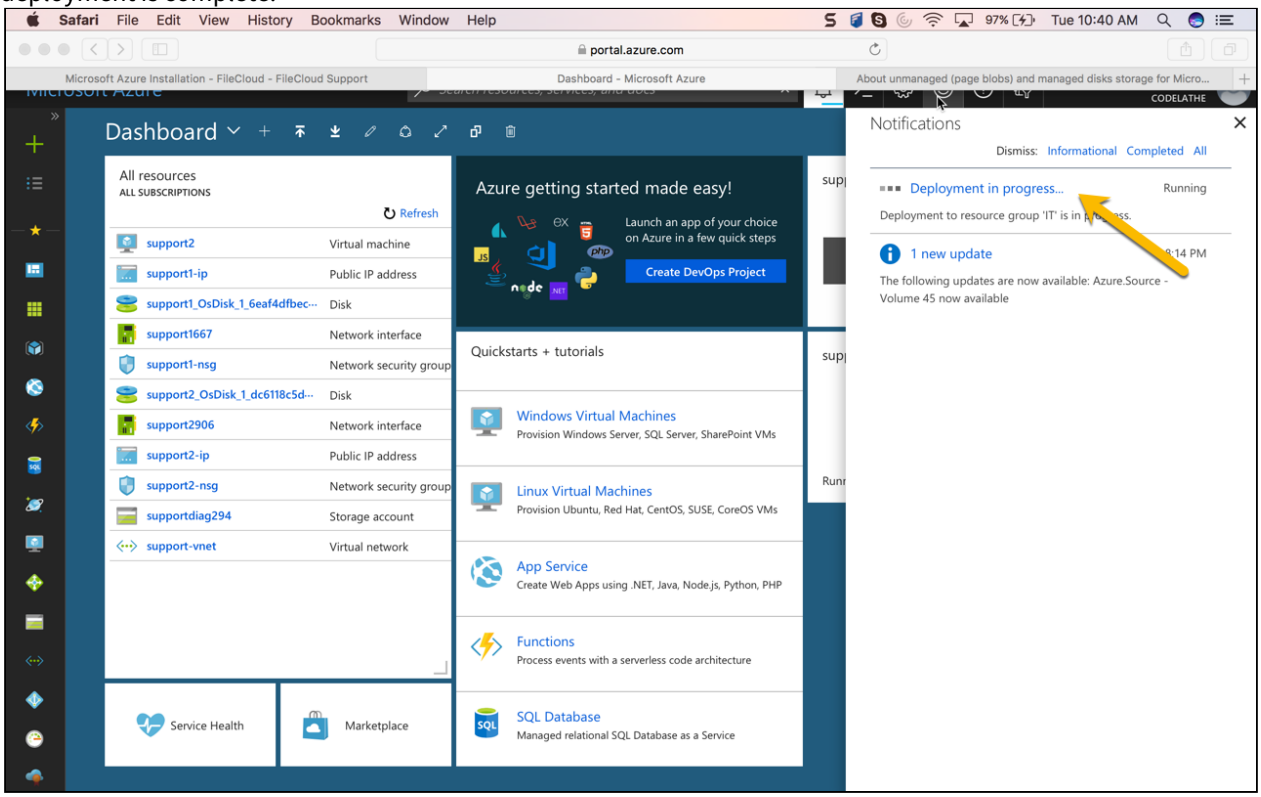


6. Verify your offer details and click Create.

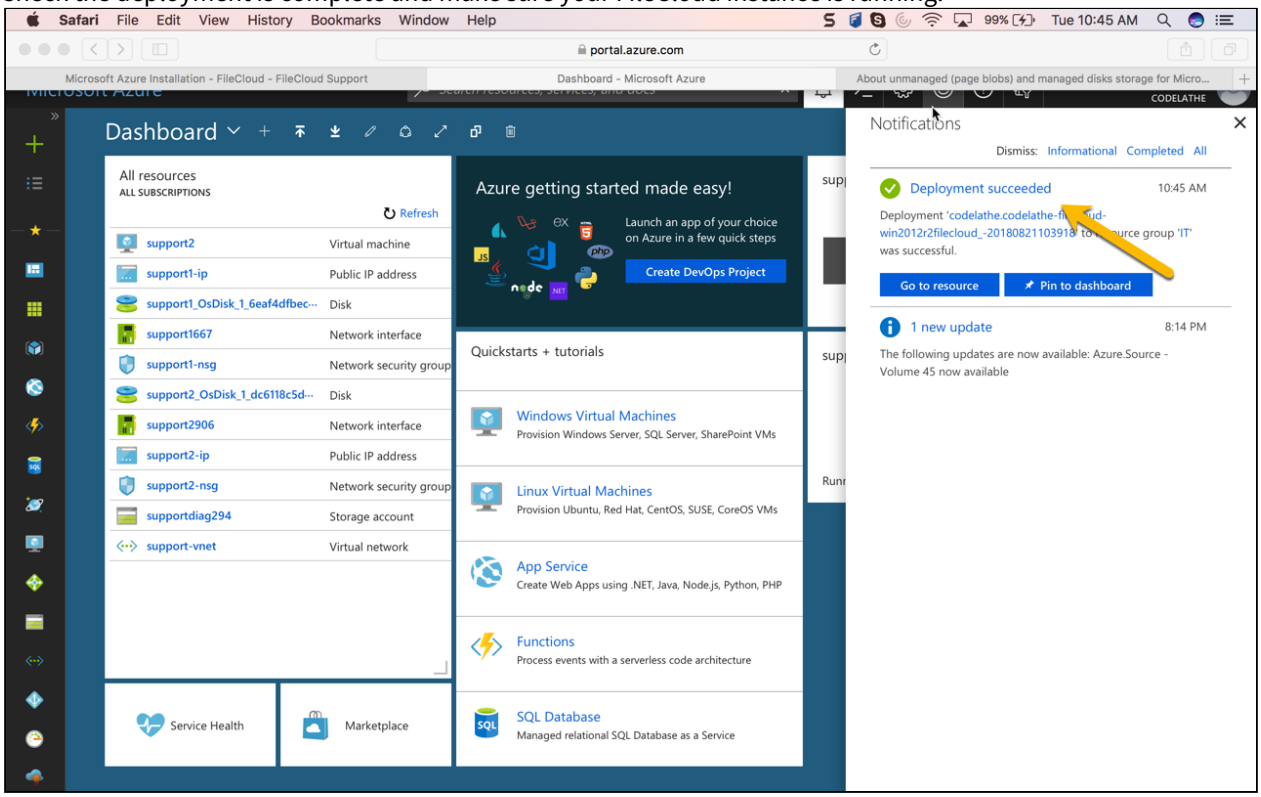


Note: FileCloud is offered under Bring your Own License Model. You can get FileCloud trial license by registering in our customer portal.

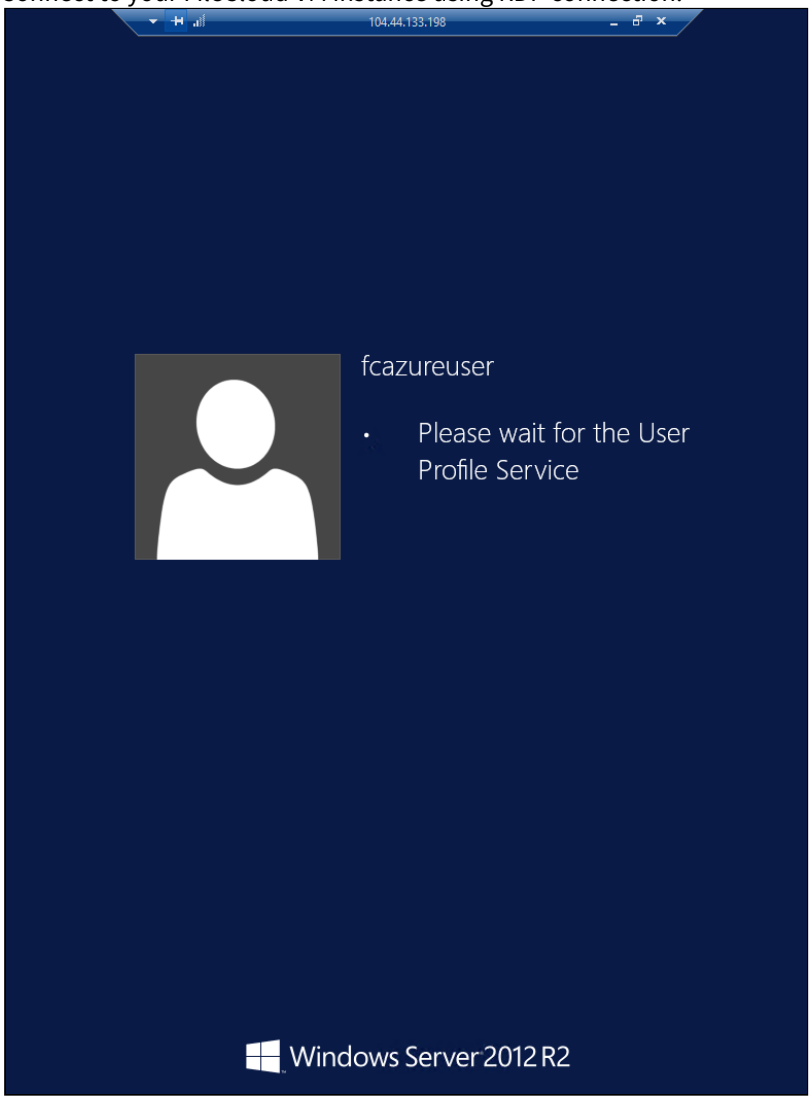
7. Azure will start provisioning your FileCloud Virtual Machine. Check the Notifications to see whether the deployment is complete.



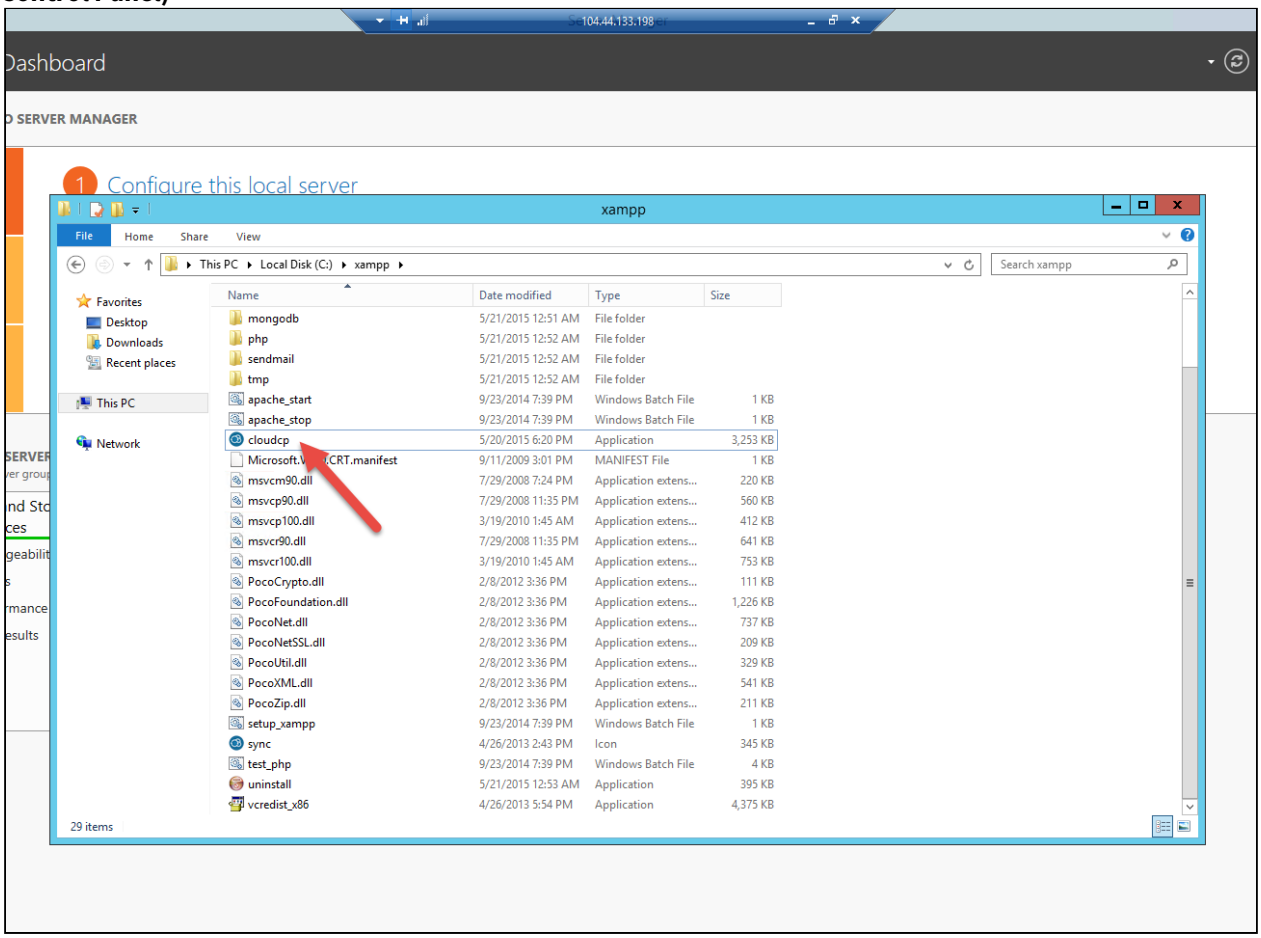
8. Check the deployment is complete and make sure your FileCloud instance is running.



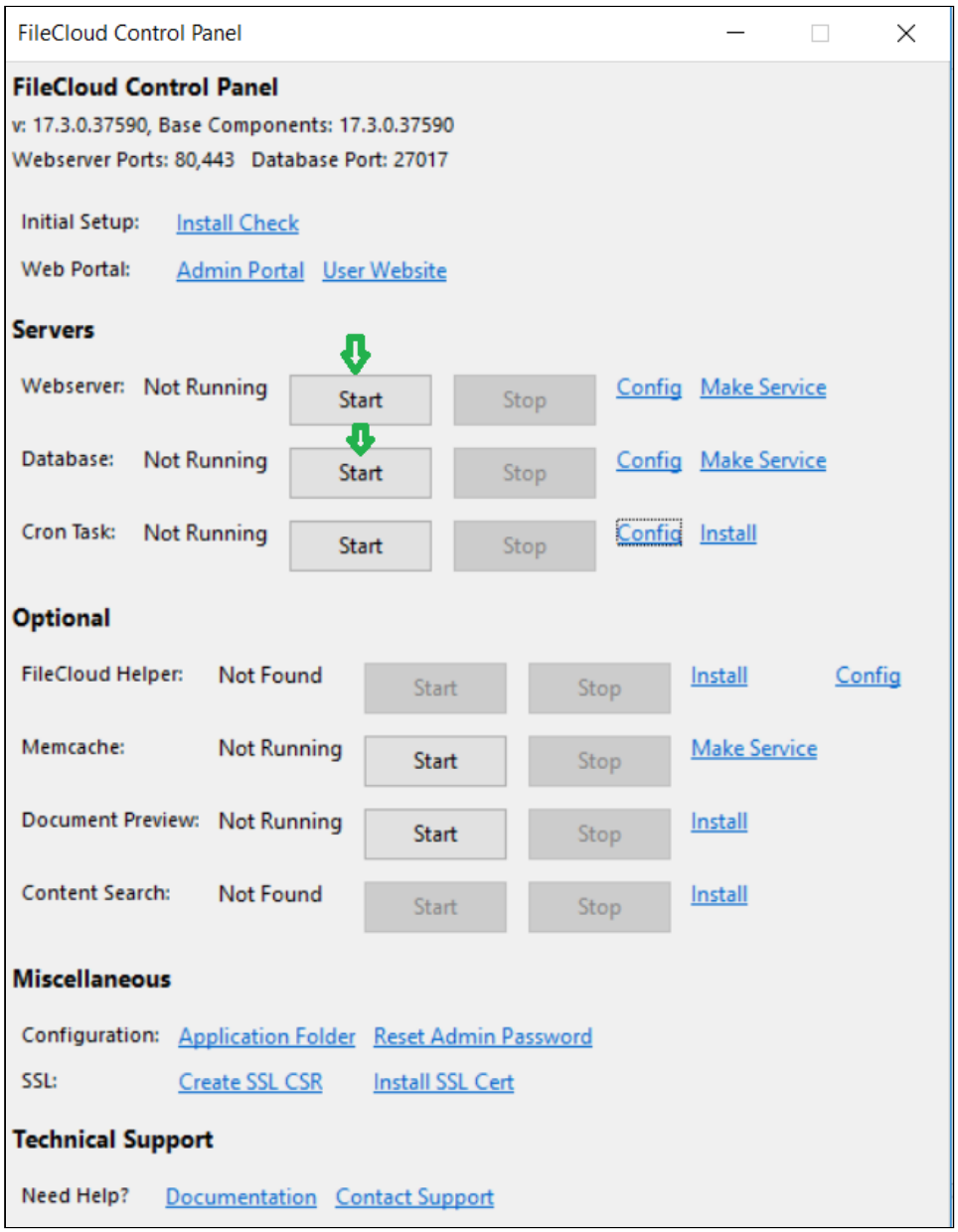
9. Connect to your FileCloud VM instance using RDP connection.



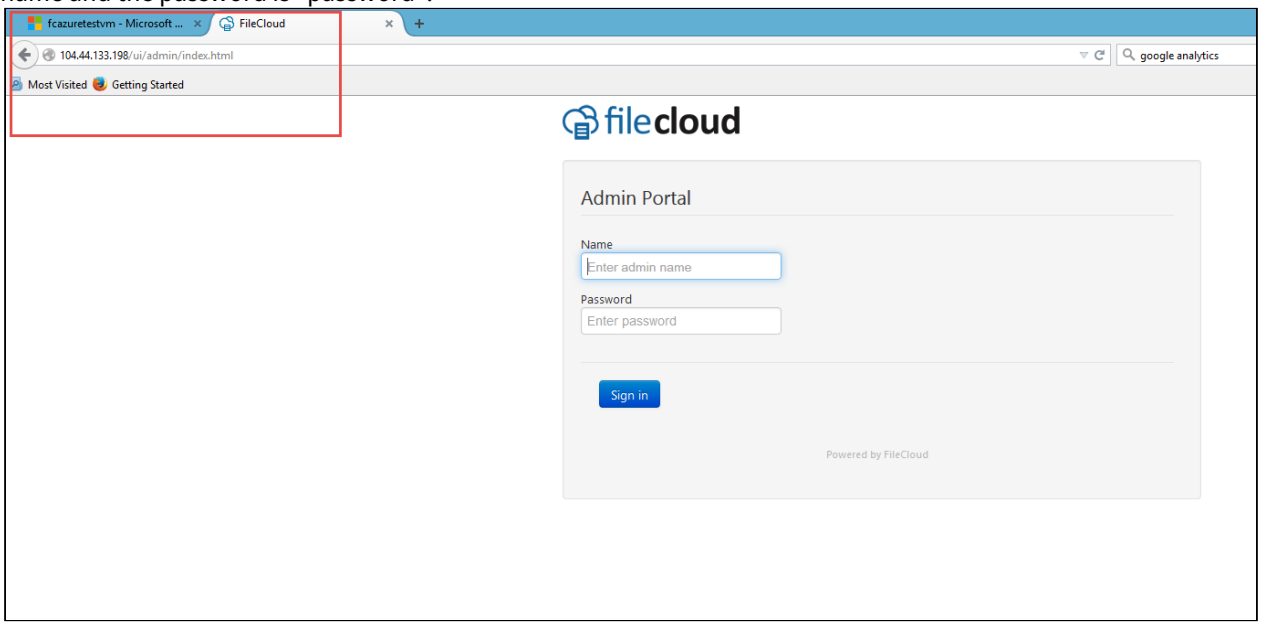
10. Right Click Windows Start Icon --> Launch File Explorer --> Go to **C:\xampp** and double click **cloudcp (FileCloud Control Panel)**



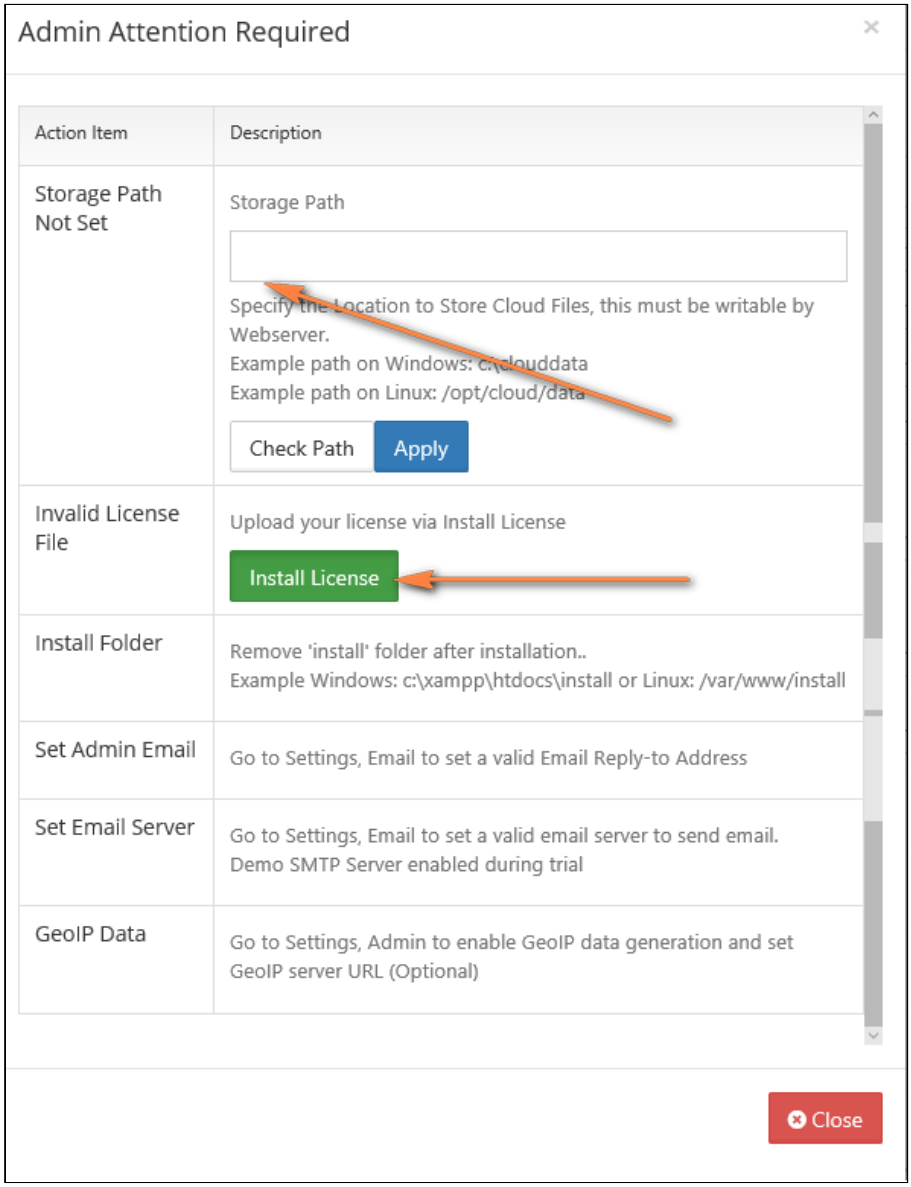
11. Start the FileCloud web server and database server via the FileCloud Control Panel.



12. Type http://<publicIP_of_FileCloudVM>/ui/admin/index.html to access the admin portal. Use "admin" as user name and the password is "password".



13. Upon successful login, set the storage path for your files and install the trial license you have got from Microsoft Azure Installation.



14. You are set now. Follow the steps here (FileCloud Site Setup) to setup and customize FileCloud as per your organization requirements.

FileCloud Integration with Azure File Storage

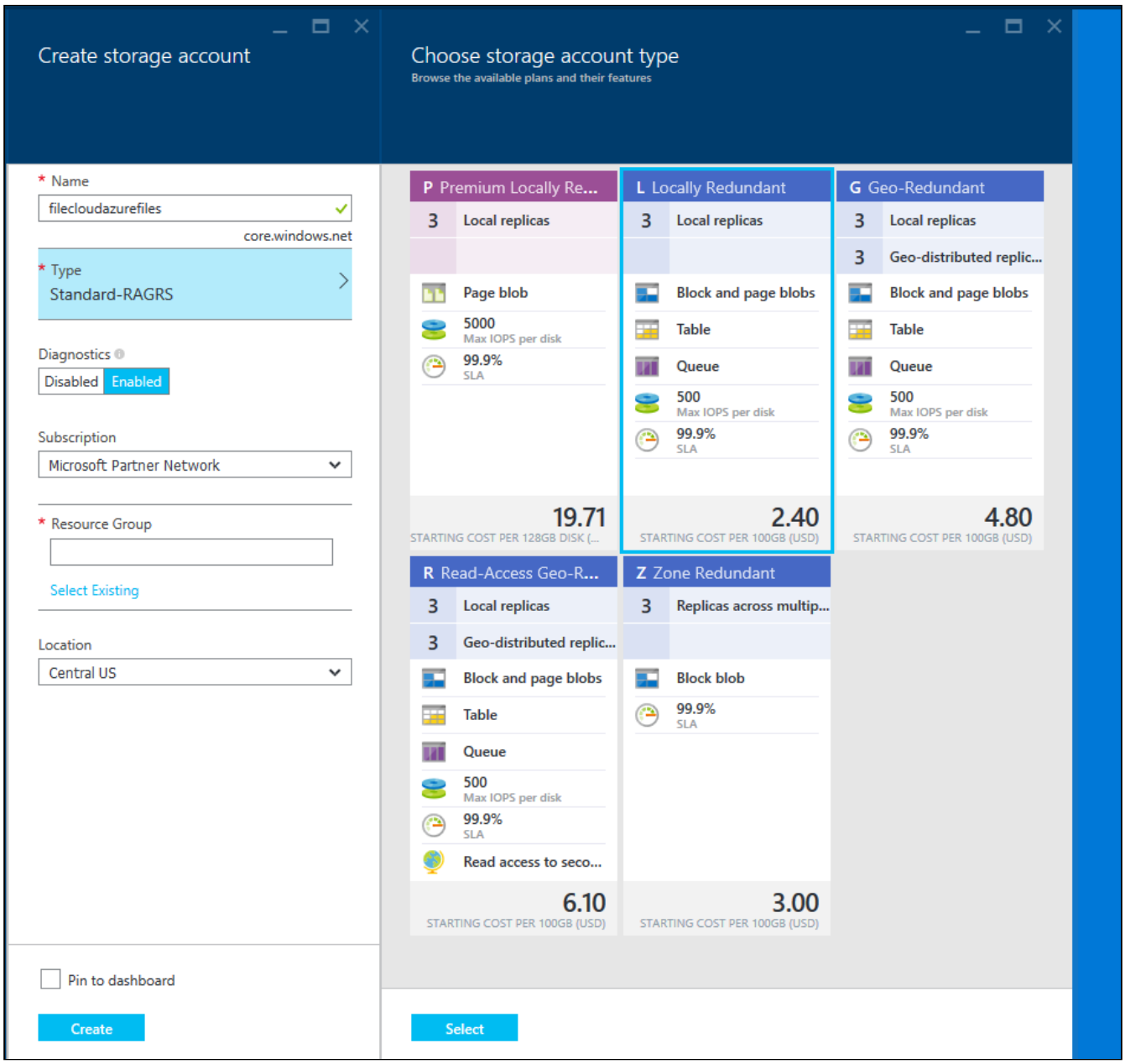
Azure File storage offers file shares in the Azure Cloud using standard SAMBA protocol (SMB 3.0). FileCloud running on Azure VMs can mount the file shares created on Azure Files storage and use it as a main storage path for FileCloud. You can also use the same fileshare to store the MongoDB data files. Azure Files storage is built on the same technology as Blob, Table, and Queue storage. When you create the storage account in Azure portal you can choose what type of redundancy you would like to have (Local or geo-redundancy). By storing both files and the database db files in Azure Files Storage you will get the same scalability, durability, reliability and geo-redundancy of Azure storage infrastructure.

One can also easily scale FileCloud by running multiple app nodes while pointing to the same Azure Files Storage location for storing files and database data files.

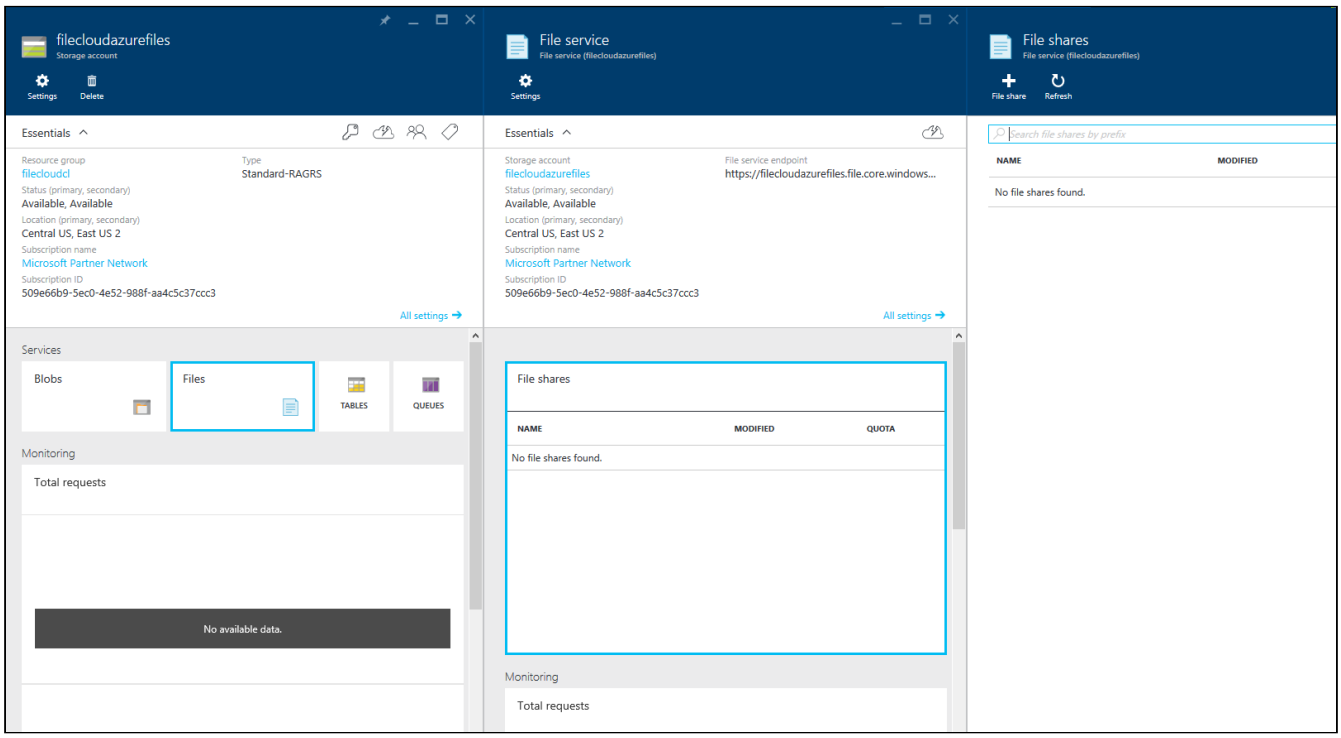
We have tested FileCloud with Azure Files storage backend using few million files and the setup has worked great. This configuration gives the scalability and data redundancy without any complicated setup. If you have any questions please feel free to contact us at ***support@filecloud.com***.

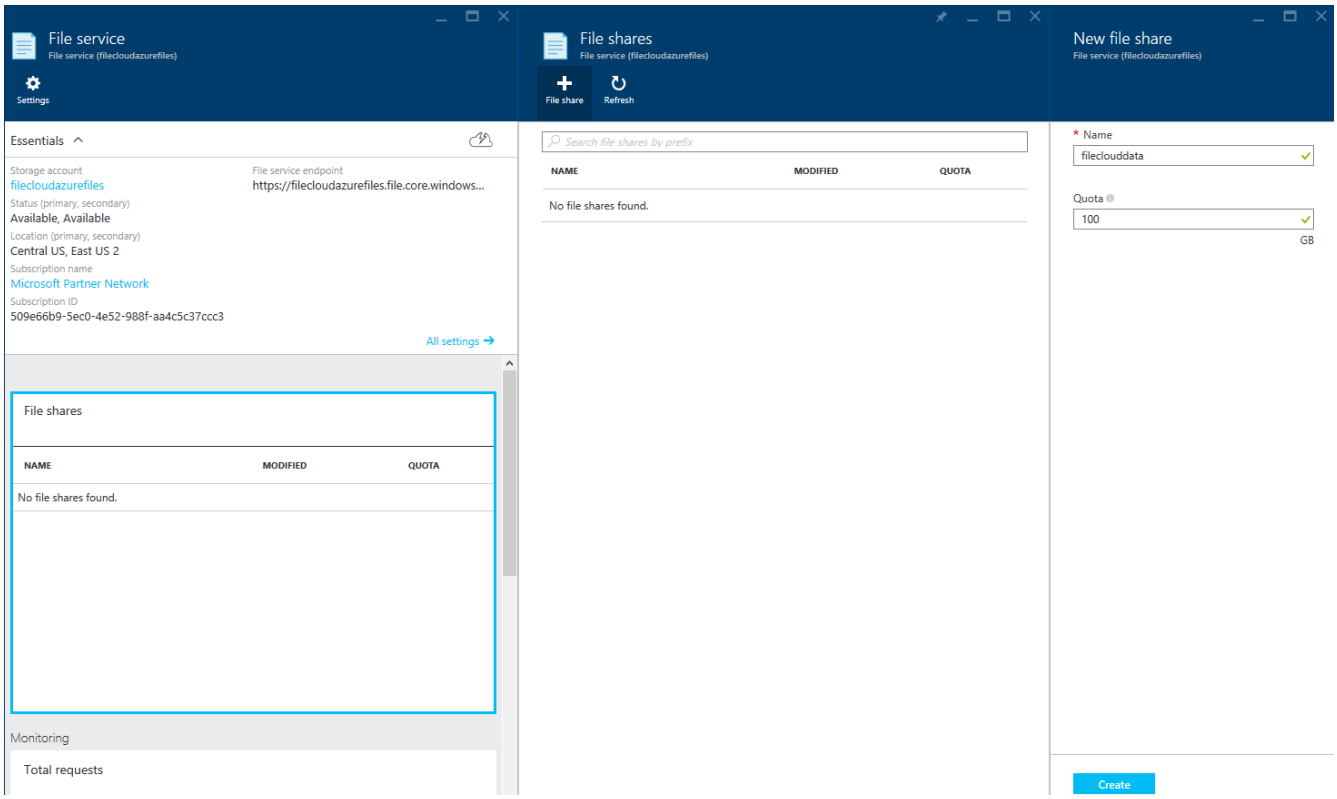
Step by Step Instructions to Integrate FileCloud with Azure File Storage

1. Create a storage account in Azure Portal and choose the storage account type (depending on your redundancy requirements). In this exercise, we have chosen a locally redundant storage account type. We recommend to choose the location same as where FileCloud VM is located.

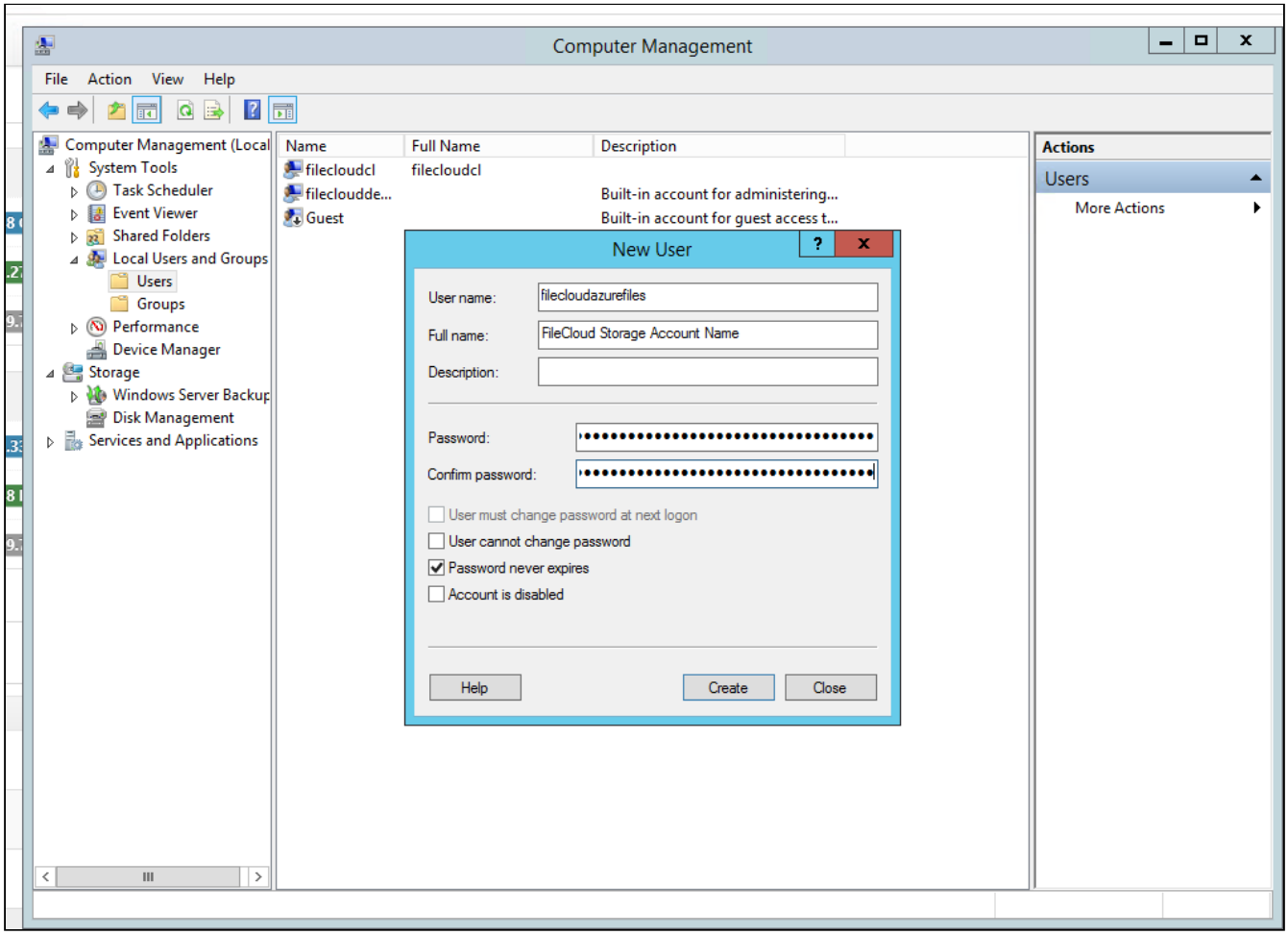


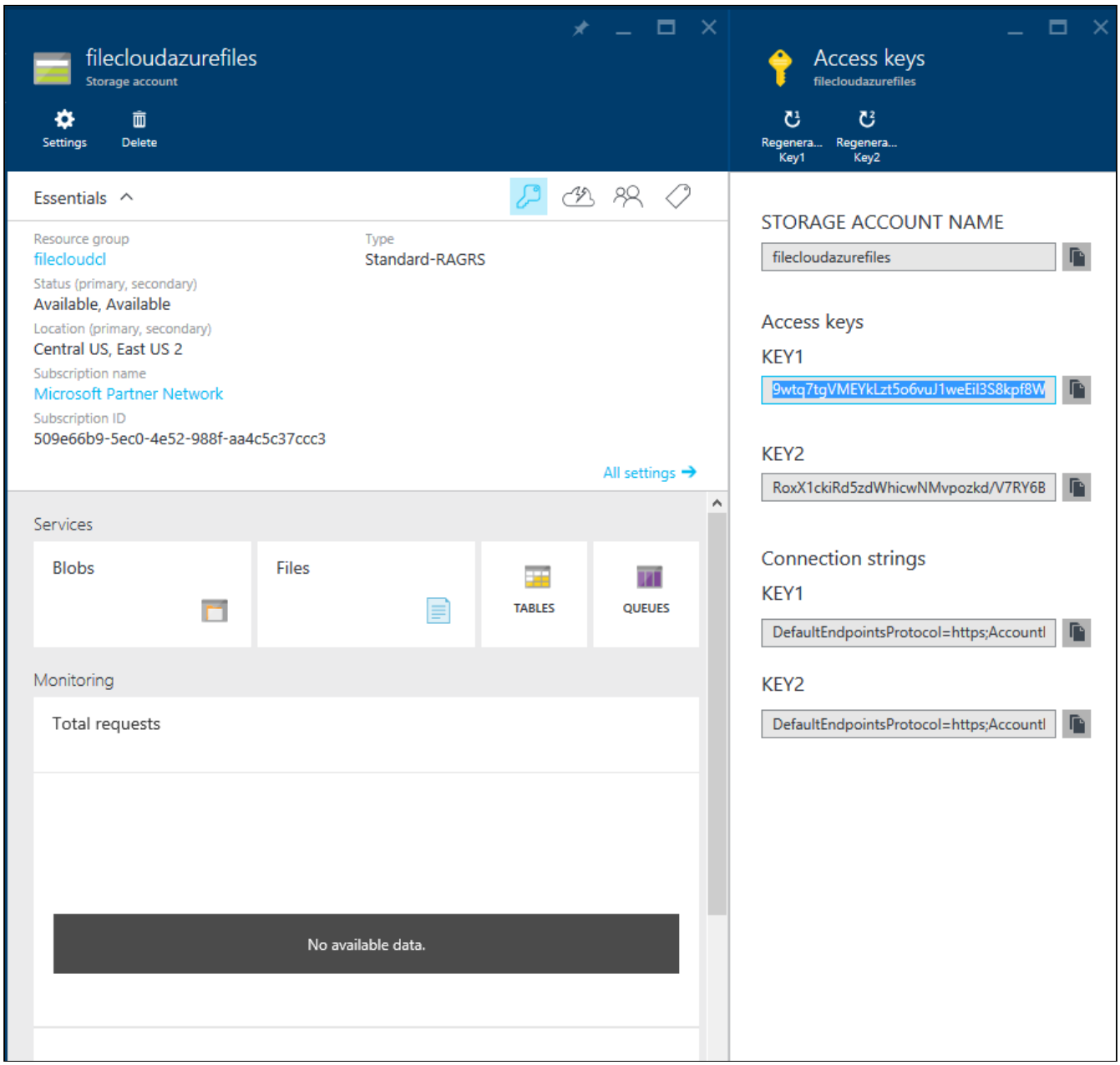
2. Create a File Share under Storage Account as shown below. One can also choose the storage quota. Maximum storage for a File Share is 5120 GB.


filecloudazurefiles
Storage account
Settings
Delete
Essentials
Resource group
filecloudcl
Type
Standard-RAGRS
Status (primary, secondary)
Available, Available
Location (primary, secondary)
Central US, East US 2
Subscription name
Microsoft Partner Network
Subscription ID
509e66b9-5ec0-4e52-988f-aa4c5c37ccc3
All settings
Services
Blobs
Files
TABLES
QUEUES
Monitoring
Total requests
No available data.
File service
File service (filecloudazurefiles)
Settings
Essentials
Storage account
filecloudazurefiles
File service endpoint
https://filecloudazurefiles.file.core.windows...
Status (primary, secondary)
Available, Available
Location (primary, secondary)
Central US, East US 2
Subscription name
Microsoft Partner Network
Subscription ID
509e66b9-5ec0-4e52-988f-aa4c5c37ccc3
All settings
File shares
NAME
MODIFIED
QUOTA
No file shares found.
Monitoring
Total requests
File shares
File service (filecloudazurefiles)
File share
Refresh
Search file shares by prefix
NAME
MODIFIED
No file shares found.

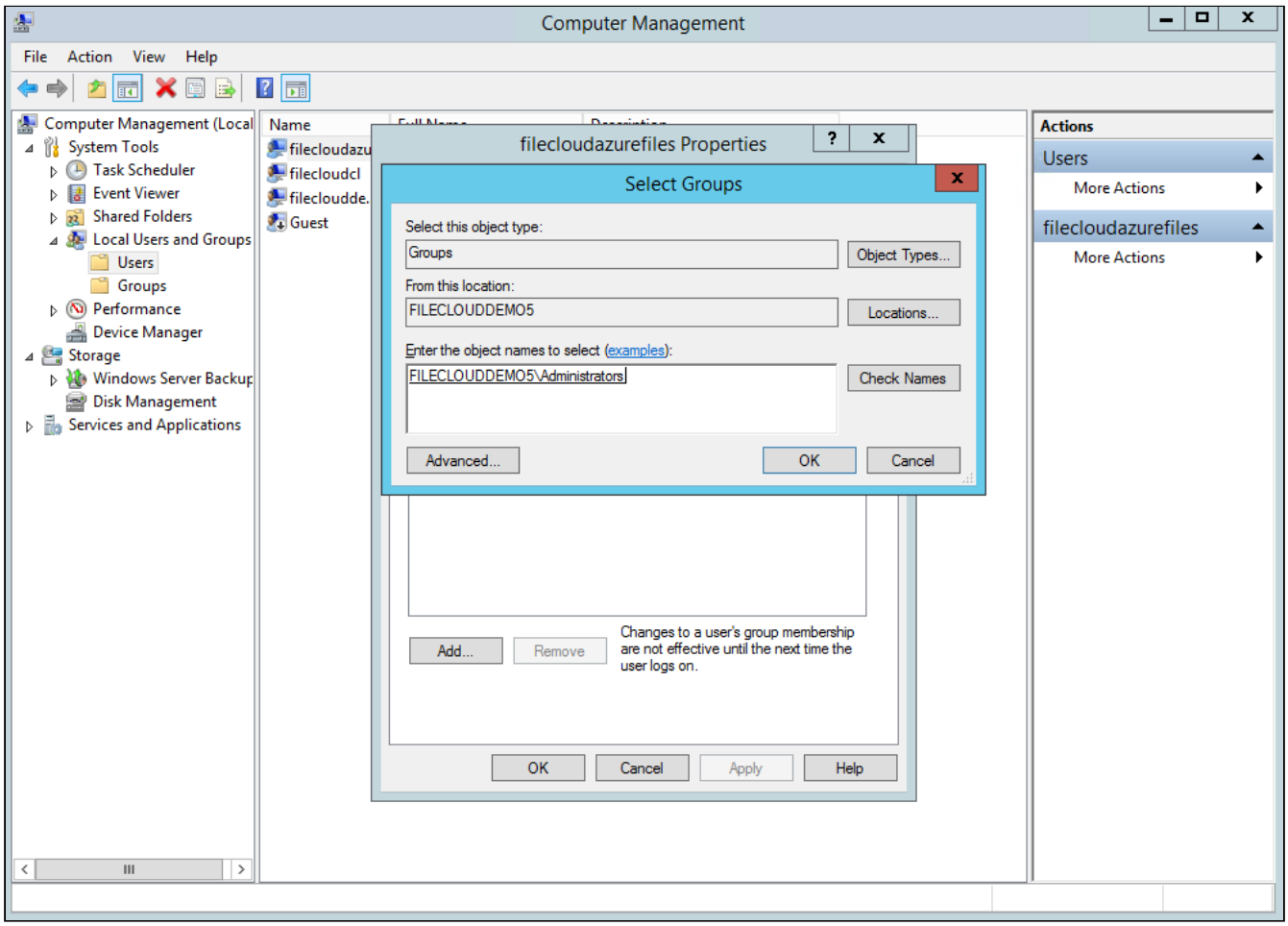

File service
File service (filecloudazurefiles)
Settings
Essentials
Storage account
filecloudazurefiles
File service endpoint
https://filecloudazurefiles.file.core.windows...
Status (primary, secondary)
Available, Available
Location (primary, secondary)
Central US, East US 2
Subscription name
Microsoft Partner Network
Subscription ID
509e66b9-5ec0-4e52-988f-aa4c5c37ccc3
All settings
File shares
NAME
MODIFIED
QUOTA
No file shares found.
Monitoring
Total requests
File shares
File service (filecloudazurefiles)
File share
Refresh
Search file shares by prefix
NAME
MODIFIED
QUOTA
No file shares found.
New file share
File service (filecloudazurefiles)
* Name
filecloudata
Quota
100
GB
Create

3. Create a local user in FileCloud VM with the same name as the storage account name that you have created in step 1. For password, please use the access key of Azure Files Storage.



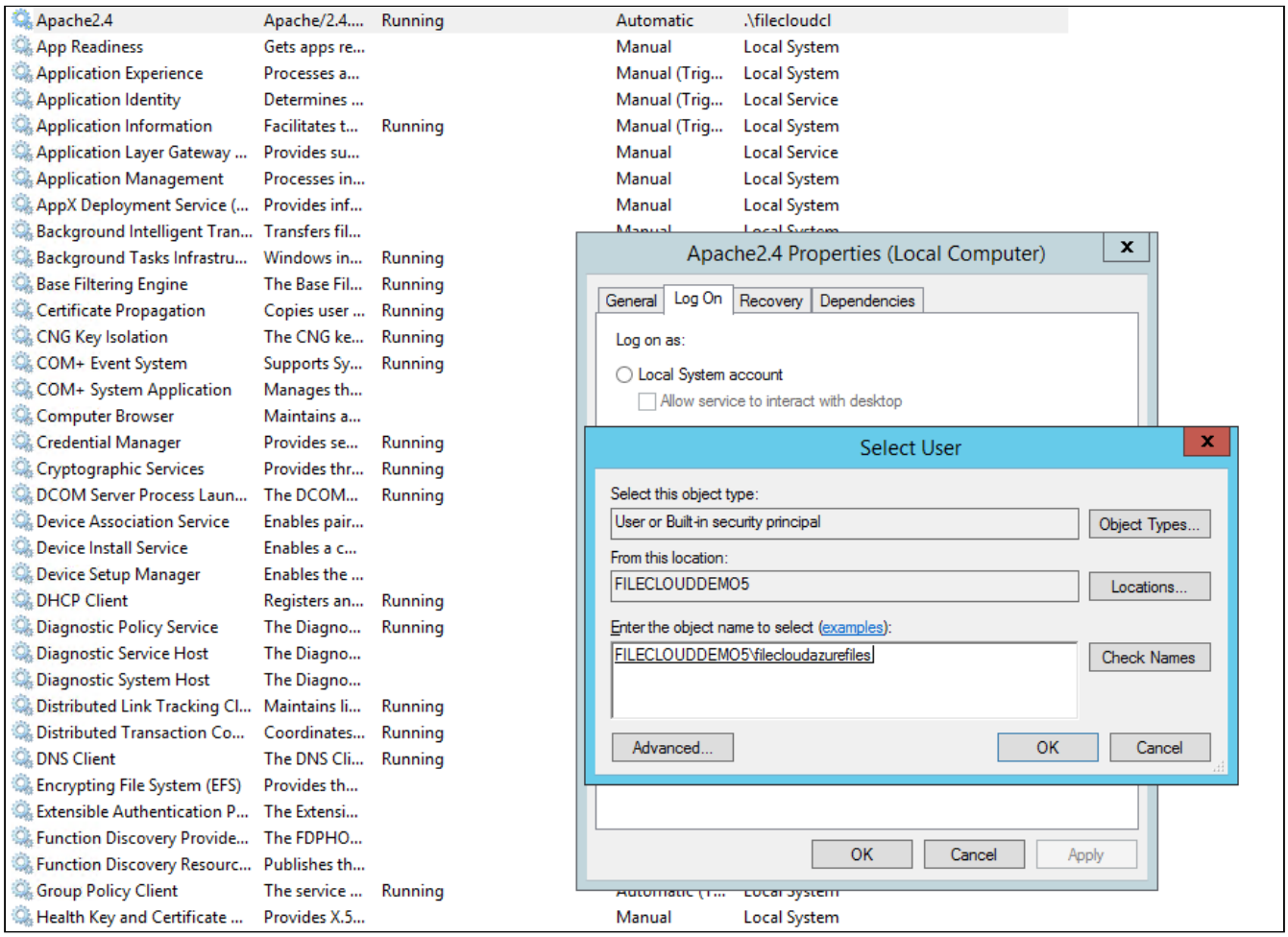


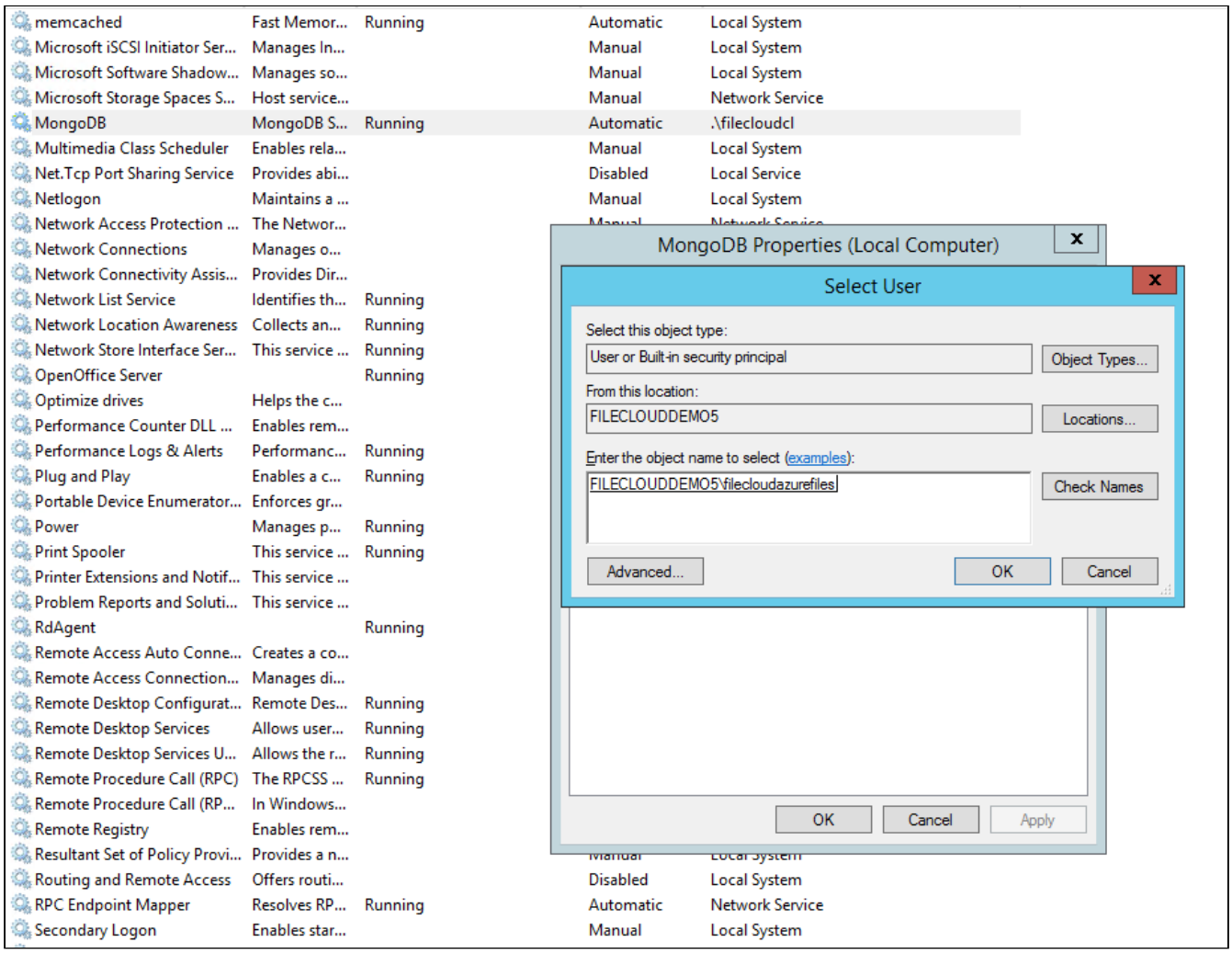
4. Make the local user created in step 3 as part of Administrators group.



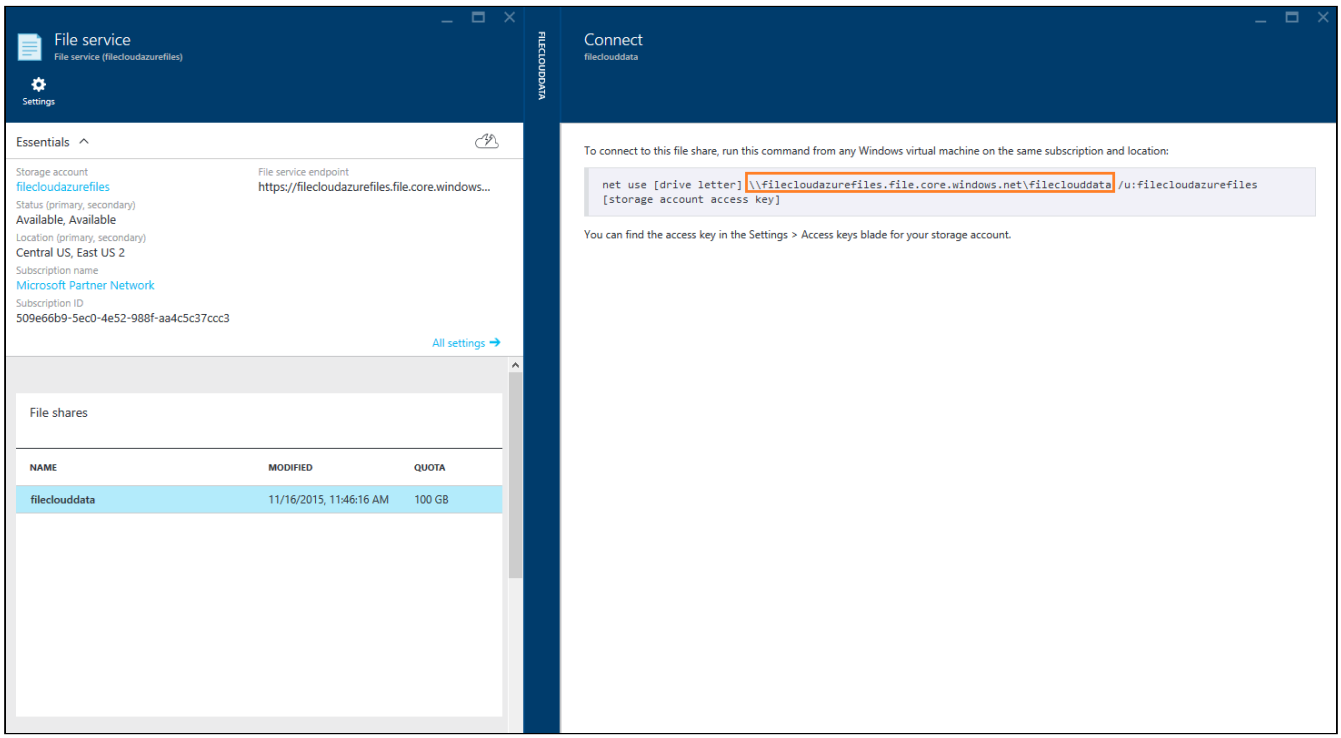
5. Run the Apache and MongoDB service using the local user account created in the previous step.

Note: We do this step for Apache and MongoDB to have the read, write access permissions to the file shares we created on Azure storage. By using the storage account name as a local user name and access key as the password, this local user will get complete access to the file shares.

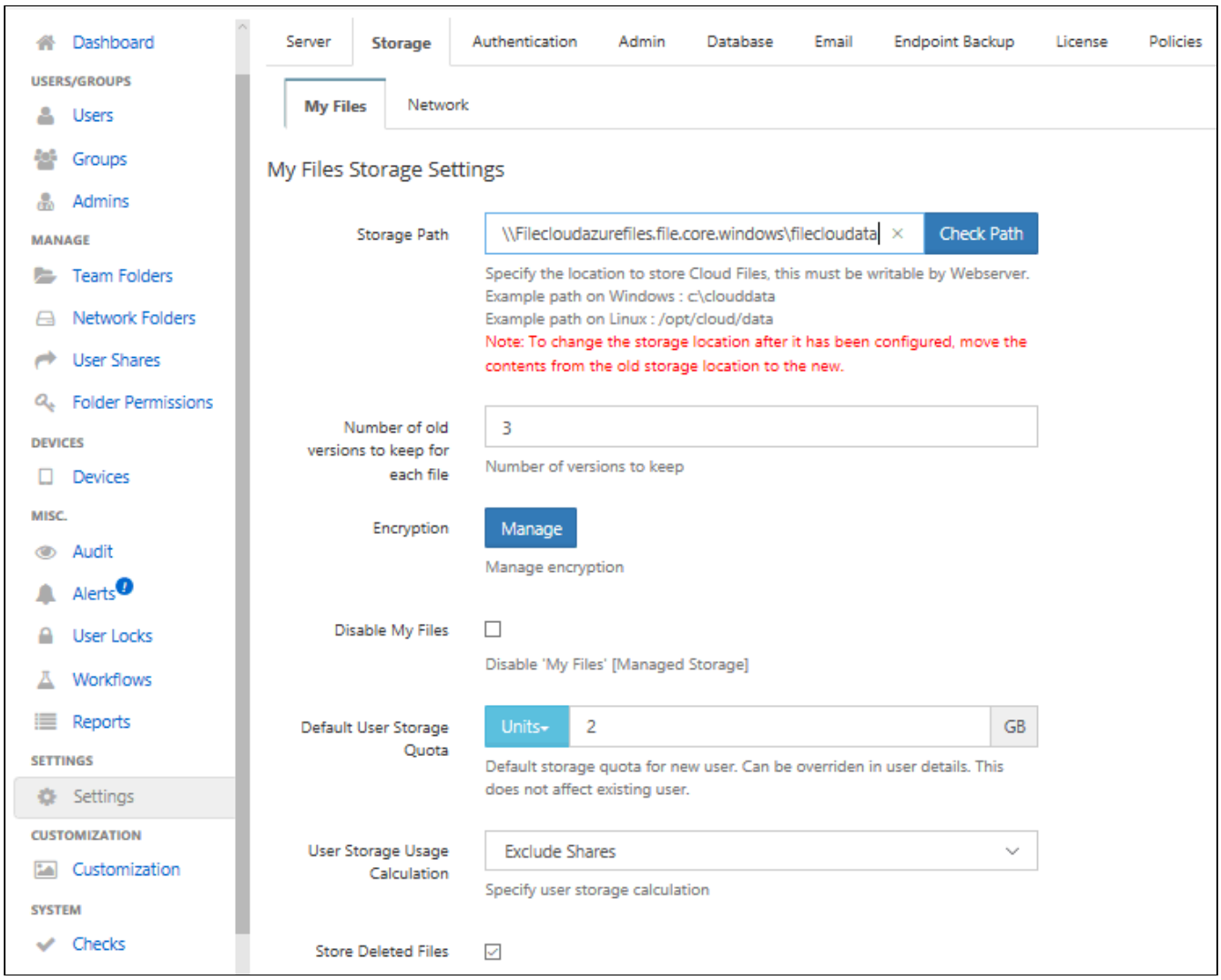

Apache2.4 Apache/2.4.... Running Automatic .\filecloudcl
App Readiness Gets apps re... Manual Local System
Application Experience Processes a... Manual (Trig... Local System
Application Identity Determines ... Manual (Trig... Local Service
Application Information Facilitates t... Running Manual (Trig... Local System
Application Layer Gateway ... Provides su... Manual Local Service
Application Management Processes in... Manual Local System
AppX Deployment Service (... Provides inf... Manual Local System
Background Intelligent Tran... Transfers fil...
Background Tasks Infrastru... Windows in... Running
Base Filtering Engine The Base Fil... Running
Certificate Propagation Copies user ... Running
CNG Key Isolation The CNG ke... Running
COM+ Event System Supports Sy... Running
COM+ System Application Manages th...
Computer Browser Maintains a...
Credential Manager Provides se... Running
Cryptographic Services Provides thr... Running
DCOM Server Process Laun... The DCOM... Running
Device Association Service Enables pair...
Device Install Service Enables a c...
Device Setup Manager Enables the ...
DHCP Client Registers an... Running
Diagnostic Policy Service The Diagno... Running
Diagnostic Service Host The Diagno...
Diagnostic System Host The Diagno...
Distributed Link Tracking Cl... Maintains li... Running
Distributed Transaction Co... Coordinates... Running
DNS Client The DNS Cli... Running
Encrypting File System (EFS) Provides th...
Extensible Authentication P... The Extensi...
Function Discovery Provide... The FDPHO...
Function Discovery Resourc... Publishes th...
Group Policy Client The service ... Running
Health Key and Certificate ... Provides X.5... Manual Local System
Apache2.4 Properties (Local Computer)
General
Log On
Recovery
Dependencies
Log on as:
Local System account
Allow service to interact with desktop
OK
Cancel
Apply
Select User
Select this object type:
User or Built-in security principal
Object Types...
From this location:
FILECLOUDDEMO5
Locations...
Enter the object name to select (examples):
FILECLOUDDEMO5\filecloudazurefiles
Check Names
Advanced...
OK
Cancel



6. Copy the file share path of file share created in step 2 from the Azure Portal (**"*filecloudazurefiles.file.core.windows.net**filecloudddata***")



7. Set the share path("***filecloudazurefiles.file.core.windows.net**filecloudata***") as Storage Path in Managed Storage Settings.

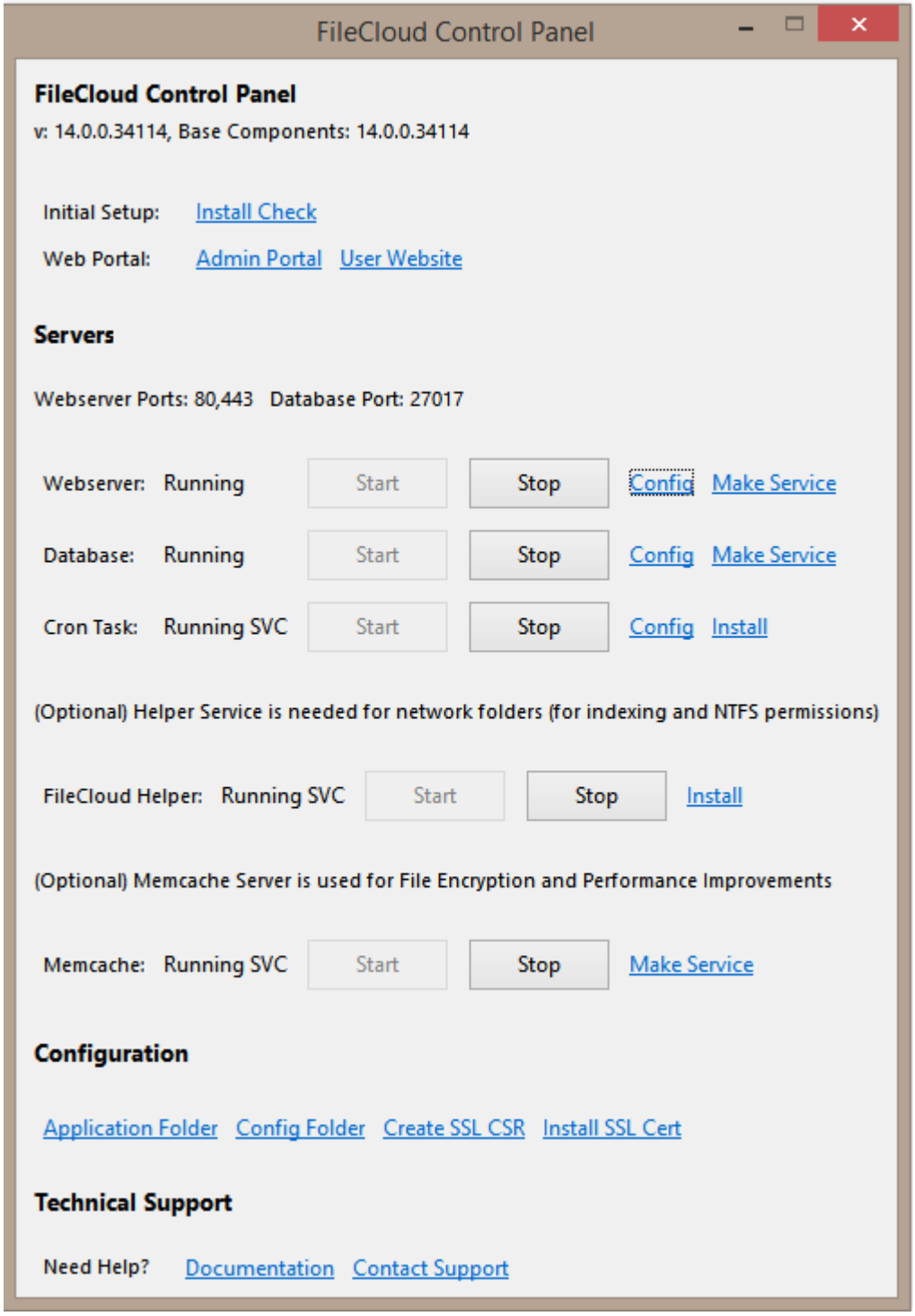


8. Open the C:\xampp\mongodb\bin\mongodb.conf file. Edit the dbpath to point to the file share path you created in Azure Files storage.

Note: Before editing the mongodb.conf file make sure you have stopped the database and the webserver from the FileCloud Control Panel.

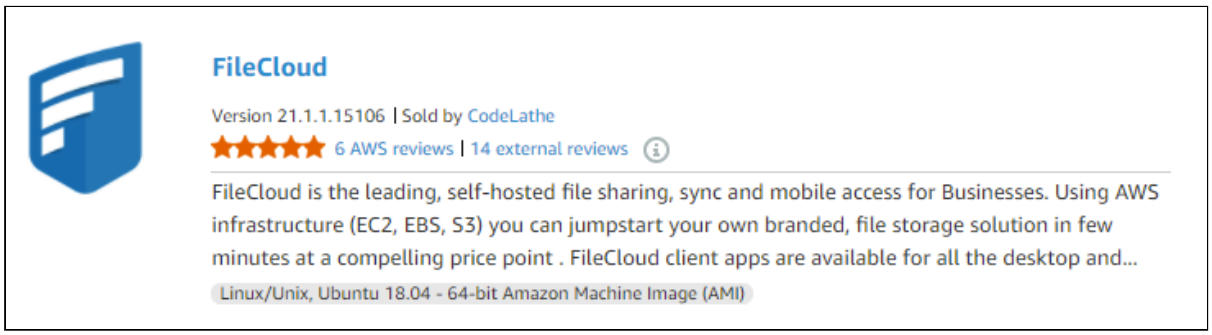
```
# mongodb.conf

# Where to store the data.
dbpath=\\filecloudazurefiles.file.core.windows.net\filecloud data
\mongodbdata

#where to log
logpath=C:\xampp\mongodb\bin\log\mongodb.log

#append log
logappend=true

#ip address
bind_ip = 127.0.0.1
port = 27017

# Enable journaling,
http://www.mongodb.org/display/DOCS/Journaling
journal=true

# Don't show mongodb http interface
nohttpinterface=true

# Enable mongodb rest interface
# rest=false
```

9. Restart the Webserver and the Database from the FileCloud Control Panel. Now all your files and the database data files will be stored in Azure Files Storage.



Amazon Web Services (AWS) Installation

FileCloud Public AMI (Amazon Machine Image) is currently available in Amazon AWS Marketplace.



See FileCloud AMI here on AWS Marketplace.

In the following section, to display more information, click on a topic.

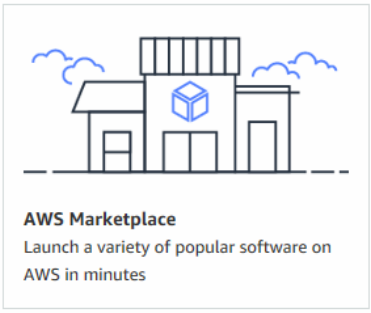
How Does It Work?

The FileCloud AMI image is built on top of Ubuntu.

- FileCloud stores the meta data and file share information in MongoDB database which is already pre-configured in the FileCloud AMI.
- The actual files can be stored in EBS or S3.
- For scalability and redundancy, we recommend you use Amazon S3 for production.
- We also recommend to take periodic snapshots of your running instance for disaster recovery.

Best Practices for an organization of up to 100 users:

- Select a t2.medium, m3.medium, or m3.large instance
- Use Amazon EBS for FileCloud stack (FileCloud application, Apache Webserver, MongoDB Database)
- Use Amazon S3 for cloud storage to provide a scalable, redundant infrastructure to satisfy any business requirement



What if I'm not using Ubuntu?

Apart from FileCloud AMI on Ubuntu, we have also pre-built AMIs (BYOL - Bring Your Own License) available on supported versions of Windows Server. Please see the AWS marketplace links below,

FileCloud Enterprise File Sharing and Sync (Windows Server 2016)

FileCloud for Windows Server 2012

We have also the following paid AMI's available on AWS Marketplace,

FileCloud Enterprise File Sharing and Sync (20 Users)

FileCloud Enterprise File Sharing and Sync - Windows 2012 R2 -(20 Users)

Launching the FileCloud AMI

An Amazon Machine Image (AMI) is a master image for the creation of virtual servers, known as Elastic Cloud (EC2 instances) in the Amazon Web Services (AWS) environment.

Machine images are like templates that are configured with:

- A root volume. This is an operating system and other software.
- Permissions. These settings constrain AMIs for instance launches to the appropriate AWS accounts.
- A block device mapping. This ensures that the correct volumes are attached to the launched instance.

These elements determine the user's operating environment.

In the following section, to display more information, click on a step.

To launch the FileCloud AMI:

1. Complete the Pre-requisites

An AWS Account

An AWS account allows you to:

- Open the Amazon EC2 console
- Choose a launch instance
- Launch your instance

If you've already signed up for Amazon Web Services (AWS), you can start using Amazon EC2 immediately.

If you haven't signed up for AWS yet, use the following link to get set up to use Amazon EC2.

Setting up with Amazon EC2

You can read more about Amazon Elastic Compute Cloud on Amazon's site.

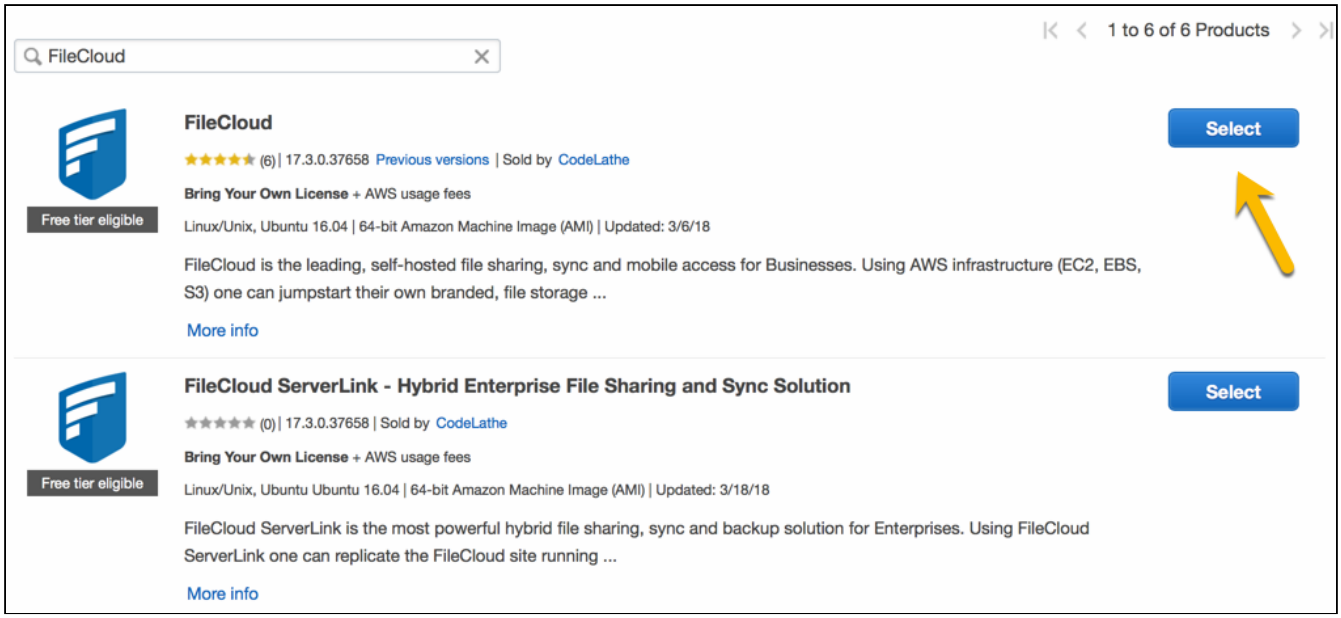
2. Choose an AMI

You can begin the process of launching a Linux instance by using the AWS Management Console.

To launch an instance:

1. Open the *Amazon EC2 console* at https://console.aws.amazon.com/ec2/.
2. From the console dashboard, choose *Launch Instance*.
3. The *Choose an Amazon Machine Image (AMI)* page displays a list of basic configurations, called Amazon Machine Images (AMIs), that serve as templates for your instance.
4. In the *Search* bar, type in *FileCloud*.
5. Next to the latest version, click *Select*.

Figure 1. An example of FileCloud listings in AWS Marketplace. (This image does not necessarily show the latest version.)



3. Choose an Instance Type

When you launch an instance, the instance type that you specify determines the hardware of the host computer used for your instance.

Each instance type offers different capabilities, such as:

- compute
- memory

- storage capabilities

Instance types are grouped in instance families based on these capabilities.

➡ Read more about Amazon's Instance Types

Table 1. General Purpose Instance Types

Instance Family	Current Generation Instance Types
General Purpose	m5.large | m5.xlarge | m5.2xlarge | m5.4xlarge | m5.12xlarge | m5.24xlarge | m5d.large | m5d.xlarge | m5d.2xlarge | m5d.4xlarge | m5d.12xlarge | m5d.24xlarge

➡ Read Amazon's complete listing of Available Instance Types

💡 CodeLathe recommends that you should select an instance type based on:

- Minimum requirement: **m5.large**
- For best performance: Select a type in the m series. For example: **m5.xlarge**

To choose the Amazon EC2 Instance type:

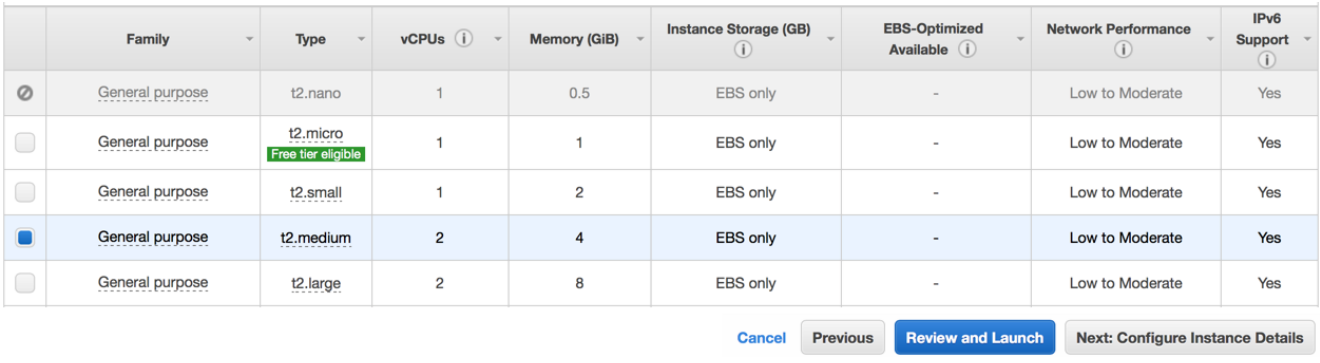
1. On the *Choose an Instance Type* page, you can select the hardware configuration of your instance.

4. Configure Instance Details

This step can change depending on the Instance Type you chose:

- T2 instances, such as t2.micro, must be launched into a VPC.
  - If your AWS account supports EC2-Classic and you do not have a VPC in the selected region, the launch wizard creates a VPC for you and you can continue to the next step.
  - Otherwise, the *Review and Launch* button is disabled and you must choose *Next: Configure Instance Details* and follow the directions to select a subnet.

Figure 2. Options for the next step after selecting an instance type.



To configure instance details:

1. If you selected an Instance Type of t2.medium or t3.medium, then you must enable *T2/T3 unlimited.* See Figure 3.
2. When you get to the Configure Security Group step, open up the port *80/443* for web access. See Figure 4.
3. You might need to open other ports such as 443 (HTTPS), depending on your business requirements.

Figure 3. Configure Instance Details

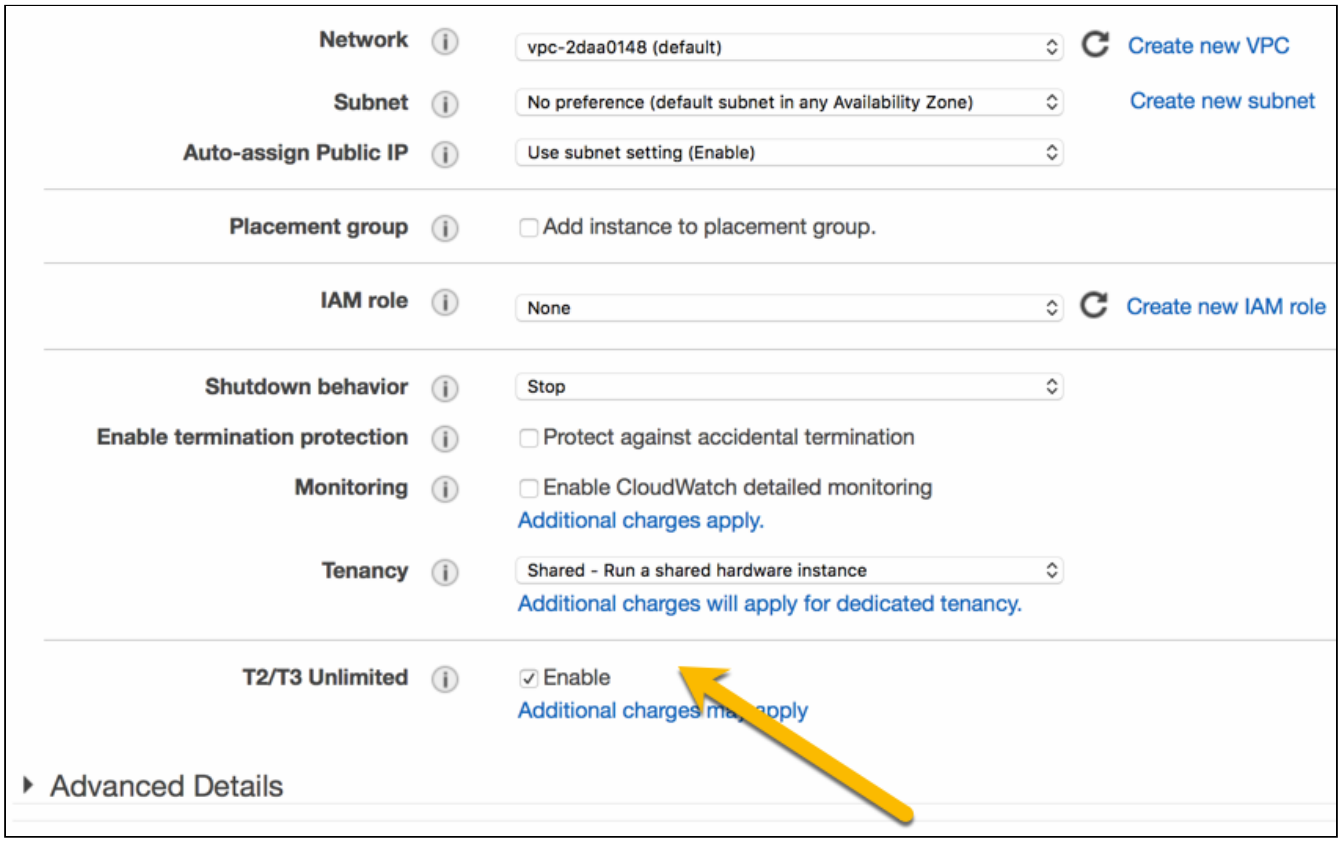
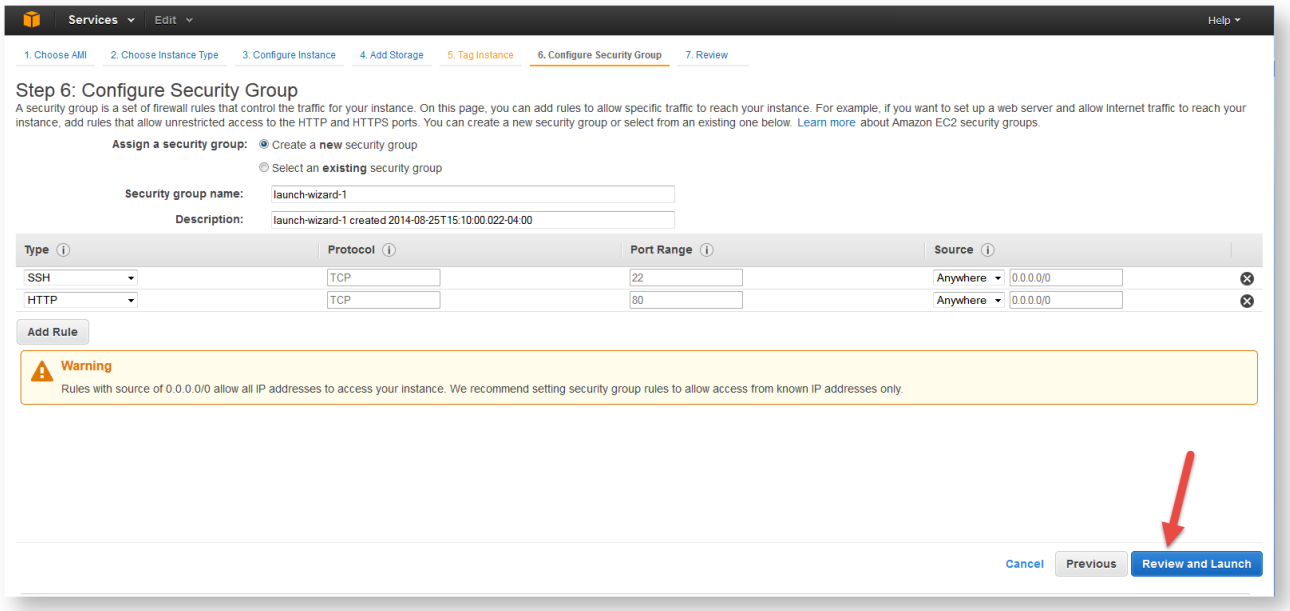


Figure 4. Configure Security Groups



You can read more about Amazon EC2 Security Groups.

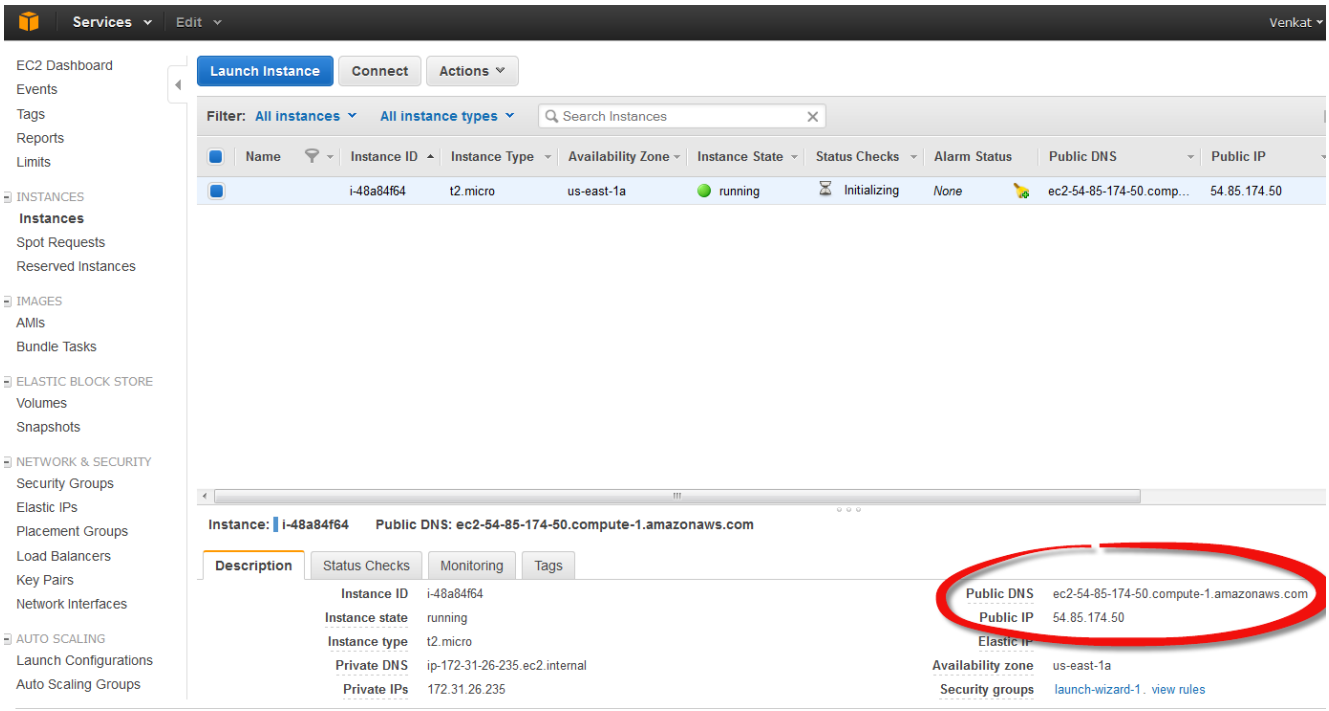
To complete the *Final Review and Launch*, see the next step: Step 5: Launch the Instance

5. Launch the Instance

To launch an instance:

1. When you are ready, click *Review and Launch*
2. Next to your instance, select the acknowledgement check box, and then choose *Launch Instance*.
3. A confirmation page lets you know that your instance is launching.
4. Choose *View Instances* to close the confirmation page and return to the console.
5. On the *Instances* screen, you can view the status of the launch. It takes a short time for an instance to launch.
6. When you launch an instance, its initial state is pending. After the instance starts, its state changes to running and it receives a public DNS name.
7. If the Public DNS (IPv4) column is hidden, choose Show/Hide Columns (the gear-shaped icon) in the top right corner of the page and then select Public DNS (IPv4).
8. It can take a few minutes for the instance to be ready so that you can connect to it.
9. Check that your instance has passed its status checks in the *Status Checks* column.
10. Note the Public DNS name to access your FileCloud site.

Figure 5. FileCloud Status in Your AWS dashboard.



2 Instance started with a public IP

6. Connect to the Instance

To connect to your instance:

1. Open a Web browser.
2. to access the FileCloud admin portal, type in the following URL:

```
http://<public_dns_name>/ui/admin/index.html
```

3. To login to the Admin Portal, use the following information:

Default Admin	admin
Default Password	Your amazon instance ID

> After logging in for the first time, you must change the admin password.

4. After logging in, you will see an Admin Attention window. Use this to install the FileCloud License.

To receive a license you must register at the FileCloud license management portal.

7. Post-installation

After logging in to the Admin Portal, you will see an Admin Attention window. You will also see tags on the right side of the dashboard telling you about what needs to be done after installation.

Complete the following items after you are able to launch and connect to your instance:

	Item
	Remove the Installation Folder
	The default FileCloud instance uses CodeLathe SMTP servers and accounts to send emails. Change the SMTP servers and accounts to use your own servers for security purposes.
	The admin email address is used in all the emails that sent out from the FileCloud System. Change the admin email to your organization email address.
	To show all the installed packages in this instance: 1. Open a Web browser 2. Navigate to http://<public_dns_name>/install. 3. Check the page and familiarize yourself with FileCloud components.
	The user name for the underlying Ubuntu OS is 'ubuntu'. Before launching the instance you will be required to create a key pair or you can use your existing key pair.
	FileCloud recommends you use S3 for file storage instead of the EBS. To understand how to setup S3 for FileCloud file storage, read Setting up FileCloud Managed S3 Storage
	After you configure the FileCloud storage, follow the site setup instructions to setup the FileCloud site according to your requirements.
	Take Periodic snapshots of your running instance for Disaster recovery and as an additional backup for FileCloud database and app.

The ability to install an Enterprise license with components (like Salesforce) is available in FileCloud Server version 18.2 and later.

- Your AMI image will automatically come with a standard or enterprise license.
- When you log in to the Admin Portal, you can automatically see the License type (BASE/ENTERPRISE) and also the total number of licenses on the dashboard.

Need to seed data quickly into your new FileCloud installation?
Seeding FileCloud for Amazon S3

FileCloud on AWS - User Deployment Guide

Introduction

Use AWS infrastructure (EC2, EBS, S3) to jumpstart your own branded, file storage solution in few minutes.

Use Cases

- File Sharing Portal- Use FileCloud to create your own own, branded file sharing, sync and mobile access, solution for your employees, customers and partners.
- File Sync - Use FileCloud for effortless file synchronization across users computers, smart phones and tablets, so everyone can work together anywhere from any device
- Client Document Portal - Use FileCloud to create a client document portal on AWS infrastructure to server your clients, customers and partners.
- Endpoint Backup and DLP - Use FileCloud to securely backup your endpoint computing devices (PCs, Mobile Phones and Servers).
- Enterprise Data Protection and DLP: Use FileCloud's unique data leak prevention (monitor, prevent and fix) capabilities to protect your enterprise data across all your users devices (Computers, Mobile Phones/Tablets.
- File Server Enablement - Use FileCloud's ServerSync to sync/backup you branch office windows files servers to FileCloud running on AWS to get low latency LAN access as well as remote access from anywhere.
- White Label Content Platform - Use white label FileCloud Platform as part of your own product line to manage digital assets.

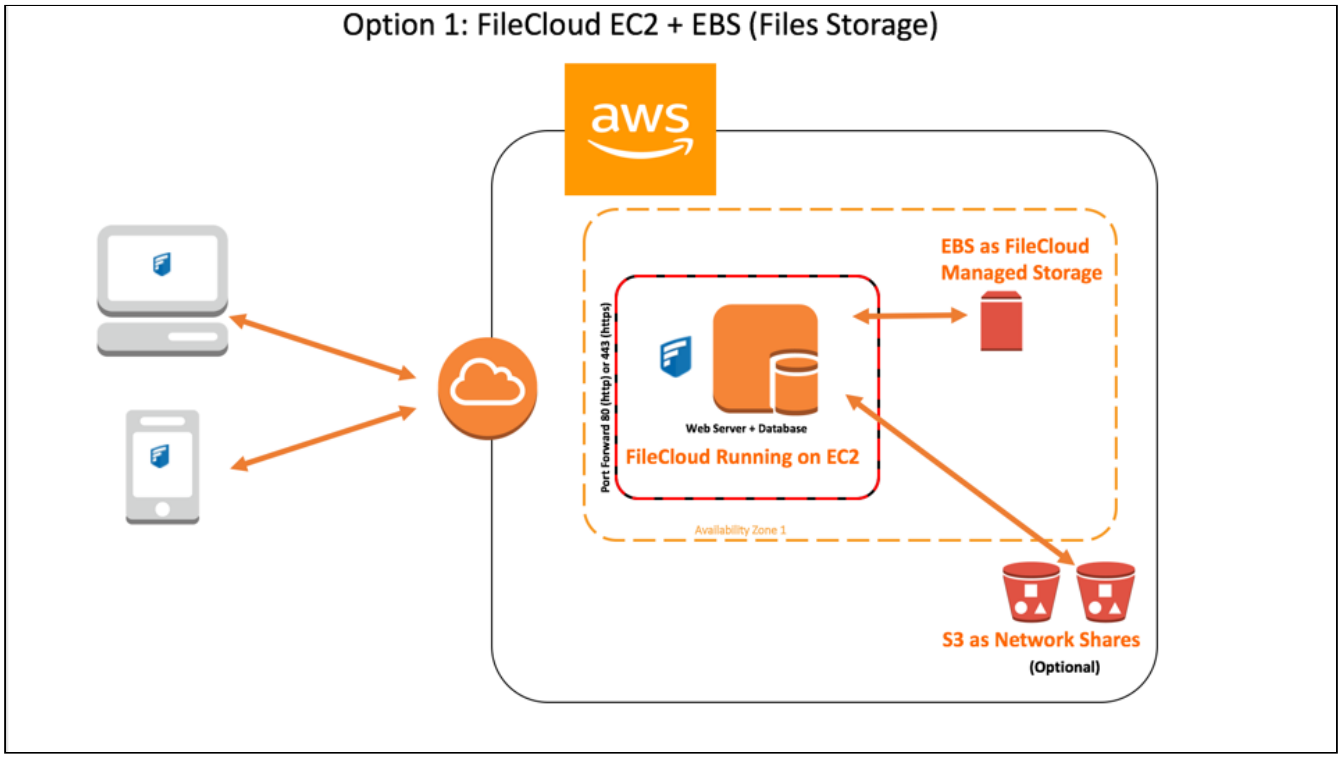
Overview of Typical Customer Deployment

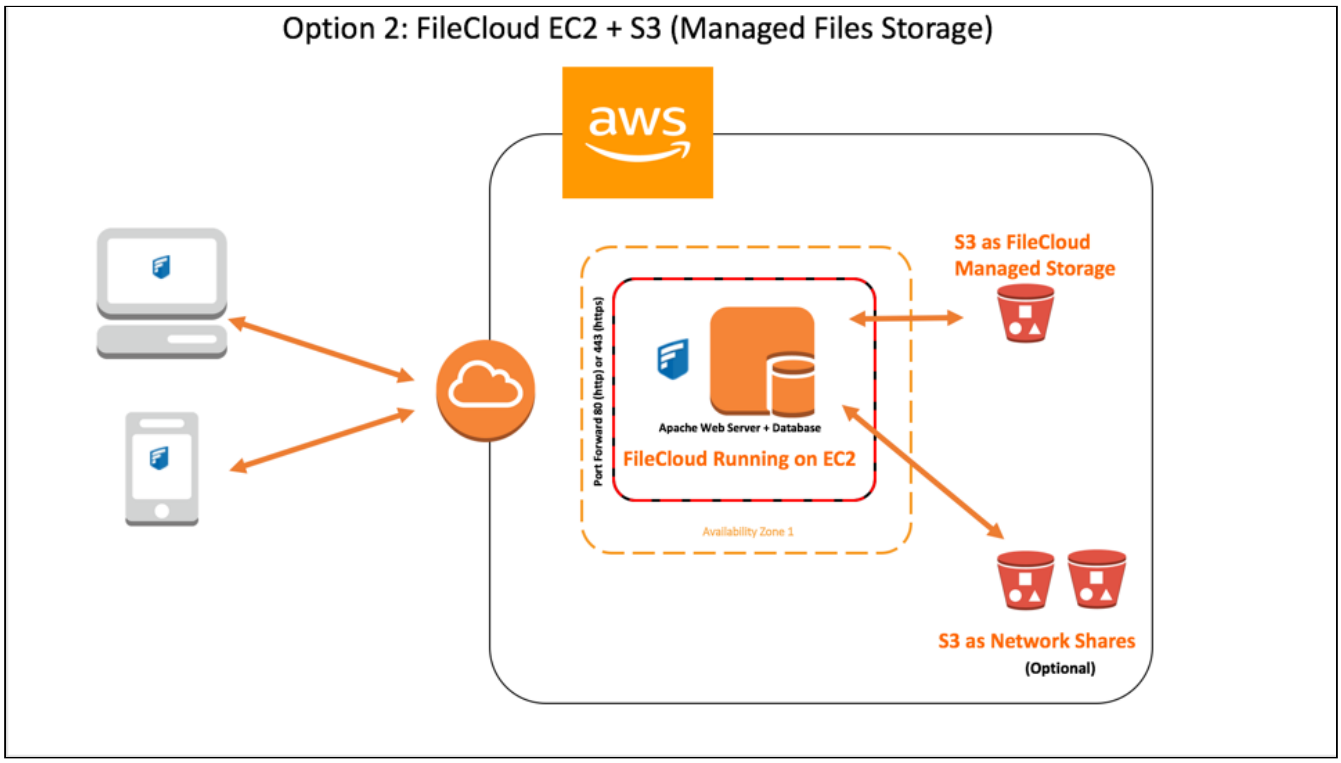
FileCloud AMI's are available on the latest versions of Ubuntu and Windows. Depending on your requirements and familiarity, you can choose any operating systems supported by FIleCloud. FileCloud stores the file, user and shares metadata in MongoDB (pre-installed in AMI) and actual files can be stored in a disk, AWS Elastic File System or AWS S3. For smaller deployments, disk is sufficient for file storage. For medium and large deployments, our recommendation is to use AWS S3 for file storage. The FileCloud AMI is also pre-configured for document preview and document indexing for full text search. It takes less than 30 minutes to configure the FileCloud AMI and get it running for production workload.

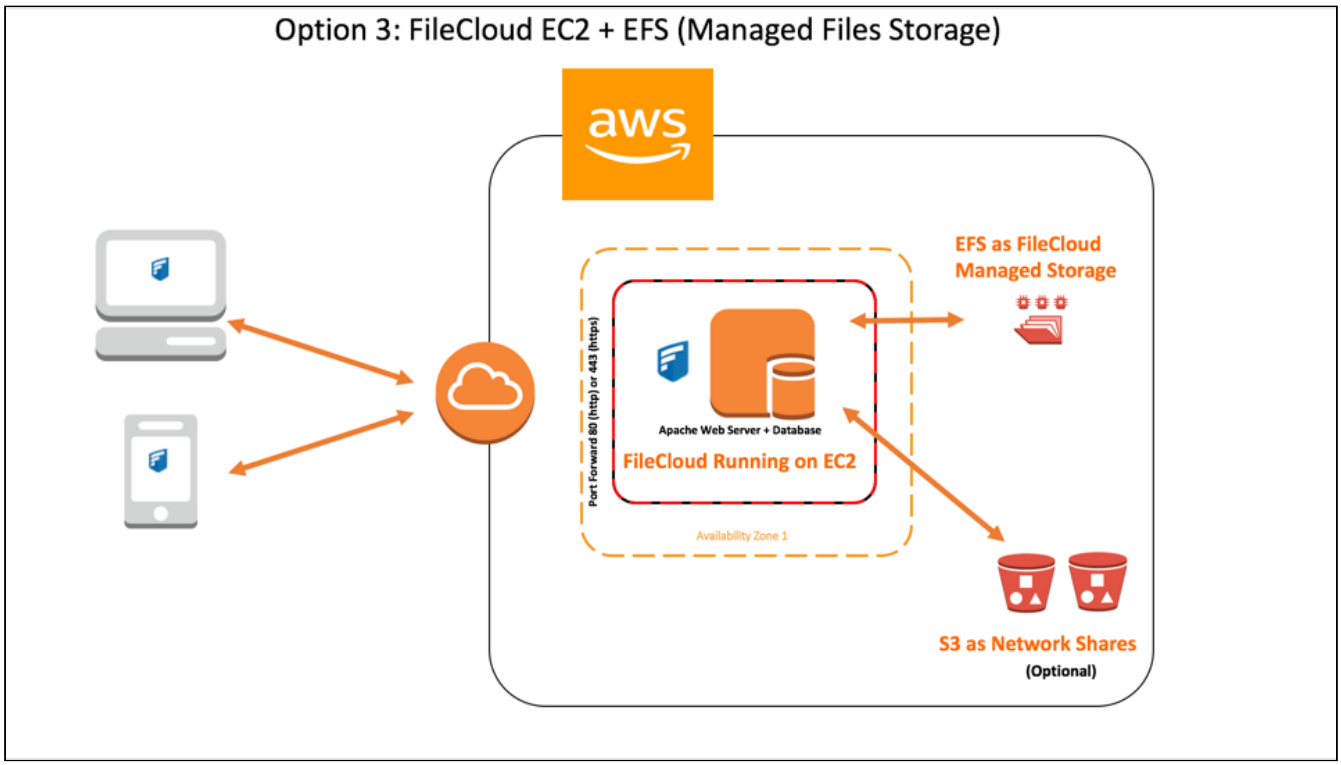
Prerequisites and Requirements

FileCloud AMI's are completely self contained. You don't need to install any additional software. Basic AWS skills are sufficient to deploy FileCloud on AWS. Simple deployments involve just EC2 and Disk (OR) EC2 and AWS S3. FileCloud AMI's are available as BYOL model. You need to register in our customer portal to get the trial license. Once you get the trial license you need to upload the license to your running EC2 instance. Since FileCloud AMI's are available on Ubuntu and Windows Server OS, you can choose the OS you are familiar with.

Architecture Diagrams




Option 2: FileCloud EC2 + S3 (Managed Files Storage)
aws
S3 as FileCloud
Managed Storage
Port Forward 80 (http) or 443 (https)
Apache Web Server + Database
FileCloud Running on EC2
Availability Zone 1
S3 as Network Shares
(Optional)


Option 3: FileCloud EC2 + EFS (Managed Files Storage)
aws
EFS as FileCloud
Managed Storage
Port Forward 80 (http) or 443 (https)
Apache Web Server + Database
FileCloud Running on EC2
Availability Zone 1
S3 as Network Shares
(Optional)

To access FileCloud, you only need port 80 (http) or 443 (https). We strongly recommend to use 443 and only allow SSL access. Depending on the underlying OS, you may need to open up port 22 (SSH access) and 3389 (Remote Desktop) for managing the FileCloud instance. Our recommended security practice is to specify the IP range for SSH and Remote Desktop instead of opening it for access from anywhere.

FileCloud secrets and keys are protected and managed in the FileCloud database. FileCloud supports encryption at Rest. To initialize encryption, administrator may supply an optional master password and start the initialization process. Once the initialization process is started, the following steps happen as part of the process:

1. An asymmetric key pair (private/public) known as "**Master"** key is generated with the optional master password.
2. A symmetric key known as "**Plain File"** key is generated.
3. The **File** key created in step 2 is encrypted using the **Master private** key resulting in an "**Encrypted File"** key.
4. All the existing uncrypted files (if they exist) in the FileCloud storage will be encrypted before the system will be ready for use. Look at the next section for more information on file encryption.

Warning On Master Password

If an optional master password was specified, then administrator has to retain the password for future use. Without this password the encryption module cannot encrypt/decrypt files in the FileCloud storage.

Additional details on the keys:

Key	Key Details	User Input	Persistence	Remarks
Master public/ private key pair	• Asymmetric • 4096 bits • RSA • sha512 digest	Password (optional)	Both private and public keys are persisted.	• It is important to save the password (if one was provided).
Plain File Key	• Symmetric • AES • 128 bits	None	Not persisted	• Plain file key will be used to encrypt/ decrypt all files using symmetric encryption. • This key will not persisted but will be cached for performance. • The cache will be valid for the lifetime of the FileCloud server process.

Key	Key Details	User Input	Persistence	Remarks
Encrypted File Key	• Encrypted using master public key	None	Encrypted file key is persisted	• Decryption of the encrypted file key results in plain file key. • Decryption of the encrypted file key will be done using the master private key and optional master password. • Encrypted file key is decrypted every time FileCloud server is started. • The plain key that is a result of decryption process is cached for the lifetime of the FileCloud server process. Restarting the server will need a fresh decryption.

If you are going to use S3 for Managed File storage, please see the security section given below to understand possible file encryption options available.

Planning Guidance

Security

When you deploy FileCloud you can use EBS for managed file storage or you can choose the S3. If you choose S3, Please use the following instructions to set up your S3 for FileCloud.

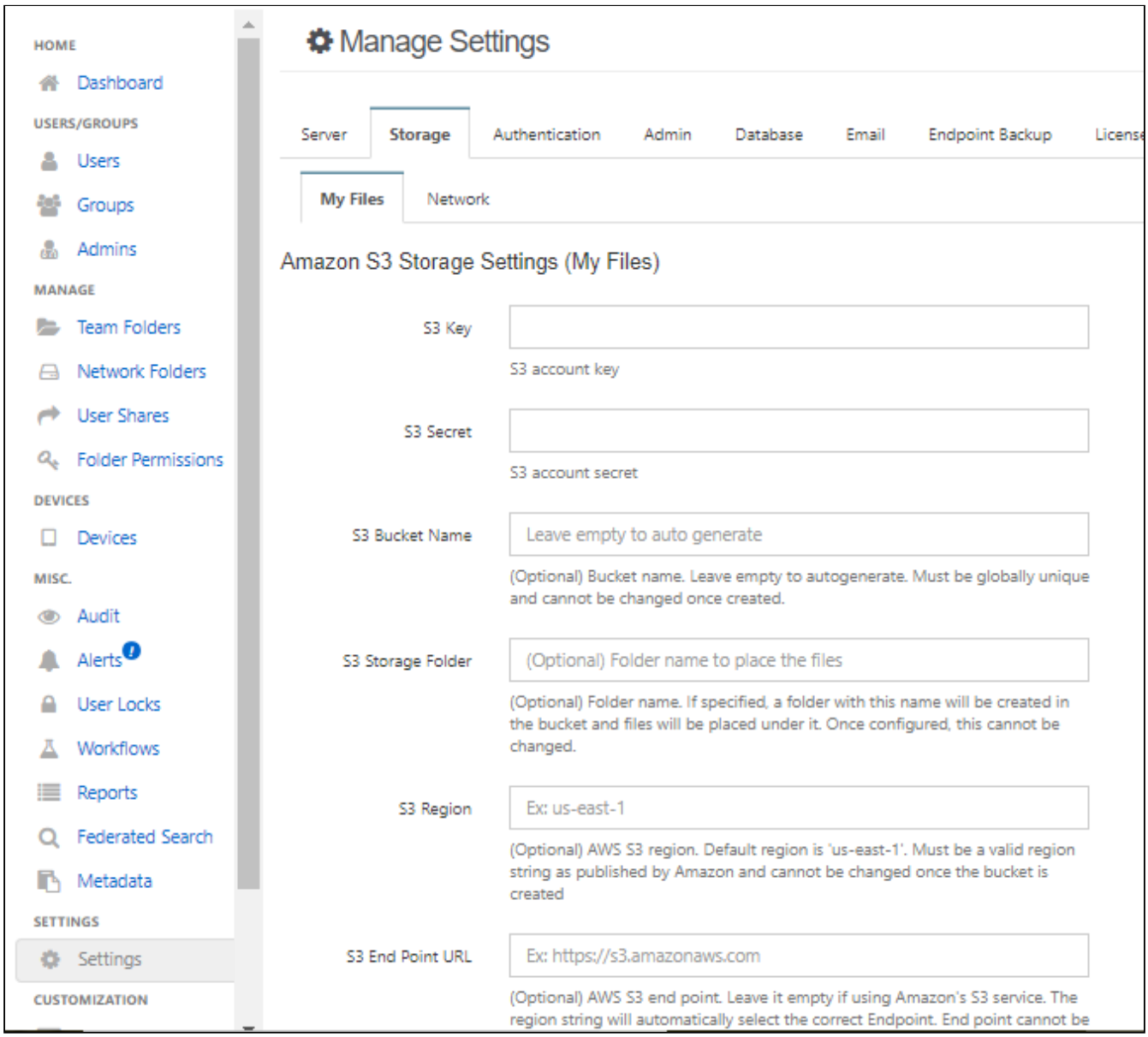
Setting up Amazon S3 Credentials

1. Log into Administration Portal
2. Navigate to Settings
3. Select "Storage" tab
4. Enter the S3 config information. Refer to the following table for more information about each setting
5. Click on Save S3 setting

Field	Description
S3 Key	This is your amazon authentication key (To get your access key, visit Amazon security portal) . For IAM user, it requires the IAM Policy for S3 Access given below.

Field	Description
S3 Secret	This is your amazon authentication secret (To get your access key, visit Amazon security portal). For IAM user, it requires the IAM Policy for S3 Access given below .
S3 Bucket Name	Provide a bucket name. The bucket should be new (in some circumstance, previously used bucket in FileCloud could be used). It is very important that the S3 bucket is never modified outside of the FileCloud subsystem.
S3 Storage Folder	Optional: All files will be stored inside this root storage folder (Will be created automatically).
S3 Region	Optional: Provide the region string. If the region is not provided, then US Standard region will be used. If you are planning to have your bucket in different region(say europe, south east) provide the correct region string. The strings should match the region string published by amazon. **Note: For govcloud installs, you must use region string: us-gov-west-1**
S3 End Point URL	Optional: This is the S3 endpoint. Use this if you are planning to use your own S3 endpoint (typically S3 compatible storage) or if it is a unpublished region. For using AWS end point, it must be the ones published at here

Note: The Amazon S3 Bucket should NEVER be modified outside of FileCloud subsystem
Do not add/edit/modify files directly using Amazon tools. Doing so will destabilize your FileCloud installation.



IAM Policy for S3 Access

If you are going to use S3 for file storage, FileCloud requires S3 access in order to create bucket and manage it.The IAM user used to manage it must have the following permissions. This shows access to all buckets in your S3 console. You can restrict to specific bucket using the appropriate resource arn. Something like arn:aws:s3:::bucket_name

```
{
        "Version": "2012-10-17",
        "Statement": [
                {
                   "Effect": "Allow",
                   "Action": [
```

```
                "s3:CreateBucket",
                "s3:DeleteObject",
                "s3:GetObject",
                "s3:ListBucket",
                "s3:PutObject"
            ],
            "Resource": [
                "arn:aws:s3:::*"
            ]
        }
    ]
}
```

Setting up S3 Encryption for FileCloud Managed Storage

S3 Managed Storage Encryption support to protect data at rest is available in Filecloud. The communication between FileCloud to AWS will use SSL encryption resulting in complete protection for data in transit. Once the S3 is set up correctly, a new field "S3 Encryption" will be available under Amazon S3 Storage Settings.

FileCloud supports the following Server Side Encryption:

Encryption Type	Notes
Server-Side Encryption with Amazon S3-Managed Keys (SSE-S3)	All data is encrypted at rest using AES256 bit encryption. The data can only be accessed using the supplied key/secret credentials. The data will be accessible via S3 Console (which should NOT done for FileCloud Managed storage data)
Server-Side Encryption with AWS KMS-Managed Keys (SSE-KMS)	Similar to SSE-S3 but the key itself is managed using Amazon's KMS service. This allows management of specific keys and their permissions for encrypting the data. The data is still encrypted at rest and is accessible via S3 Console with appropriate credentials.
Server-Side Encryption with Customer-Provided Keys (SSE-C)	This is a new support available from FileCloud v15 on-wards. The data will be encrypted using customer supplied 32 bit encryption key. This option will have SLOWER performance due to restriction on how this data can be decrypted (Amazon server will NOT be able to decrypt the data and the data has be first downloaded to FileCloud server and decrypted). The data will NOT be accessible via S3 console as well.

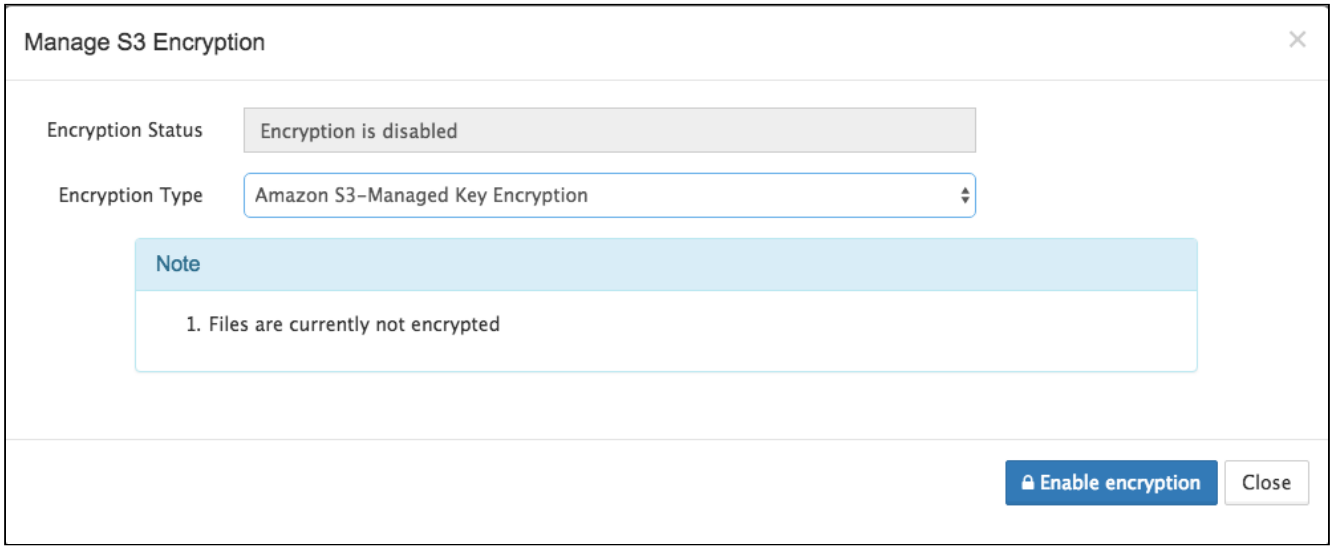
To manage S3 encryption,

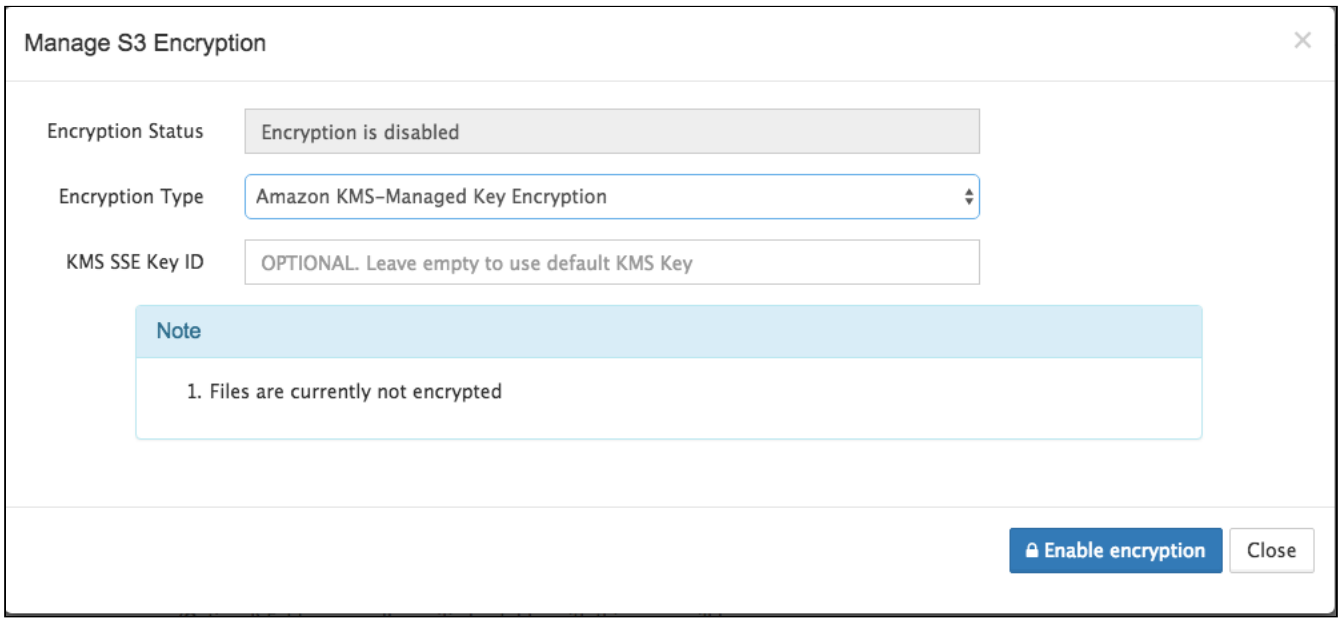
1. Log into Administration Portal
2. Navigate to Settings
3. Select "Storage" tab
4. Click on "Manage" button in the S3 Encryption option

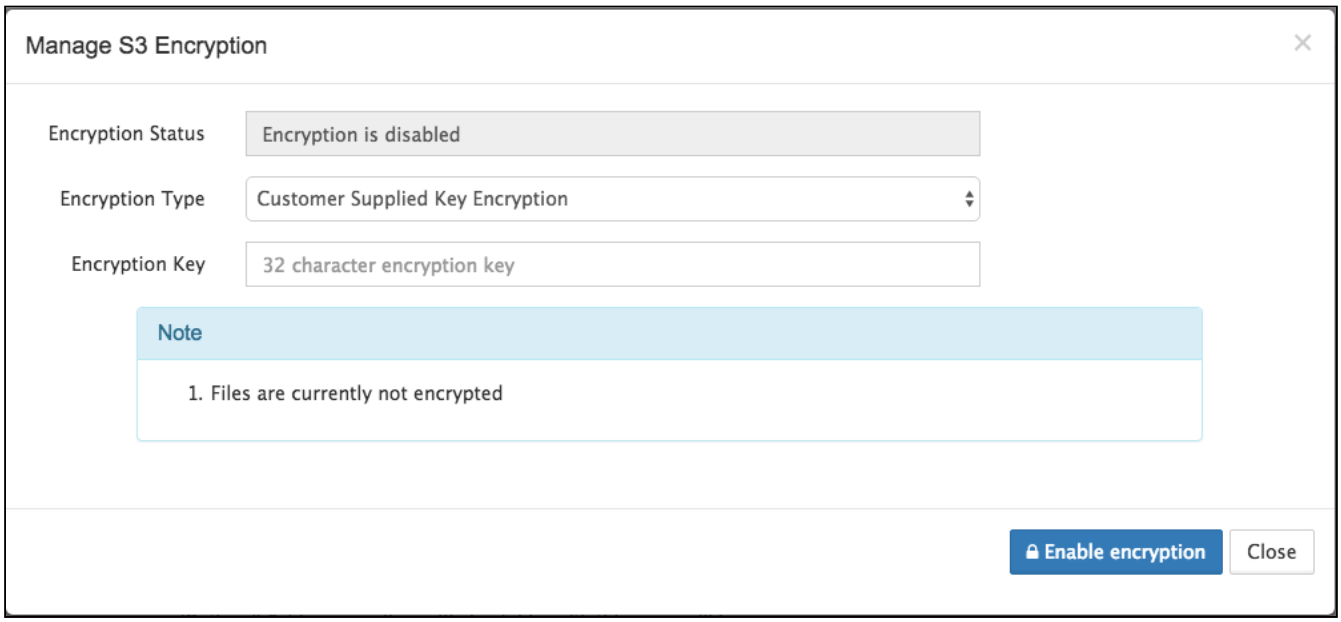
Depending on the status of encryption, you will see "Enable encryption" or "Disable encryption" button.

Enabling encryption will attempt to encrypt all available data in the bucket as well as all new data will be encrypted. This can take some time depending on the amount of existing data in the bucket. Please modify encryption setting when there is minimal activity in FileCloud.
Though, changing encryption can be done at any time, we recommend using off-peak hours to avoid any unexpected access issues

For Windows, If your xampp is installed in location other than c:\xampp, then add the following key in <your xampp folder>\htdocs\config\cloudconfig.php
For example, if your xampp is in D:\xampp, then in file D:\xampp\htdocs\config\cloudconfig.php, add the following string (any location before the bottom "?>" line)
define("PHPBIN_PATH","D:\\xampp\\php\\php.exe");







Costs

T2.Medium or T3.Medium is suffice to run FileCloud for 100 users. File Storage cost depends on the storage method you choose (EBS, EFS or S3) and amount of files you will be storing and the access pattern. Typical cost for 100 users and 10 TB storage comes around 2800-3250$ per year.

Sizing

A T3.medium (Unlimited) can handle approximately 30-40 FileCloud calls per second which equates to approximately 100-200 users using FileCloud. Depending on number of users and thier access pattern, you can vertically (choose bigger instance) or horizontally (add more instances) can scale your deployment.

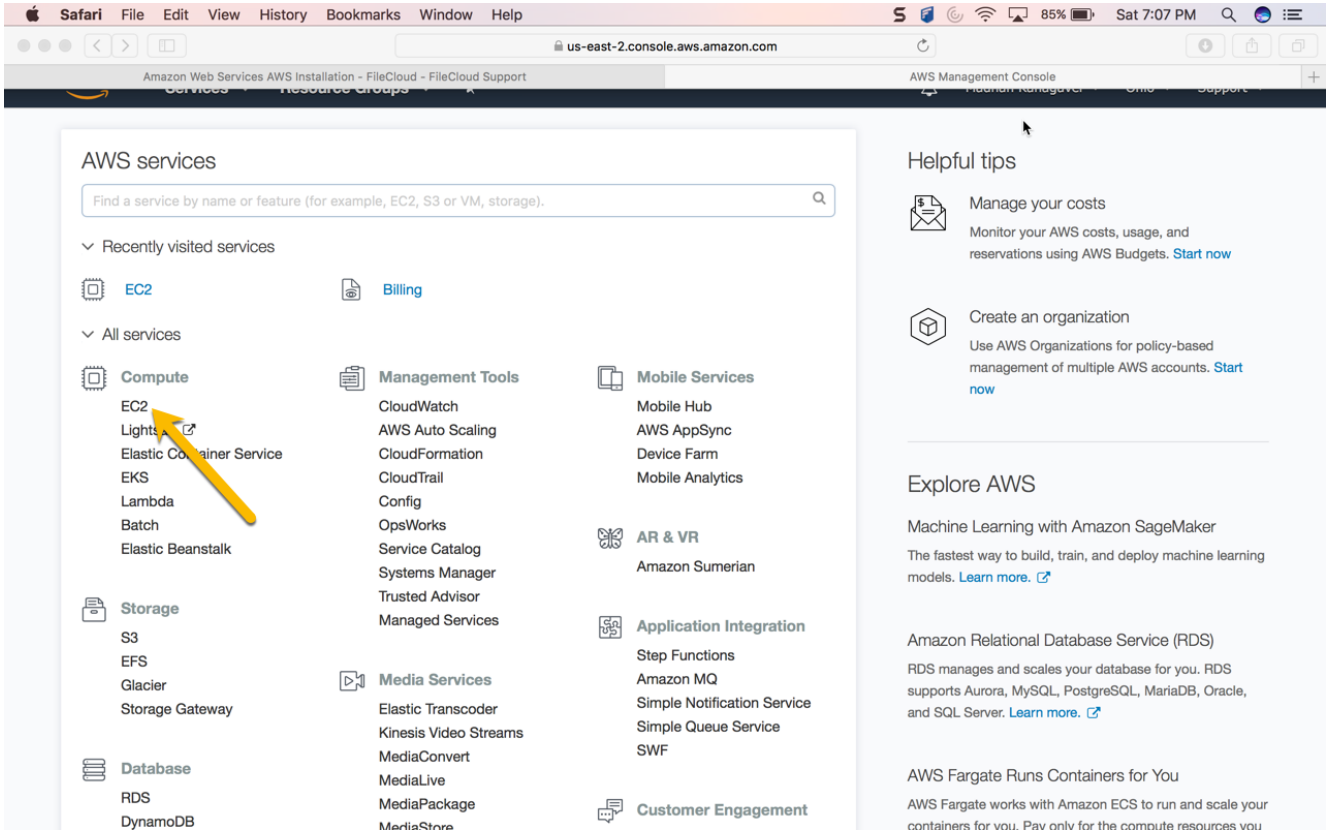
Deployment Guidance

Deployment Assets

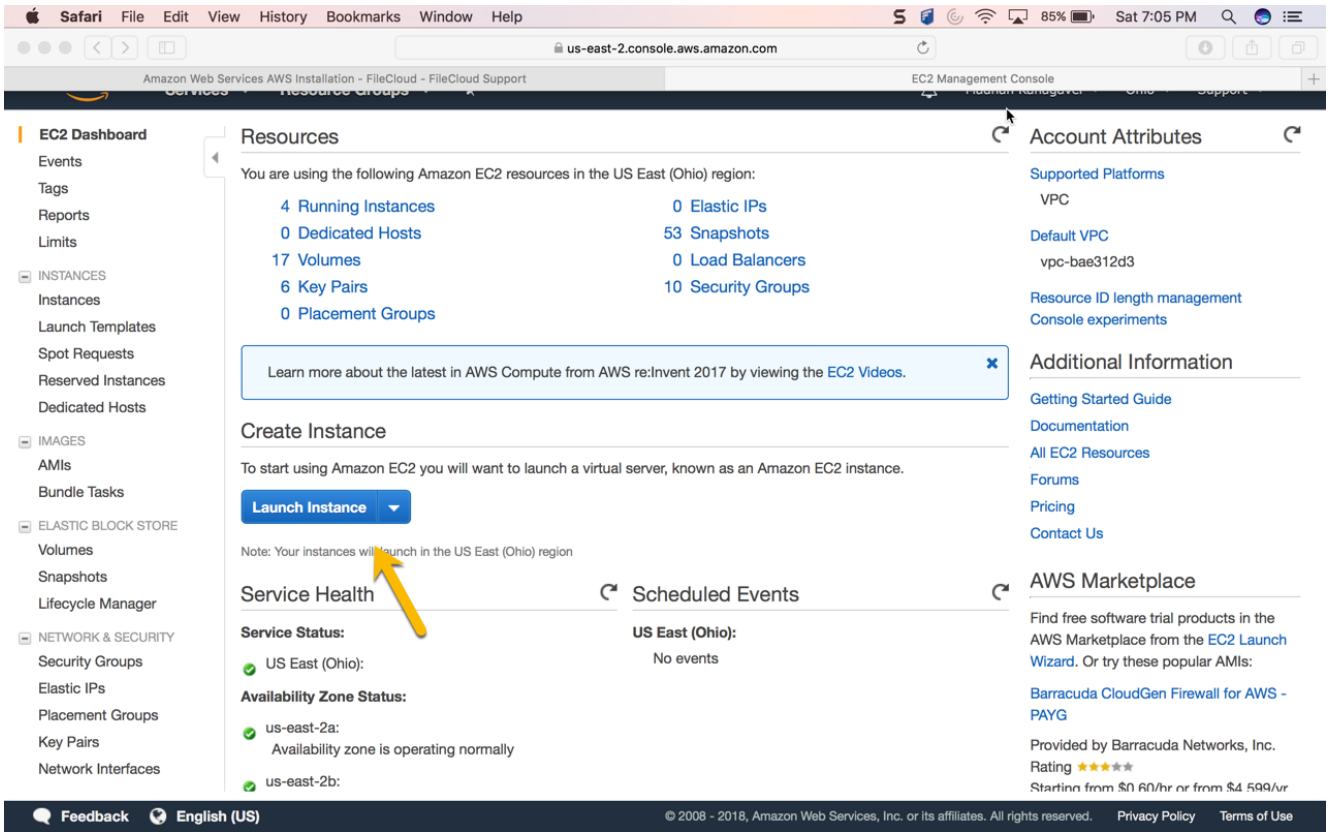
FileCloud pre-built AMI's (Amazon Machine Image) are currently available in Amazon AWS Marketplace. We have pre-built images for both Linux (Ubuntu) and Windows Server OS. You can choose the base OS as per your preference.

Steps to Launch FileCloud AMI

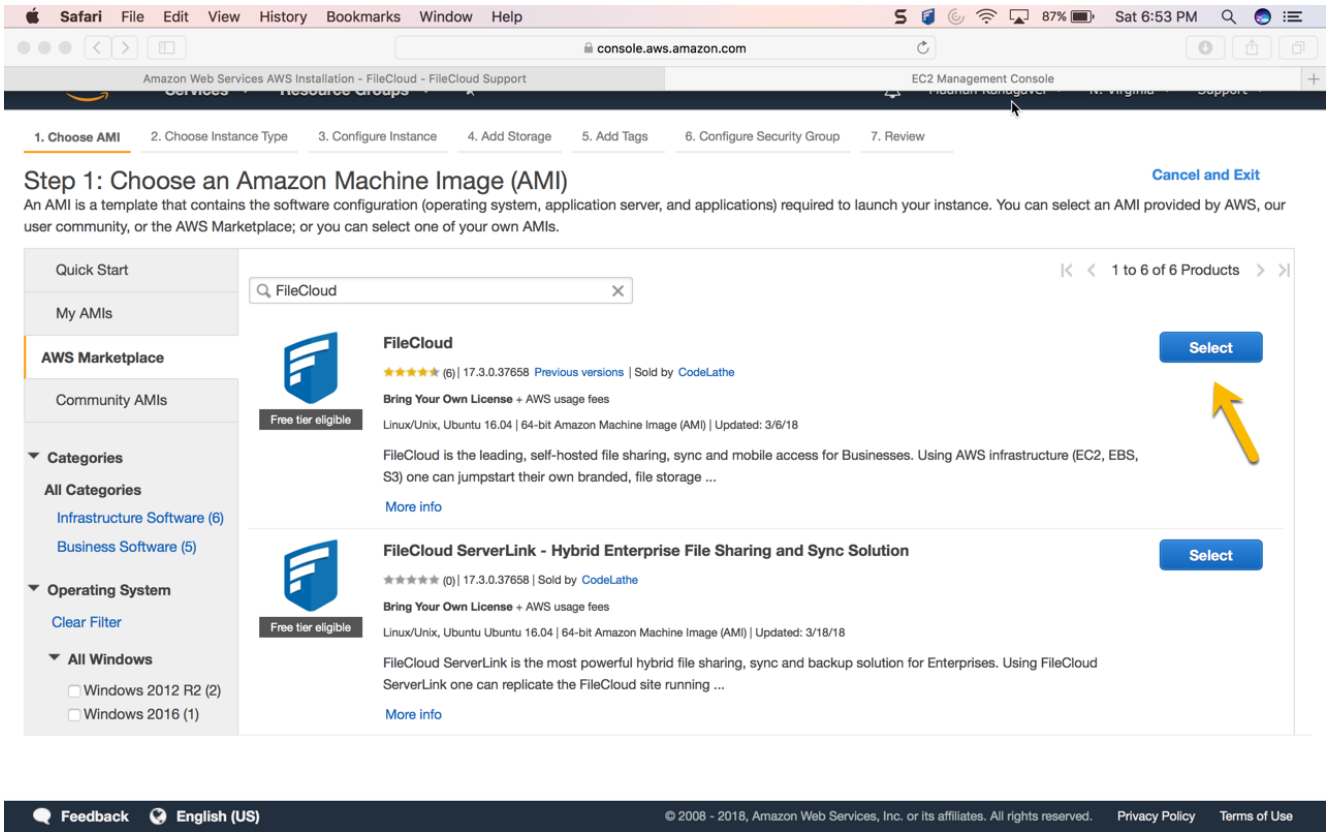
1. Login to AWS management console and Click EC2 (Virtual Servers in the Cloud)



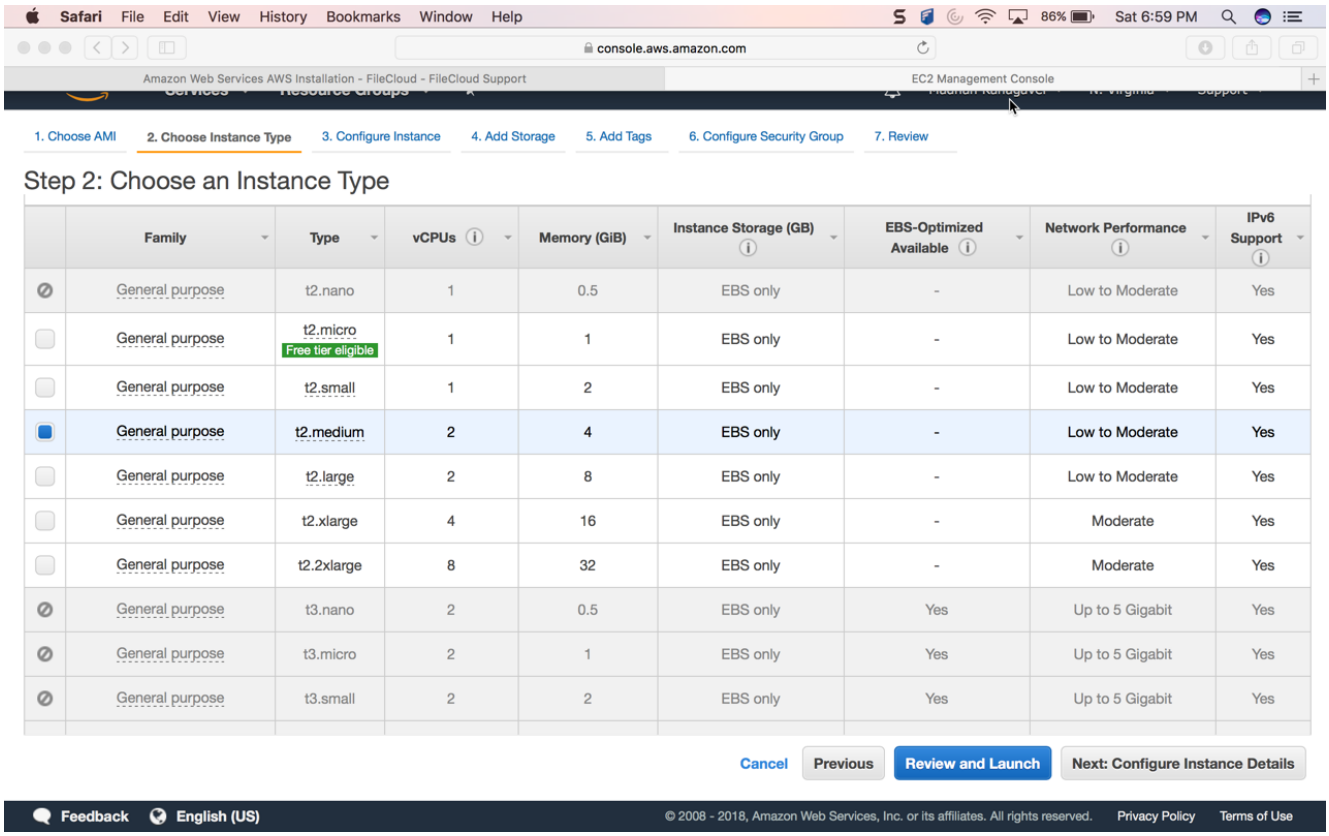
2. Click Launch Instance



3. Search FileCloud AMI in AWS marketplace. Choose the latest version.
The version details in the screen shot is for reference purposes only. The latest version details may be different from the information shown.



4. Choose the desired Amazon EC2 Instance type. We recommend atleast t2.medium or t3.medium. **However, for best performance, the "m" series is better. For example m3.medium. If you choose the t2 or t3 series, please enable T2/T3 unlimited when you configure the instance.**


Safari File Edit View History Bookmarks Window Help
86% Sat 6:59 PM
console.aws.amazon.com
Amazon Web Services AWS Installation - FileCloud - FileCloud Support
EC2 Management Console
1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review
Step 2: Choose an Instance Type
Family
Type
vCPUs
Memory (GiB)
Instance Storage (GB)
EBS-Optimized Available
Network Performance
IPv6 Support
General purpose t2.nano 1 0.5 EBS only - Low to Moderate Yes
General purpose t2.micro Free tier eligible 1 1 EBS only - Low to Moderate Yes
General purpose t2.small 1 2 EBS only - Low to Moderate Yes
General purpose t2.medium 2 4 EBS only - Low to Moderate Yes
General purpose t2.large 2 8 EBS only - Low to Moderate Yes
General purpose t2.xlarge 4 16 EBS only - Moderate Yes
General purpose t2.2xlarge 8 32 EBS only - Moderate Yes
General purpose t3.nano 2 0.5 EBS only Yes Up to 5 Gigabit Yes
General purpose t3.micro 2 1 EBS only Yes Up to 5 Gigabit Yes
General purpose t3.small 2 2 EBS only Yes Up to 5 Gigabit Yes
Cancel
Previous
Review and Launch
Next: Configure Instance Details
Feedback
English (US)
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Privacy Policy
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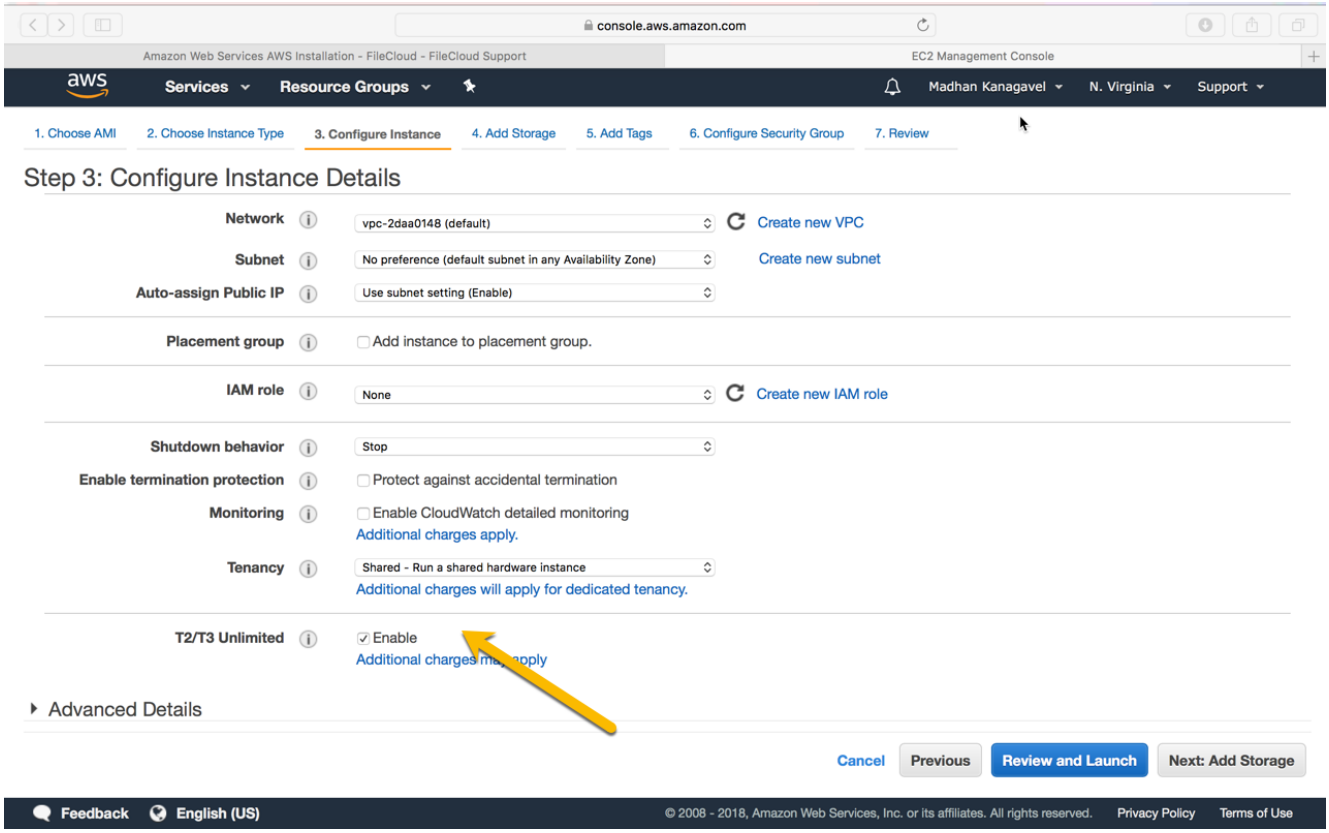
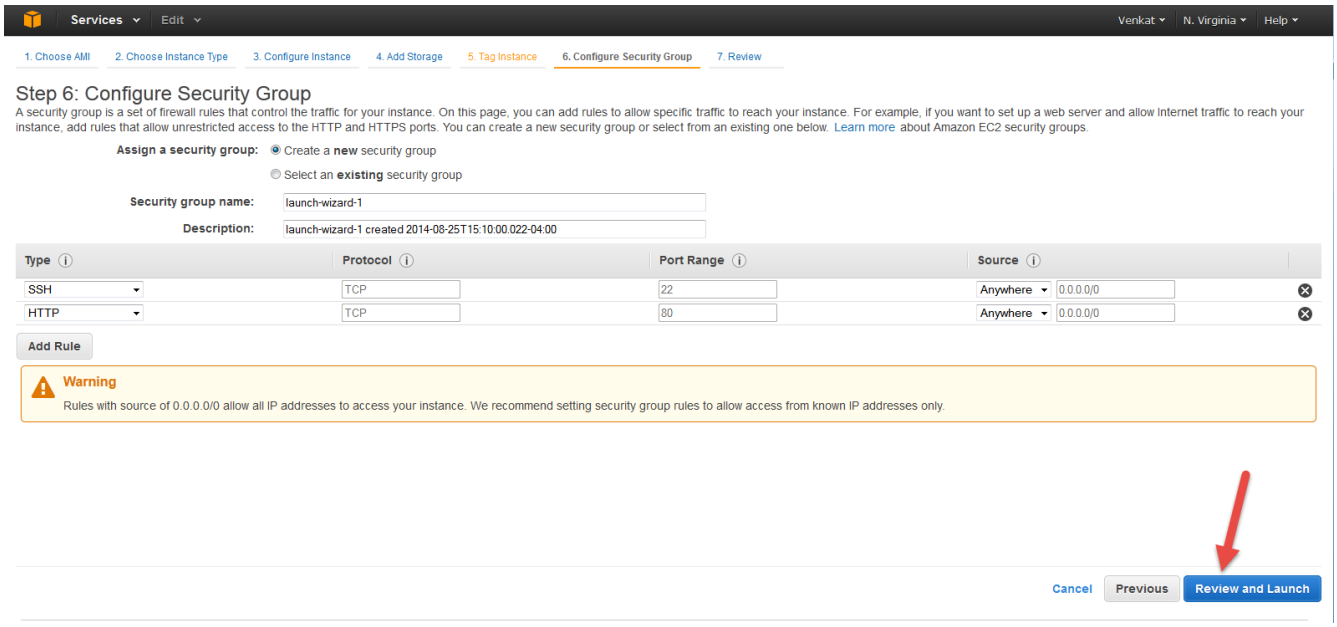
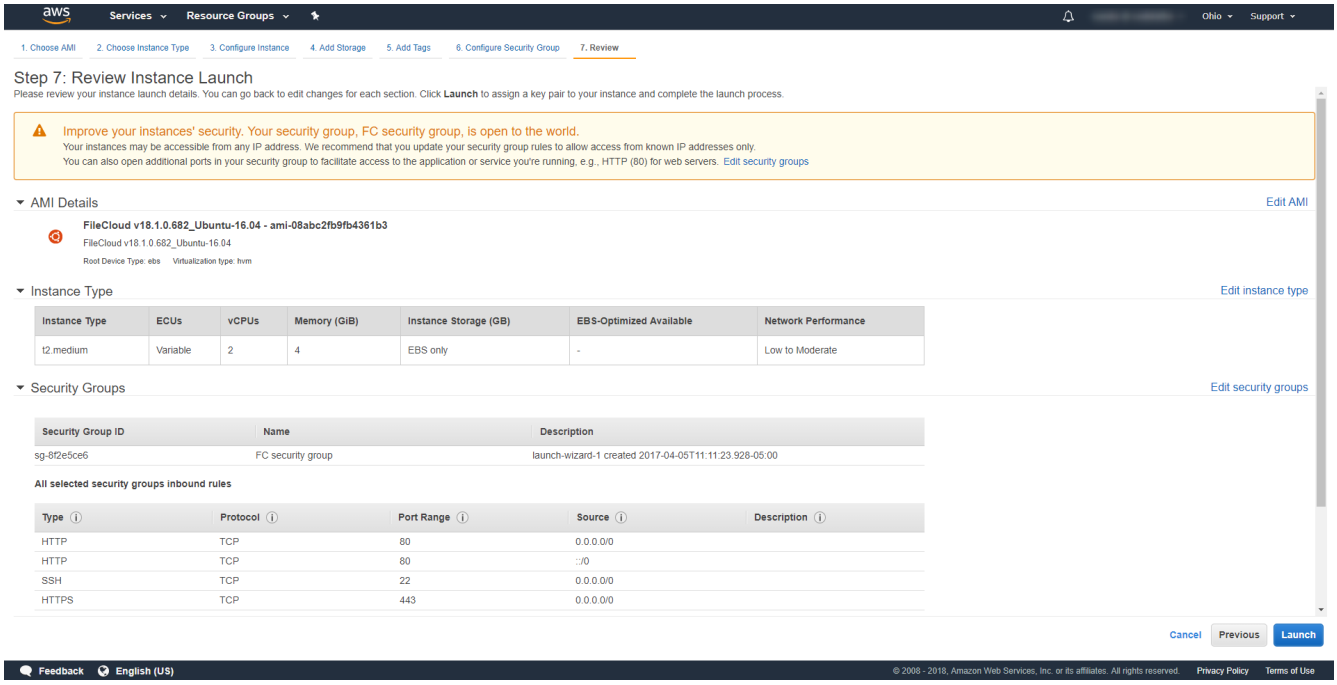


5. Configure the security group to open up the port 80/443 for web access.

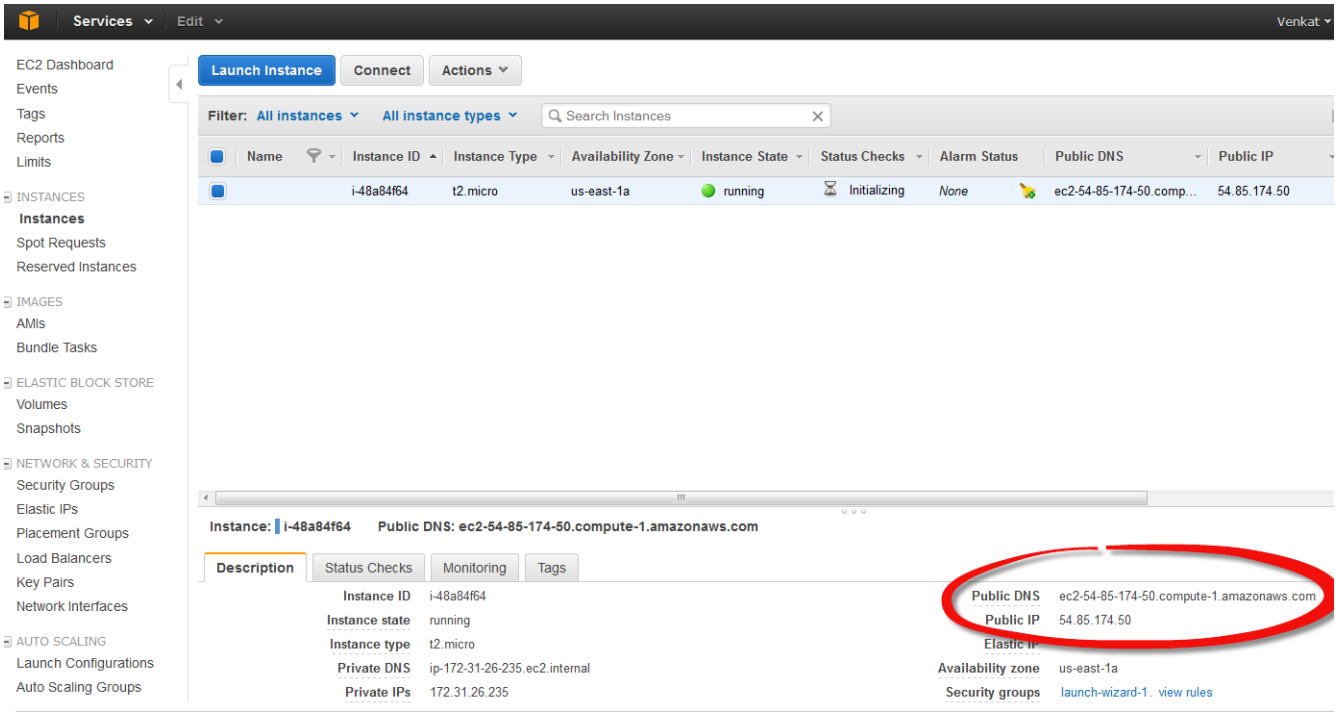


Note: You might need to open other ports such as 443 (HTTPS), depending on your business requirements.

6. Complete the Final Review and launch the instance.

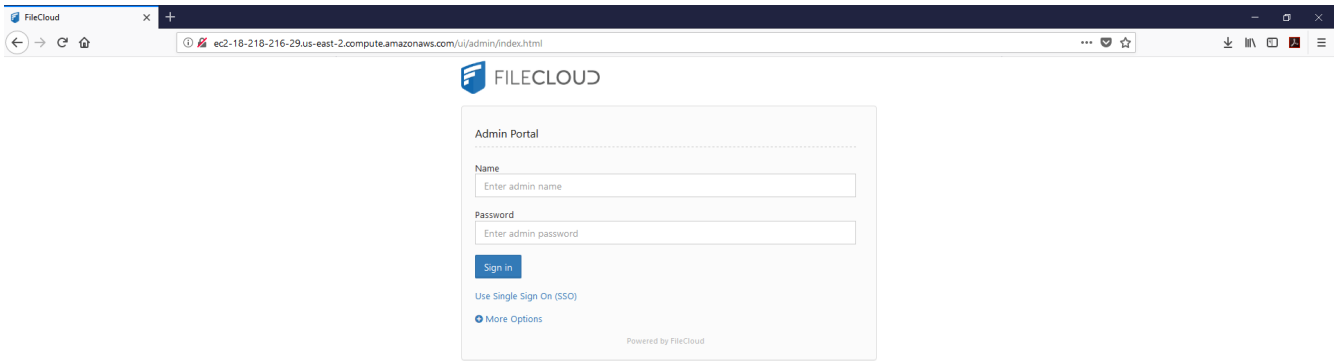


7. You can see now your FileCloud is running in your AWS dashboard. Please note the Public DNS name to access your FileCloud.

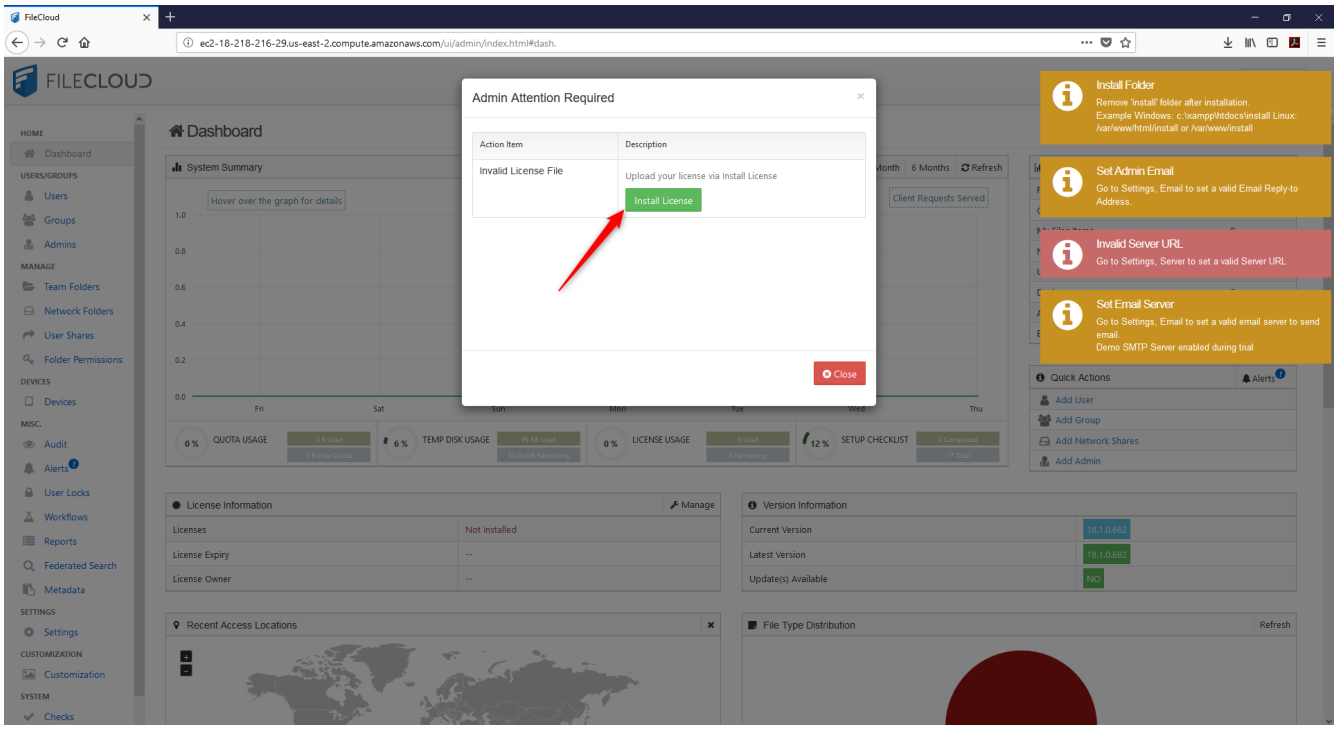


8. Type 'http://<public_dns_name>/ui/admin/index.html' in your browser to access the FileCloud admin portal. If the Webpage fails to load, please verify port 80 is open as mentioned above in Step 5.

Default Admin	admin
Default Password	Your amazon instance ID
Note	Please change the admin password upon first login.



9. Once you logged into the admin portal, please install the FileCloud License.
Please register at our license management portal (https://portal.getfilecloud.com/ui/user/index.html?mode=register) to get trial licenses.



1. The user name for the underlying Ubuntu OS is 'ubuntu'. Before launching the instance you will be required to create a key pair or you can use your existing key pair.
2. If you go to 'http://<public_dns_name>/install' , the page will show all the installed packages in this instance. Check the page and familiarize yourself with FileCloud components. Before going production move the install folder to somewhere else.
3. We recommend you to use S3 for file storage instead of the EBS. Please check the following section (Enabling Amazon S3 Storage) to know how to set up S3 for FileCloud file storage.
4. The default FileCloud instance uses our SMTP servers and accounts to send emails. Please change this to your SMTP server for security purposes.
5. Please change the admin email to your organization email address. This email address is used in all the emails that sent out from the FileCloud System

Enabling Amazon S3 Storage

warning

Do not change this once the installation is set up and data is already stored. This should only be set up for fresh installs.
When changing the storage type from local to amazons3, the file(s)/folder(s) that have been already stored in the local storage will not be automatically moved to was s3 storage.
In this case, adminstrator has to manually export file(s)/folder(s) from local storage before changing storage type and manually import them after changing storage type.
Be very careful when changing the storage path, If done improperly it could lead to data loss.

To enable Amazon s3 storage as the backend,

Step 1:

Edit the file "WWWROOT/config/cloudconfig.php" and change the line

```
define("TONIDOCLOUD_STORAGE_IMPLEMENTATION", "local");
```

to read as

```
define("TONIDOCLOUD_STORAGE_IMPLEMENTATION", "amazons3");
```

Step 2:

Rename file "WWWROOT/config/amazons3storageconfig-sample.php" to "WWWROOT/config/amazons3storageconfig.php"

Nothing needs to be added or edited in amazons3storageconfig.php

In Windows WWWROOT is typically c:\xampp\htdocs and in Linux it is /var/www/html
e using

Once you configured the FileCloud storage, Please follow the site setup instructions to set up the FileCloud site according to your requirements

Operational Guidance

Health Checkup

AWS offers excellent system, instance status checks and CloudWatch monitoring. Pay attention on CPU utilization, Network In/Out and Network Packet In/Out of your EC2 instance. Using CloudWatch monitoring scripts, you can also monitor memory, swap, and disk space utilization of your EC2 instance.

Apart from the standard AWS monitoring metrics, FileCloud also offers system alerts. FileCloud Alerts are available in FileCloud's Admin portal.

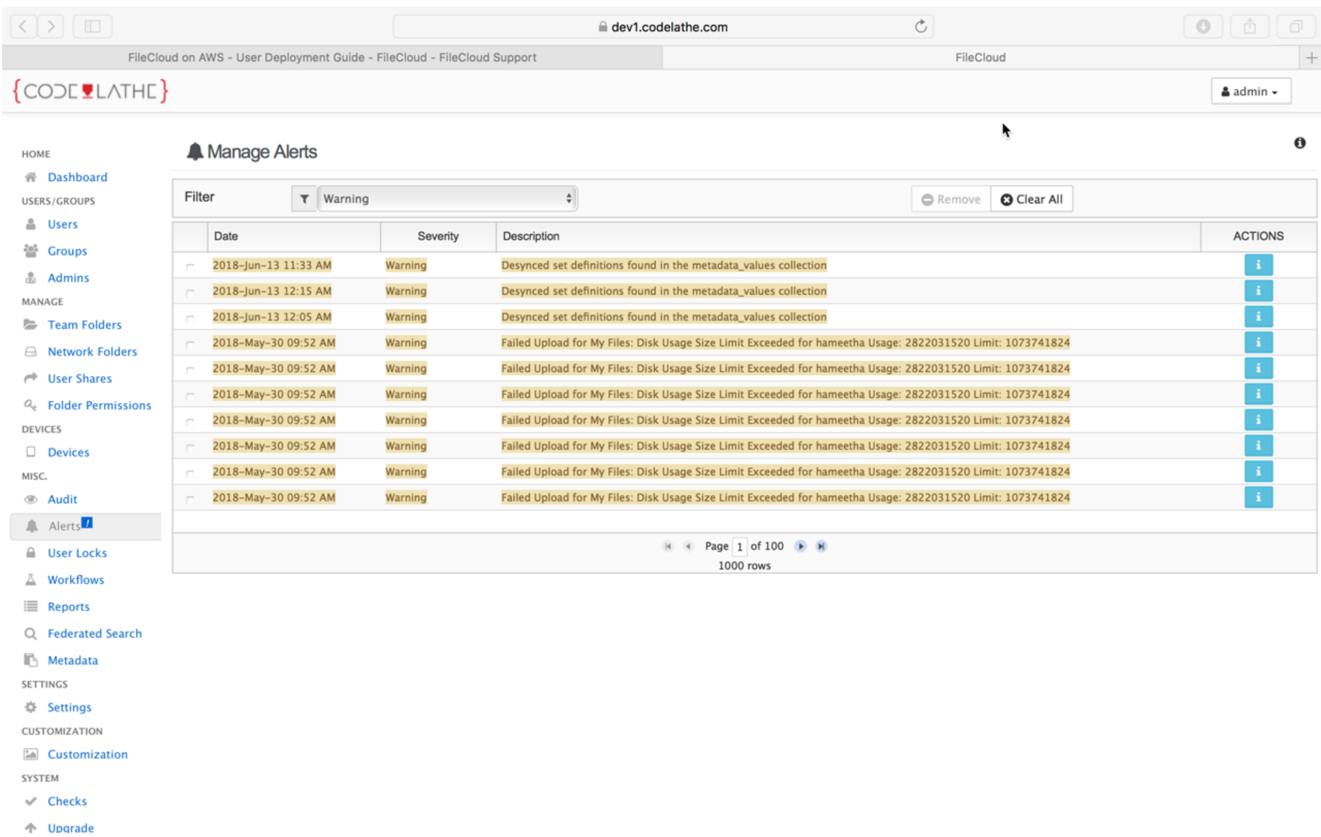
This page tracks all unhandled exceptions, system error messages generated in the FileCloud server. The number of alerts are shown in the Dashboard and the Alerts page will show detailed information about the various errors encountered.

Depending on the error, you might need to take steps to correct the problem. For example, if alerts indicate that system is frequently running out of memory, then system memory may need to be increased.

To view alerts:

1. Log into the Administration portal.
2. On the left navigation panel, click *Alerts*.

The following view shows errors detected by FileCloud. The alerts are categorized as Informational, Warning, Critical and Fatal. Always pay attention to critical and fatal errors. FileCloud administrators also get periodic Administrator Summary emails that will show the number of alerts.



Backup and Recovery

FileCloud supports unlimited file versioning and to recycle bin. You can configure this options by logging in to FileCloud admin portal. This provides protection from accidental deletes by users.

In addition to that, please take periodic snapshots of your running instance for disaster recovery and as an additional backup for FileCloud database and app. If you are not taking snapshots of your running instance, atleast make sure you are backing up the mongodb database to a disk or S3 using AWS CLI . As long as we have the FileCloud database, we can recover the FileCloud application from instance/service failure.

The following instruction will backup the mongodb to a designated s3 bucket (You can also make it as a cron job so that it runs periodically),

```
cd /var/lib/mongodb
aws s3 sync . s3://my-bucket/filecloudbbackup/
```

In case of instance failure, Please start a new FileCloud AMI and and follow the instructions below to bring the instance up and running.

1. Before making any changes, stop mongodb service

```
service mongod stop
```

2. Copy the backup database files back to /var/lib/mongodb from the s3 bucket

```
cd /var/lib/mongodb
aws s3 sync s3://my-bucket/filecloudbbackup/ .
```

3. Finally start the mongodb service using following command.

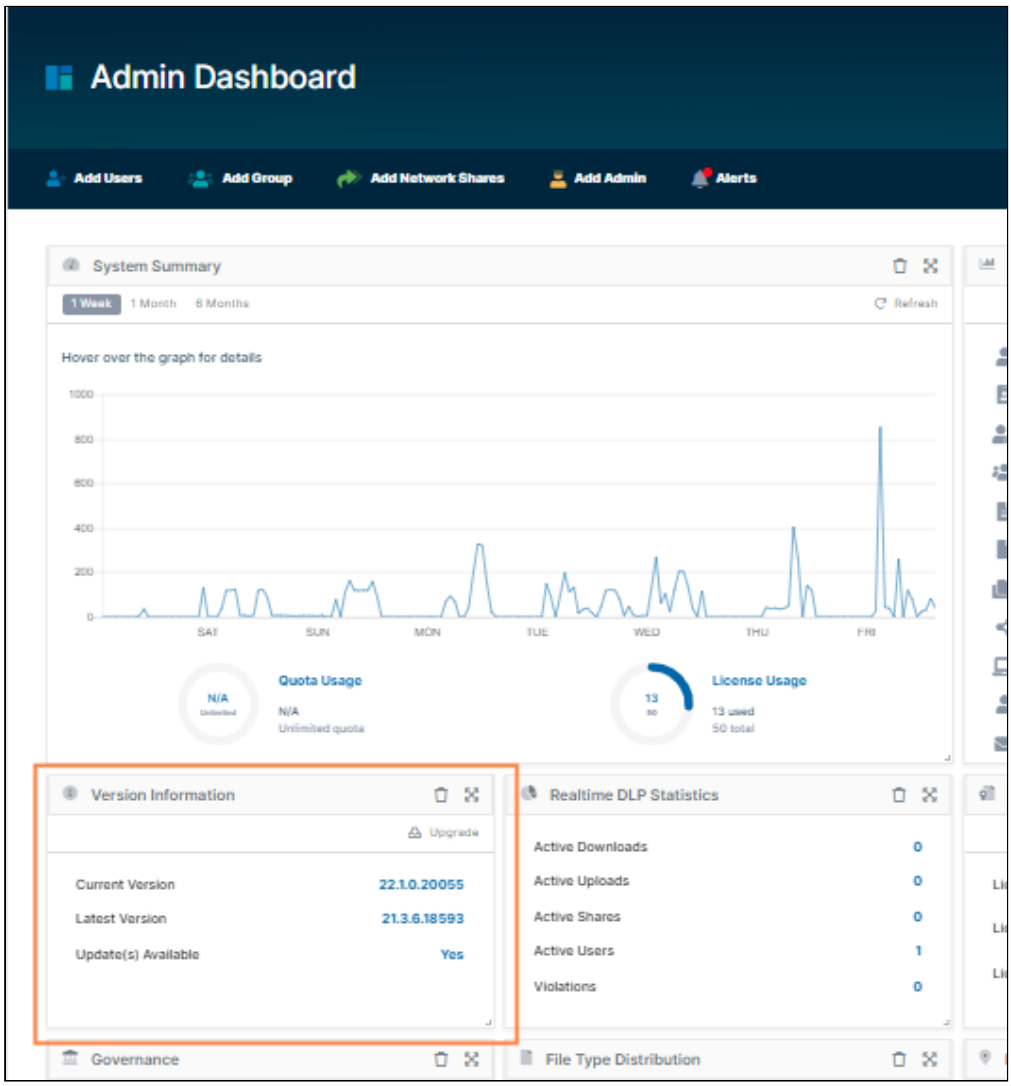
```
service mongod start
```

Routine Maintenance

We release 2 or 3 major releases every year. Routine maintenance requires you keep your FileCloud system updated to the latest version.

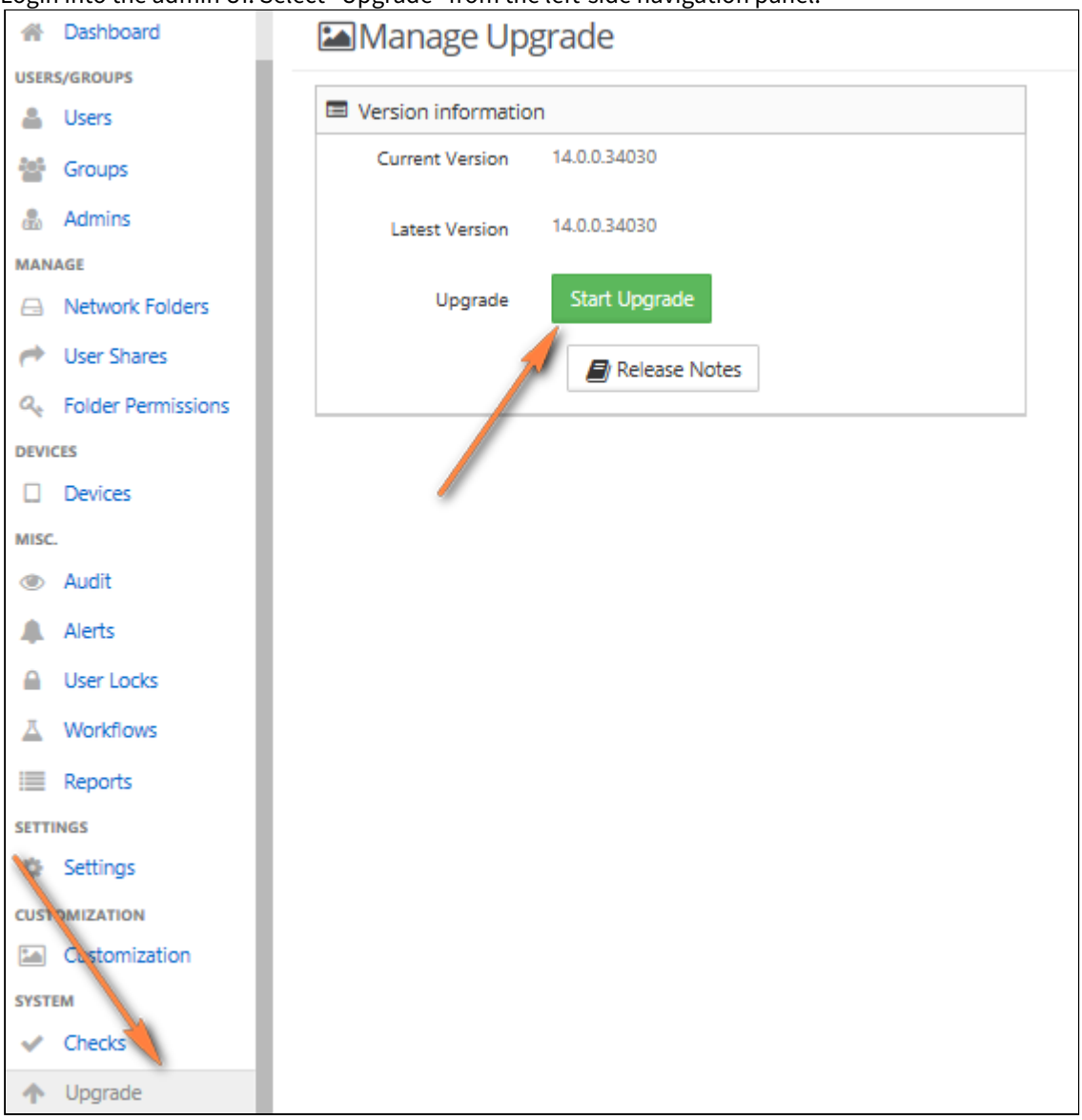
Generally, new FileCloud release availability will be notified in two ways:

1. By subscribing to the FileCloud Mailing List
2. By seeing the version update available in the FileCloud Admin Dashboard.

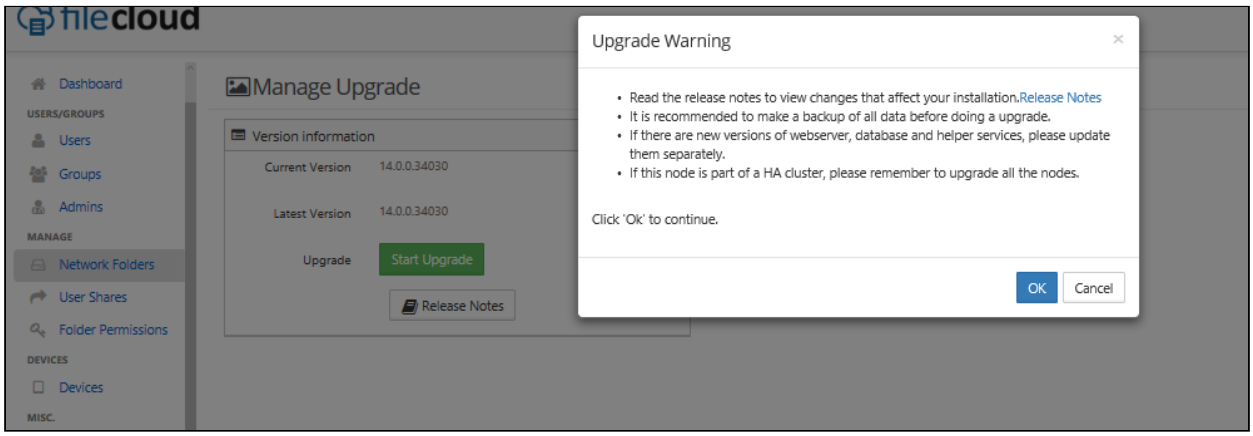


FileCloud offers in-place system updates. Please follow the instructions to update FileCloud from the admin portal.

1. Login into the admin UI. Select "Upgrade" from the left-side navigation panel.

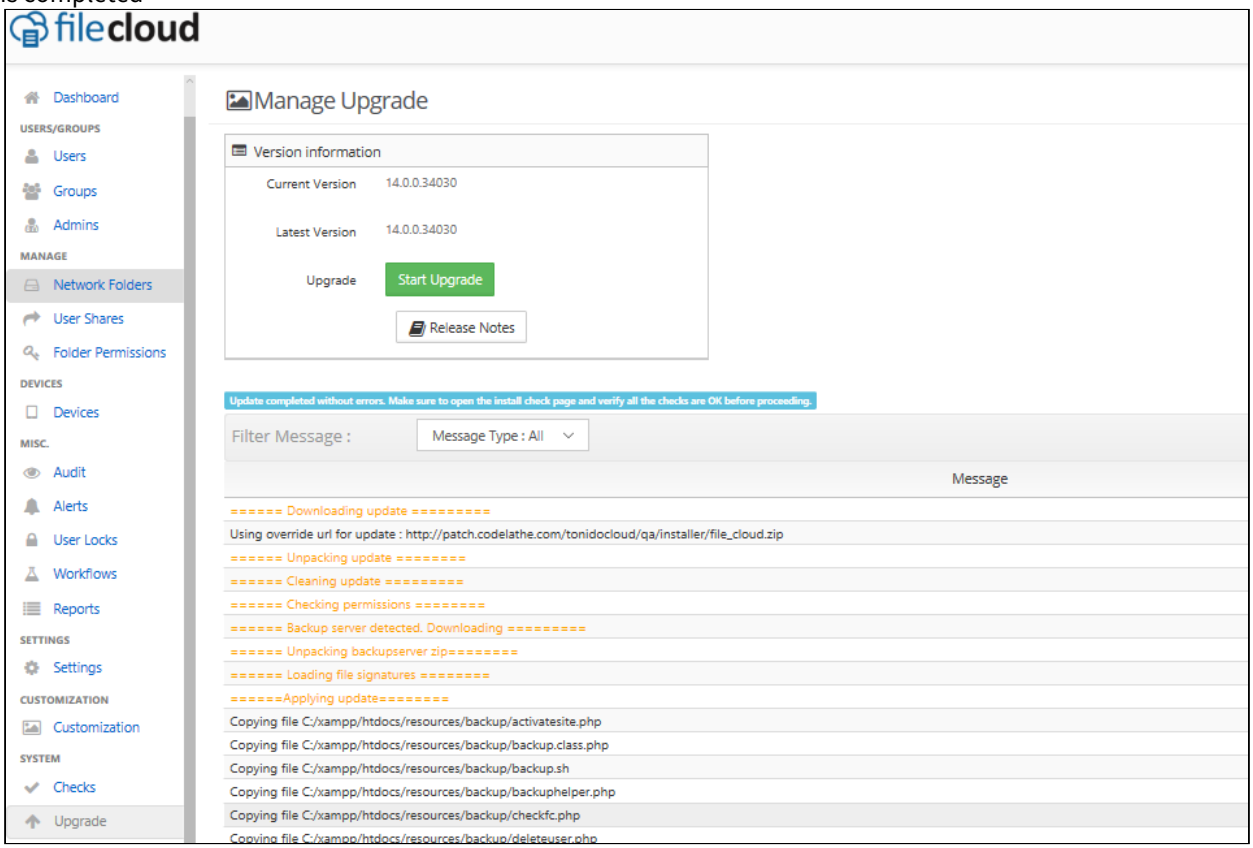


2. In the upgrade screen, click on "Click here to upgrade" button.
3. If there are no new updates available, no additional actions required.
4. If there are any new updates available, a popup will be shown with new update information.



5. Click on the "Click here to Upgrade" button to start the upgrade process.

6. The upgrade process will check for perform the upgrade and a report will be generated after the update process is completed



7. Once the upgrade is completed, you will be redirected to the install verification page at http://site/install
8. Once it is verified that the checks are complete, refresh the browser UI (Ctrl + F5) to get the latest updated User Interface.

Emergency Maintenance

If the EC2 instance where you are running FileCloud is degraded, You have two options:

1. Take the snapshot of EBS disk and start an instance from the snapshot.
   (or)
2. If option 1 is not feasible, please start a new FileCloud AMI and copy the backed up FileCloud Database files to /var/lib/mongodb (Linux) or c:\xampp\mongodb\bin\data (Windows). Then start the mongod service.

Support

Please send an email to support@filecloud.com to receive technical support.

- We answer all support questions within one business day and most within a couple of hours
- If your question or issue cannot be resolved via email, our support team will connect remotely via screen sharing software to troubleshoot and fix the problem on your server

Support Costs

Your annual FileCloud subscription includes a basic support plan, software updates, and security updates. For pricing of advanced support plans, please contact our sales team.

Accessibility

Reference Materials

FileCloud Site Setup Guide - FileCloud Site Setup Guide

FileCloud End User Guide - FileCloud End User Guides

FileCloud API Getting Started Guide - FileCloud Developer Guide

Seeding FileCloud for Amazon S3

These instructions should be used only for new installations (or, as shown in the last procedure, for migrating from FileCloud Server to FileCloud Online).

These instructions will not work if you are seeding a system with ServerLink enabled. Contact support.

Initially, when FileCloud is ready for production purposes, you may need to pre-populate the server with files and folders for FileCloud users.

- FileCloud is bundled with a tool to pre-load files and folders before you grant users access.
- These instructions explain how to use the FileCloud Server tool for seeding data into your deployment.

How To Seed Data

1. Enable MongoDB

To use the seeding tool, MongoDB should be enabled and running in PHP CLI mode.

- This may require you to edit the PHP.ini file.
- In Windows, the MongoDB module is already enabled by default.
- If MongoDB is not enabled for PHP CLI mode, the tool will fail.

Enable MongoDB:

In Linux enter:

```
[root@cnfc php.d]# php -m | grep mongodb
mongodb
[root@cnfc php.d]#
```

In Windows enter:

```
C:\Windows\system32>C:\xampp\php\php.exe -m | findstr mongodb
mongodb

C:\Windows\system32>
```

If you do not get the above results, please Contact FileCloud Support.

2. Use the seed command

1. In a command line enter:
   For Windows:

   ```
   cd c:\xampp\htdocs\resources\tools\seeding
   PATH=%PATH%;C:\xampp\php
   ```

   For Linux:

   ```
   cd /var/www/html/resources/tools/seeding
   ```

   Then, for both Windows and Linux, enter:

   ```
   php  seed.php -h <hostname>] -p <from path> -i -d <storagepath> -m <s3inipath> -u
   <user> -r
   ```

Parameters:
[required] -h <host> Site host name or 'default' for default site.
[required] -p <from path> Source path from which files are seeded.
[optional] -i Seed files. Set this flag to seed files.
[optional] -d <storagepath> Seed files from source path specified with -p to this existing storage path.
[optional] -m <s3inipath> Path to migrate.ini. This ini file will be used to migrate existing local storage to S3 storage.
[optional] -u <user> User whose files are to be imported. File with the user name should exist in the source path. Applicable only with -i.
[optional] -r Reset existing database. This will reset the databases, so use it with caution.

The seed command deletes the source files after uploading. This is designed to improve the speed of seeding.

Seeding Scenarios

Seed files for multiple users without resetting databases

To seed files for multiple users at the same time, prepare a top directory(source path) with separate folders for each user to be seeded with data. Under the user specific folder place files/folders to be seeded for that user.
Run the following command to seed all the users from the prepared source path.

Linux seeding files/folders for multiple users - Default site

```
php seed.php -h default -p /tmp/seedfolder -i
```

The following code shows how to export files for user 'jdoe' from site site21.hostedcloud.com to directory 'cloudexport'.

Windows seeding files/folders for multiple users - Default site

```
php seed.php -h default -p C:\temp\seedfolder -i
```

Note

- If user account exists, seeded files/folders will be imported to those accounts
- If user accounts doesn't exist, user accounts will be created before seeding.

Seed files for multiple users resetting databases

To seed files for multiple users at the same time, prepare a top directory(source path) with separate folders for each user to be seeded with data. Under the user specific folder place files/folders to be seeded for that user.
Run the following command to delete all the existing data and seed from the prepared source path.

Linux resetting and seeding files/folders for multiple users - Default site

```
php seed.php -h default -p /tmp/seedfolder -i -r
```

Windows resetting and seeding files/folders for multiple users - Default site

```
php seed.php -h default -p C:\temp\seedfolder -i -r
```

Note

- All the existing user accounts and its associated data will be deleted before the seeding.
- New user accounts will be created before seeding. Default username and password will be used (i.e password → password)

Seed files for a single user

Windows seeding files/folders for single user - Default site

```
php seed.php -h default -p C:\temp\seedfolder -u jdoe -i
```

Note

- Data will be seeded for a single user.
- In this case, command expects a folder **jdoe** to exist under the source path.

Seed files into an existing path

To seed files into an existing FileCloud storage path, prepare a top directory(source path) with a single folder under which files/folders to be seeded are placed.
Run the following command to seed the single folder and its contents to an existing FileCloud storage path.

Linux seeding files/folders into an existing storage path - Default site

```
php seed.php -h default -p /tmp/seedfolder -d /jdoe/march
```

Windows seeding files/folders into an existing storage path - Default site

```
php seed.php -h default -p C:\temp\seedfolder -d /jdoe/march
```

Note

- In this case, the command imports a single folder under the source path into the FileCloud storage path **/jdoe/march**. All contents of **seedfolder** are copied to **/jdoe/march**, but the folder **seedfolder** is not copied.

Migrate local storage to S3 storage

The seeding tool can also migrate files from local storage to S3 storage. When the tool is run in this mode, it does the following steps:

1. Checks if AWS CLI is installed on the system running the tool
2. Checks if a valid migration ini file is specified. Look below for the file format.
3. Important: Deletes the existing S3 storage database. If the site was never configured for S3 before, then this should not be an issue.
4. Creates a new S3 storage database and imports the data from local storage database converting it into S3 storage database format on the fly.
5. Creates multiple AWS CLI commands to upload data from the local storage to the S3 bucket. The details of this transfer are generated using the specified ini file.
6. Executes the AWS CLI commands prepared in the previous step.

Run the following command to migrate from local storage to S3 storage

Linux migrating from local storage to S3 storage

```
php seed.php -h default -m /tmp/migrates3.ini
```

Windows migrating from local storage to S3 storage

```
php seed.php -h default -m C:\temp\migrates3.ini
```

S3 migration ini file

```
aws_storage_bucket = "company.bucket"
aws_storage_folderprefix = "site1"
aws_access_key_id = "AKIAT4YDRDUSRO863KJJ"
```

```
aws_secret_access_key = "stPwbS3Y1KrZGUkVbNcYJx+8S/ZZKFROOjUdG9e9"
aws_region = "us-east-1"
```

Migrate from FileCloud Server to FileCloud Online

If you are migrating to FileCloud Online, the full set of databases has to be exported along with migration. This can be achieved with the following commands.

Linux migrating from local storage to S3 storage

```
php seed.php -h default -m /tmp/migrates3.ini -e /tmp/dbexport
```

Windows migrating from local storage to S3 storage

```
php seed.php -h default -m C:\temp\migrates3.ini -e C:\temp\dbexport
```

Contact FileCloud Support for help with this procedure.

Amazon GovCloud AWS Installation

Prerequisite: One needs to have Amazon AWS GovCloud account to use the GovCloud infrastructure. If you are a federal, state govt agency or a US business working with government contracts, you can get AWS GovCloud account from Amazon. You can apply for an Amazon Govcloud account here (https://aws.amazon.com/govcloud-us/contact/). Once your account is approved, you can start using the AWS GovCloud infrastructure. Note that the Amazon GovCloud admin console as well as the account is different from your regular AWS account. Not all aws services are available under AWS GovCloud. The AWS GovCloud (US) Region allows customers to adhere to: US International Traffic in Arms Regulations (ITAR), Federal Risk and Authorization Management Program (FedRAMP), and Department of Defense (DoD) Cloud Computing Security Requirements Guide (SRG) Impact Levels 2, 4, and 5.

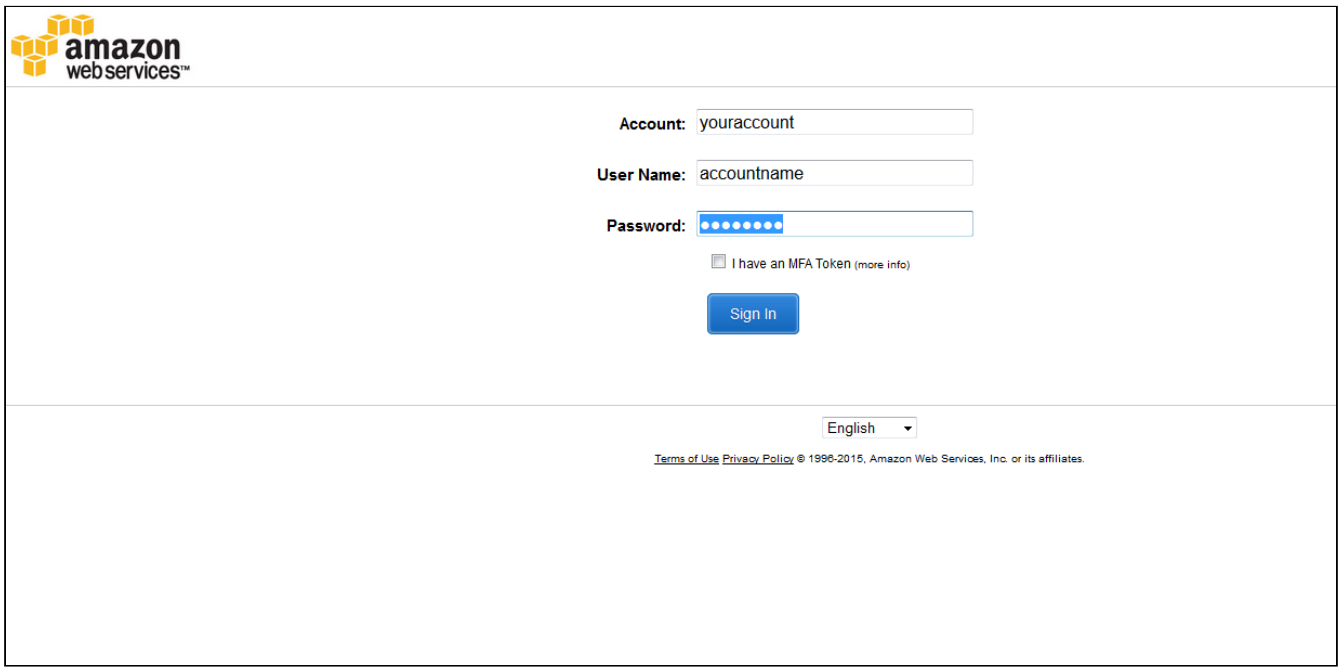
FileCloud Public AMI (Amazon Machine Image) is currently available in Amazon AWS GovCloud. Using FileCloud's AMI, government agencies can host their own, secure file share sync and mobile access solution for their organization is less than 10 minutes. The FileCloud AMI image is built on top of Ubuntu 16.04 OS. FileCloud stores the metadata and file share information in MongoDB Database which is already configured in the FileCloud AMI. The actual files can be stored in EBS or S3. For scalability and redundancy, we recommend to use S3 for production. We also recommend that you take periodic snapshots of your running instance for disaster recovery.

For a 100 users organization, a t2.medium or m3.medium or m3.large instance is good enough. Using Amazon EBS for FileCloud stack (FileCloud application, Apache Web Server, MongoDB Database) and Amazon S3 for cloud storage provides a scalable, redundant infrastructure that will satisfy any stringent business and federal security requirements. Since you only pay for the FileCloud licenses ($40/user/year) and Amazon infrastructure the cost savings are very significant compared to any other public cloud file sharing app like Dropbox or Box.net.

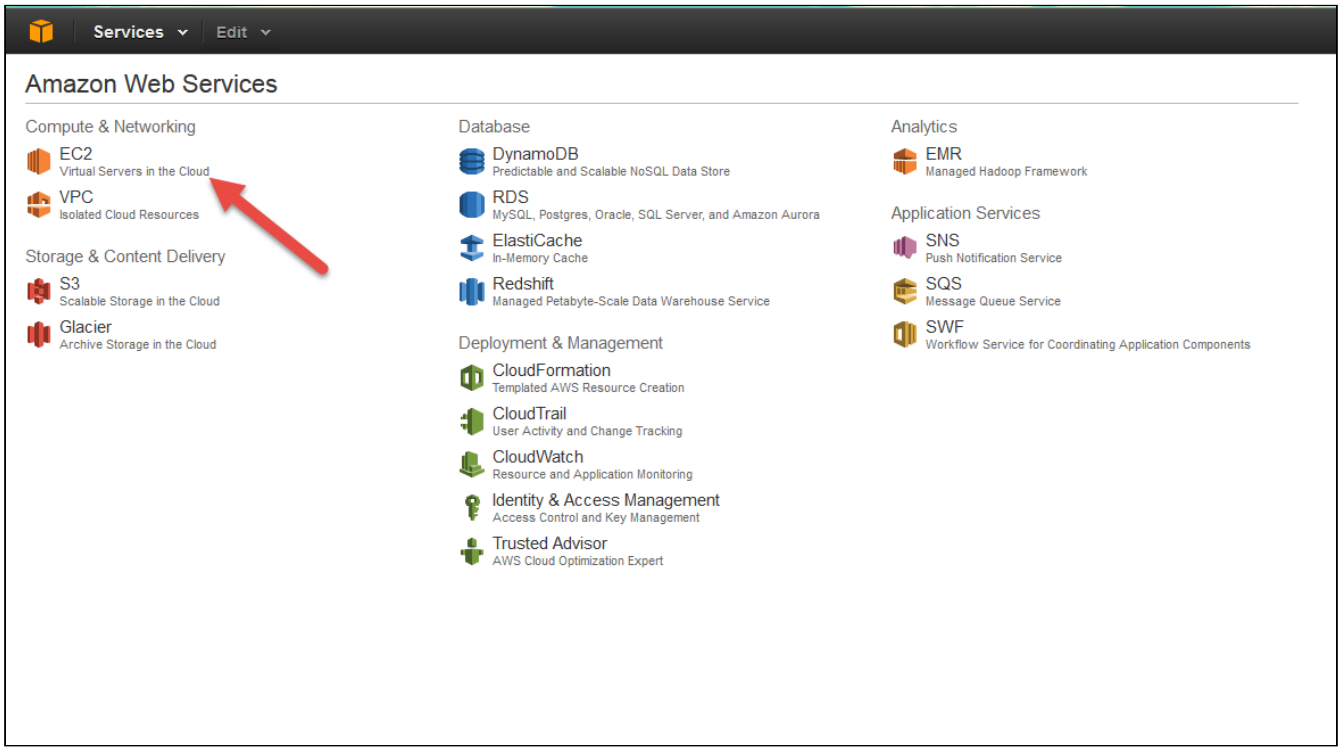
In a normal usage scenario, we expect FileCloud + AWS Infrastructure will cost $60/user/year compared to $240/user/year for Dropbox or Box.net. In addition, with FileCloud you have complete control over the app, branding, domain naming and access permissions. Using FileCloud + AWS, one can approximately save over $18,000 (assumption 100 users) when compared to Dropbox for business or Box.net.

Steps to Launch FileCloud AMI on GovCloud

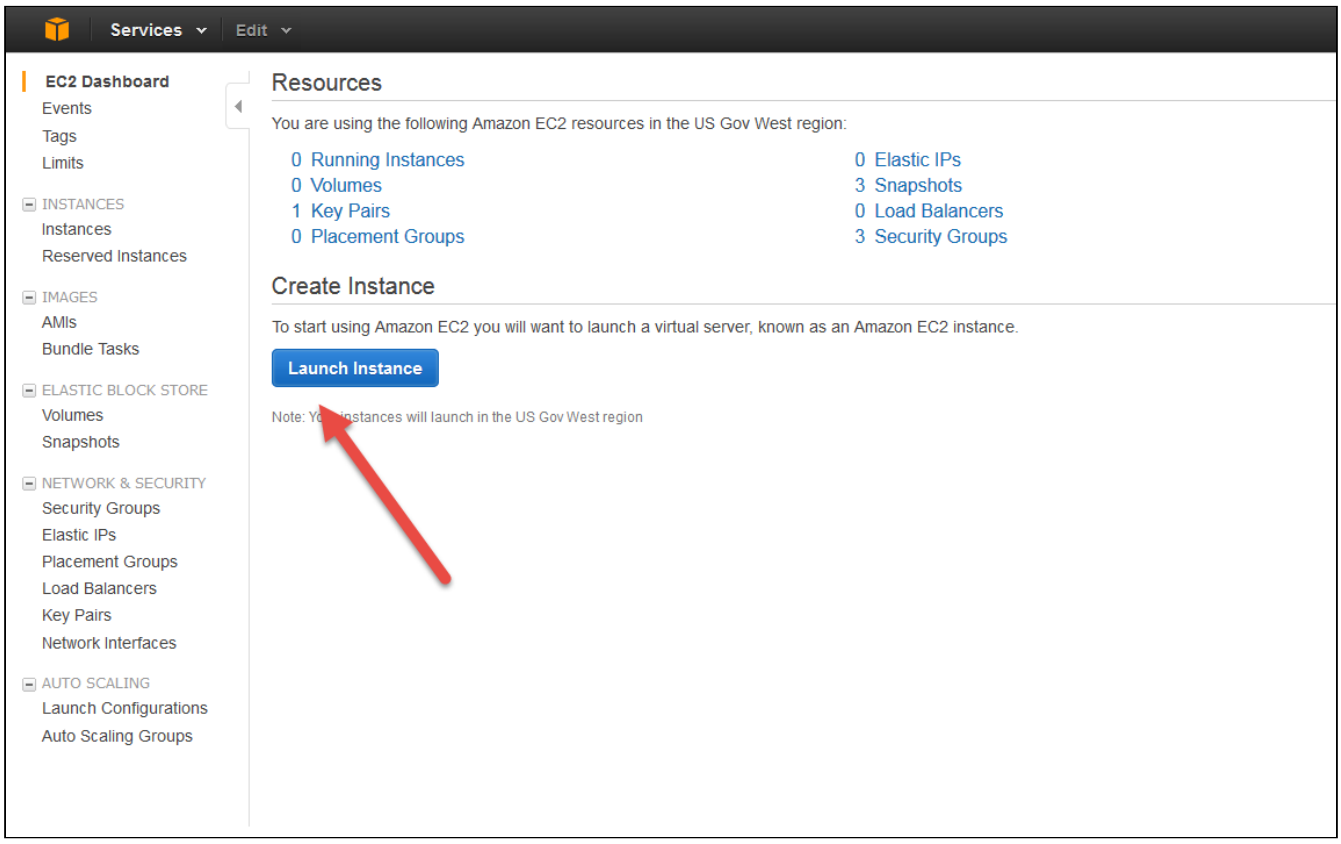
1. **Login to your aws govcloud admin console using your account, username and password**



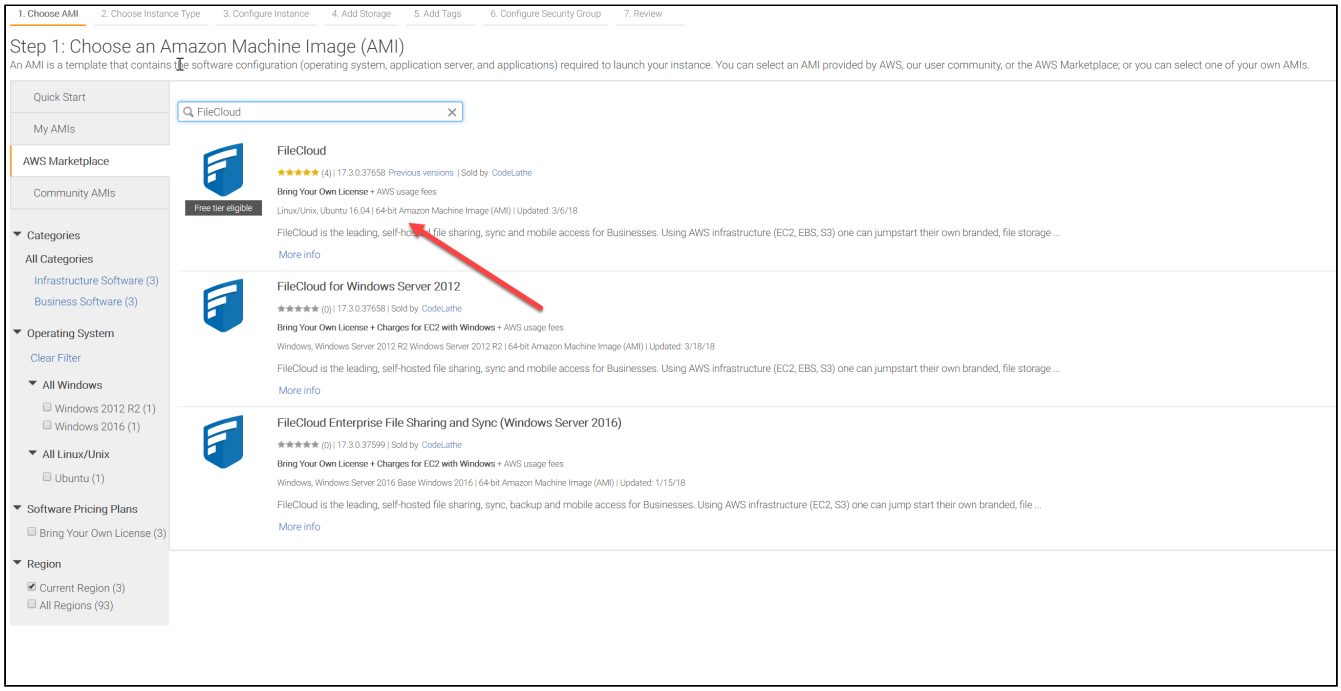
2. Click EC2 (Virtual Servers in the Cloud)



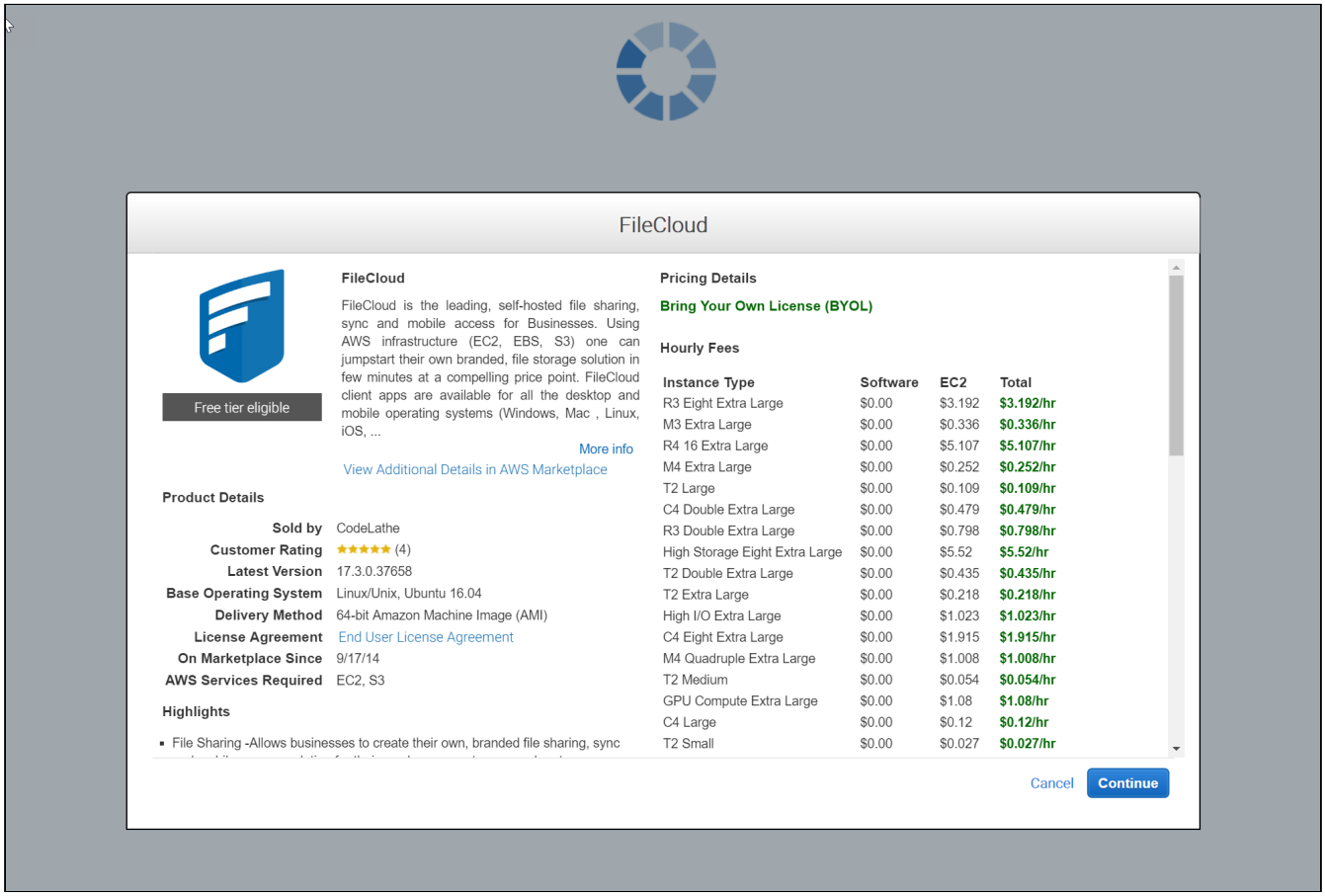
3. Click Launch Instance



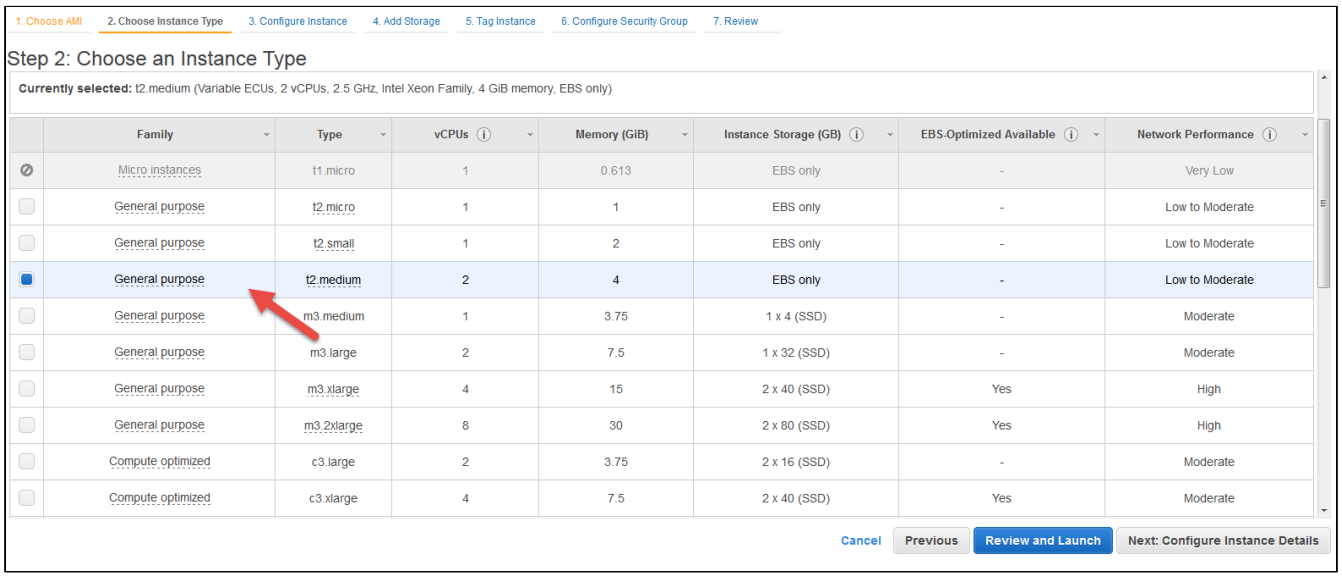
4. Search FileCloud AMI in AWS marketplace



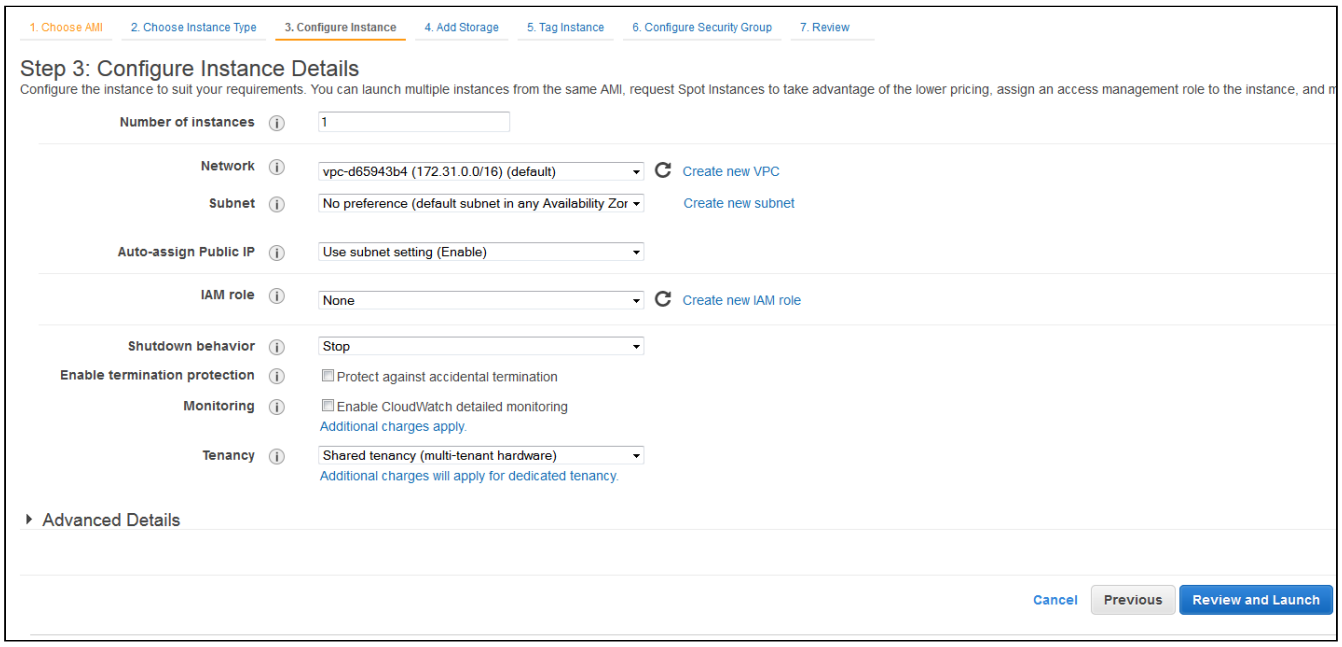
and choose Continue



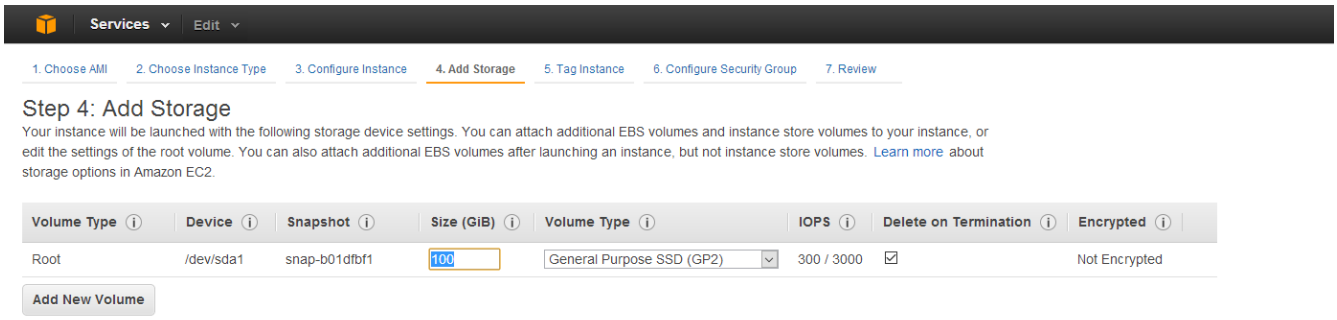
5. Choose the desired Amazon EC2 Instance type. We recommend at least t2.medium. However, m3 series (like m3.medium) would be better. t2 series begin to throttle resources after sustained usage.



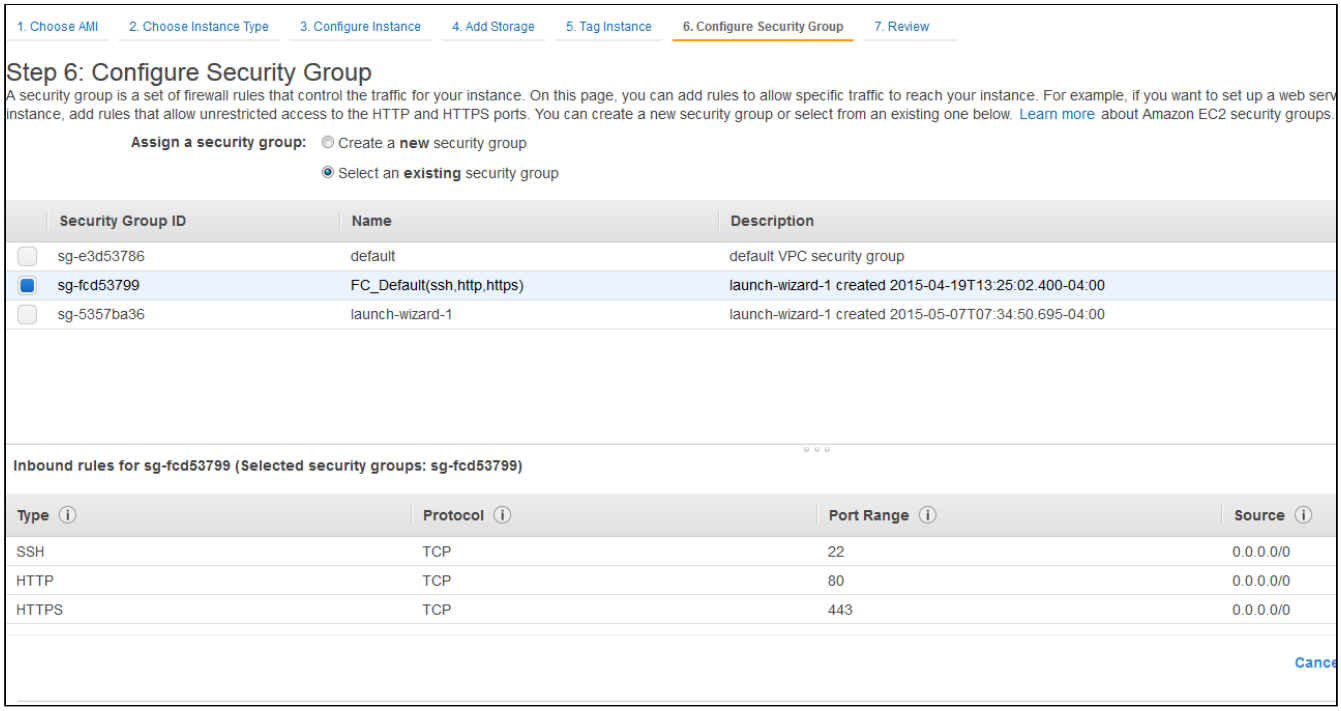
6. Configure the instance details as per your requirement.



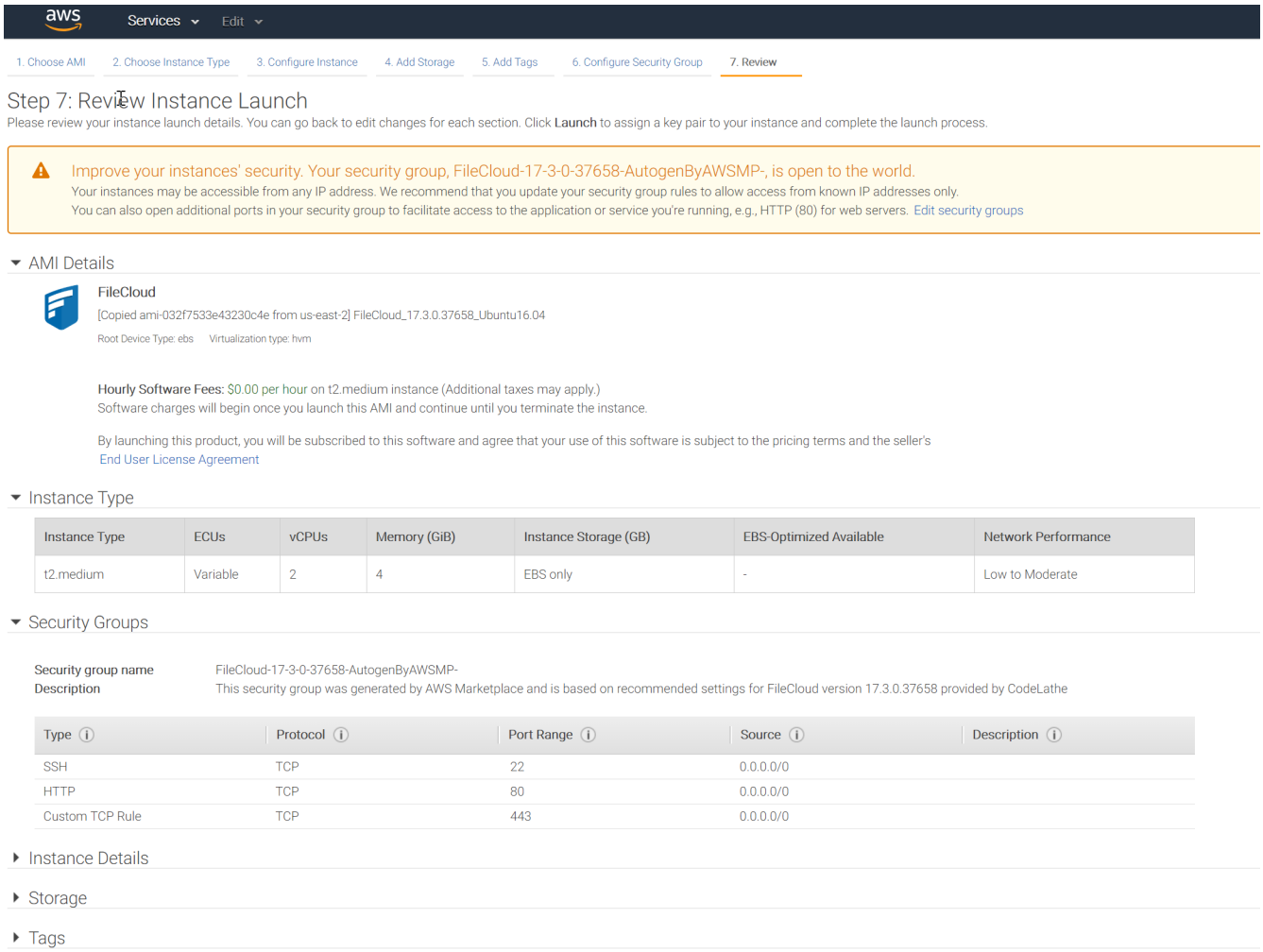
7. Select the desired storage. EBS storage is used to store the file meta and application data in the mongodb database. Depending on your implementation, actual files can be stored either in EBS or amazon S3.



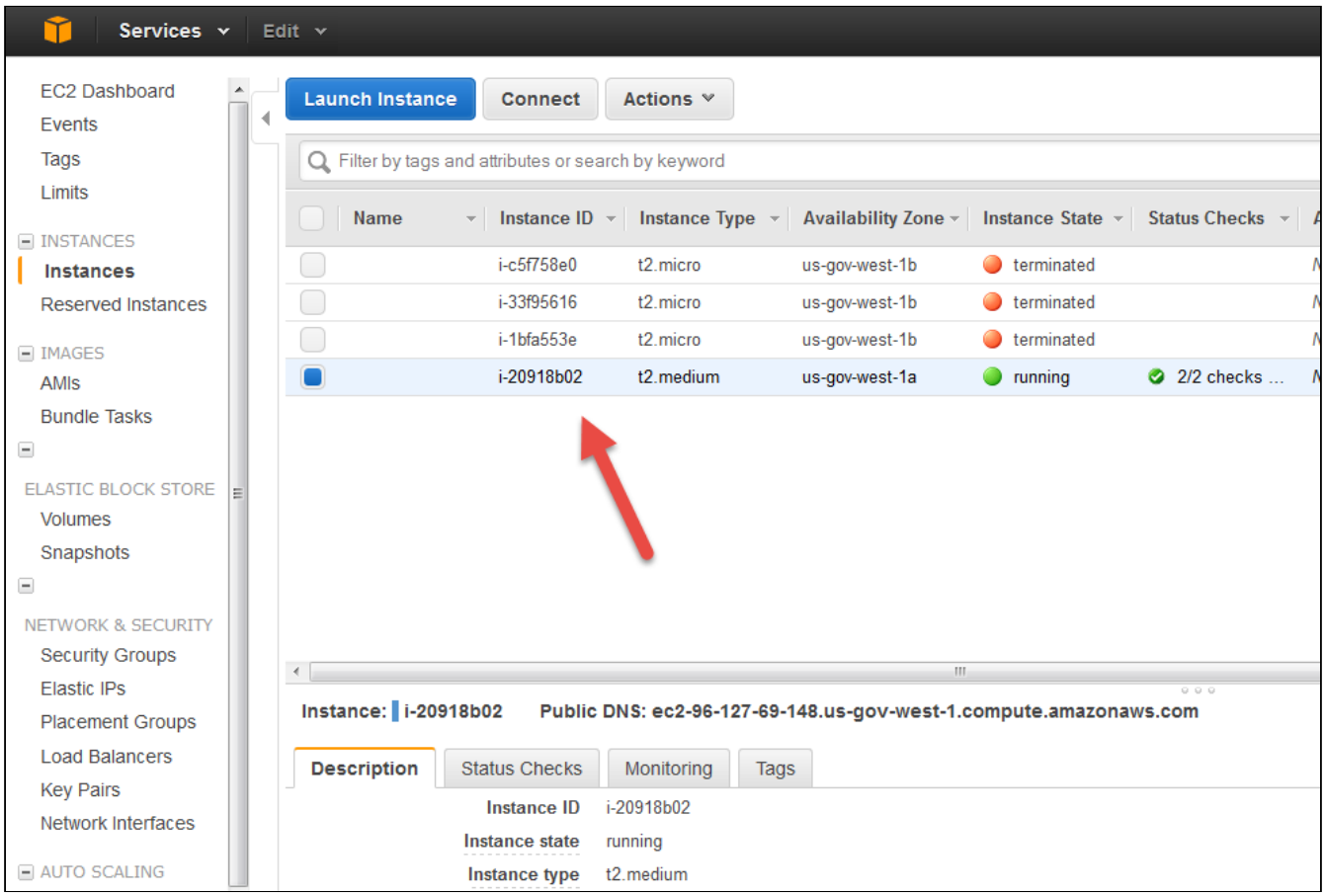
8. Configure Security Groups. If you need a external HTTP/HTTPS access you need to open port 80 and 443.



9. Complete the review and launch instance

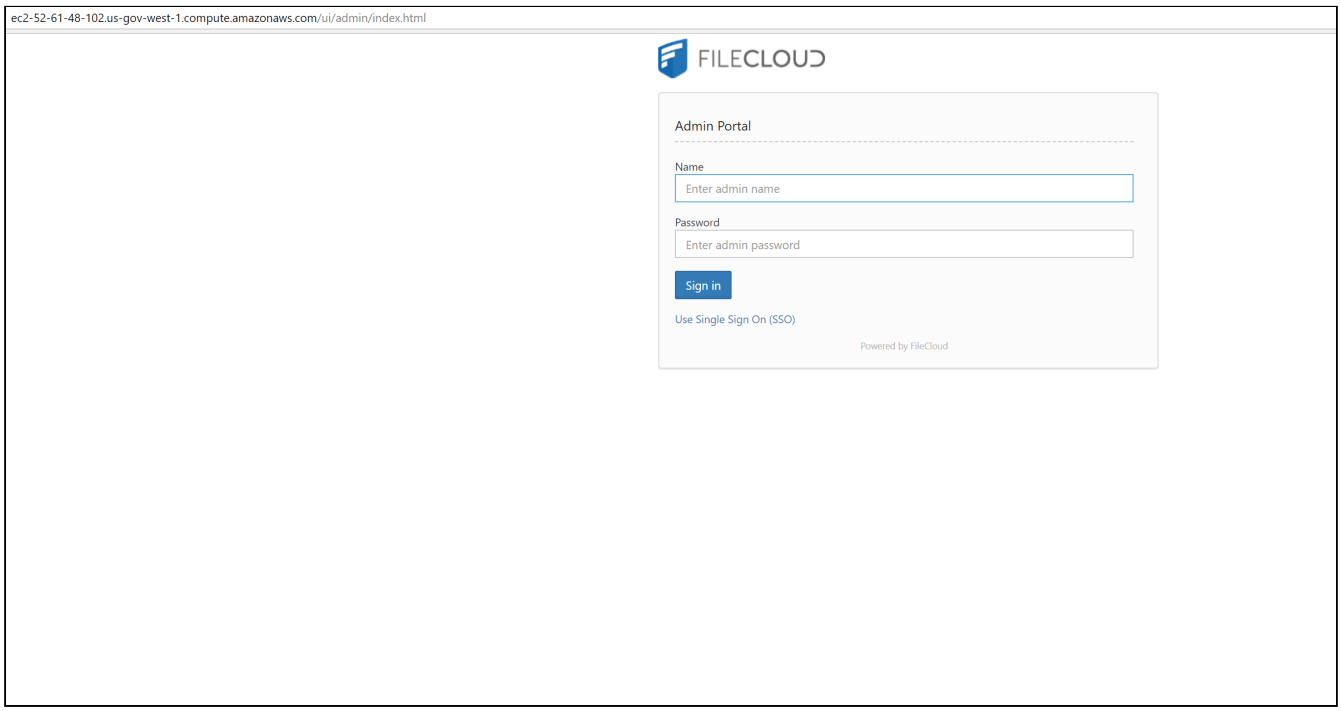


10. You can see now your FileCloud is running in your AWS dashboard. Please note the Public DNS name to access your FileCloud.



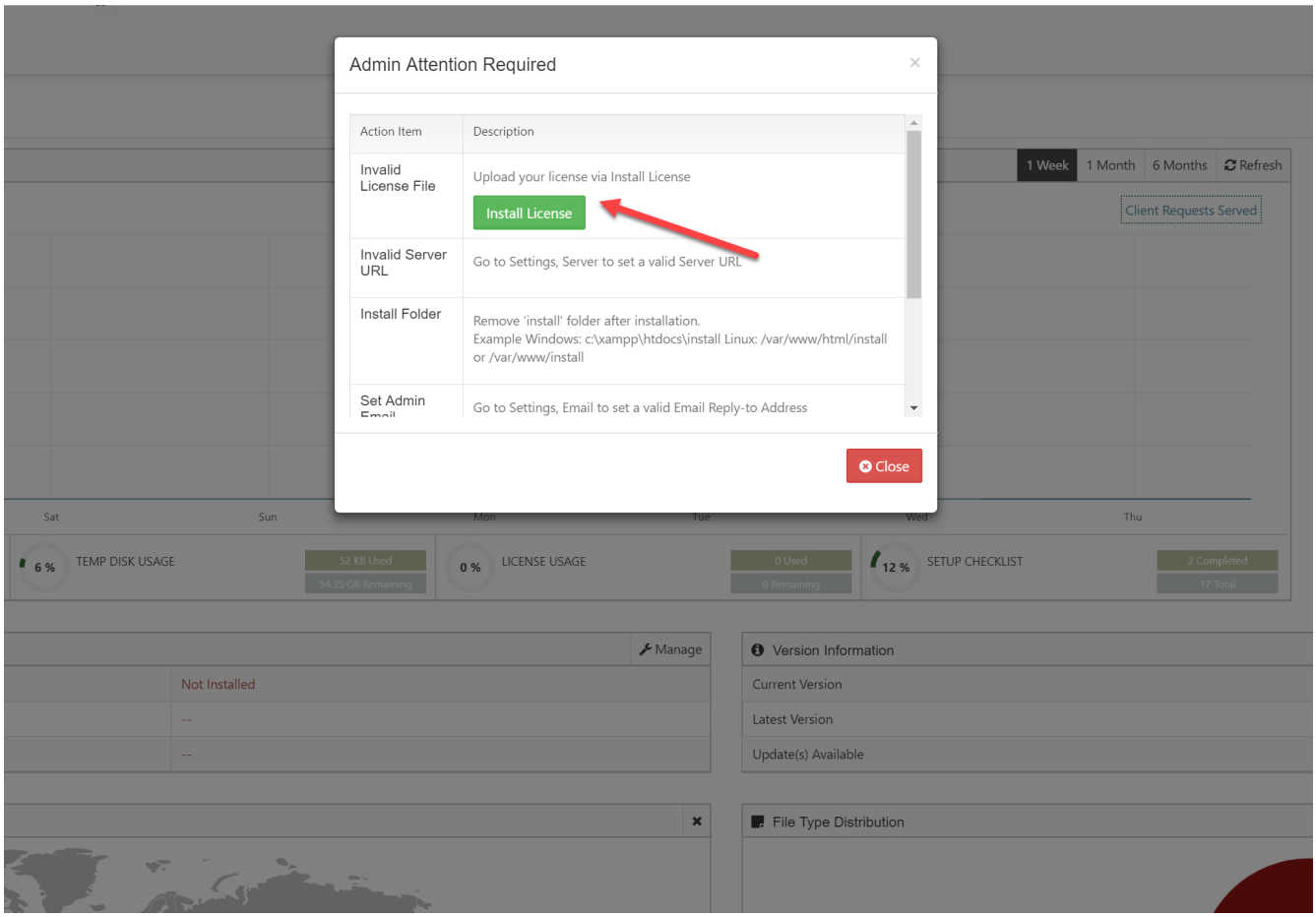
11. Type 'http://<public_dns_name>/ui/admin/index.html' in your browser to access the FileCloud admin portal.

Default Admin	admin
Default Password	Your amazon instance ID
Note	Please change the admin password upon first login.



12. Once you logged into the admin portal, please install the FileCloud License.

Please register at our license management portal (https://portal.getfilecloud.com/ui/user/index.html?mode=register**) to get trial licenses.**



1. The user name for the underlying Ubuntu OS is 'ubuntu'. Before launching the instance you will be required to create a key pair or you can use your existing key pair.
2. If you go to 'http://<public_dns_name>/install' , the page will show all the installed packages in this instance. Check the page and familiarize yourself with FileCloud components. Before going production move the install folder (/var/www/html/install) to somewhere else.
3. We recommend you to use S3 for file storage instead of the EBS. Please check this page (Setting up FileCloud Managed S3 Storage) to know how to setup S3 for FileCloud file storage.
4. Take Periodic snapshots of your running instance for Disaster recovery and as an additional backup for FileCloud database and app.

FAQ

What is AWS GovCloud (US?

AWS GovCloud (US) is an isolated AWS Region designed to allow US government agencies and customers to move sensitive workloads into the cloud by addressing their specific regulatory and compliance requirements. The AWS

GovCloud (US) framework adheres to U.S. International Traffic in Arms Regulations (ITAR) regulations as well as the Federal Risk and Authorization Management Program (FedRAMP^{SM}) requirements.

What is the Federal Risk and Authorization Management Program (FedRAMP)?

The Federal Risk and Authorization Management Program, or FedRAMP, is a government-wide program that provides a standardized approach to security assessment, authorization, and continuous monitoring for cloud products and services. For more info check FedRAMP website (http://www.fedramp.gov/).

What is ITAR Regulations?

International Traffic in Arms Regulations (**ITAR**) The regulations control the export and import of defense-related articles and services on the United States Munitions List (USML).

More Information:

FileCloud Blogs
• Choose the Right File Sharing Solution for ITAR Compliance

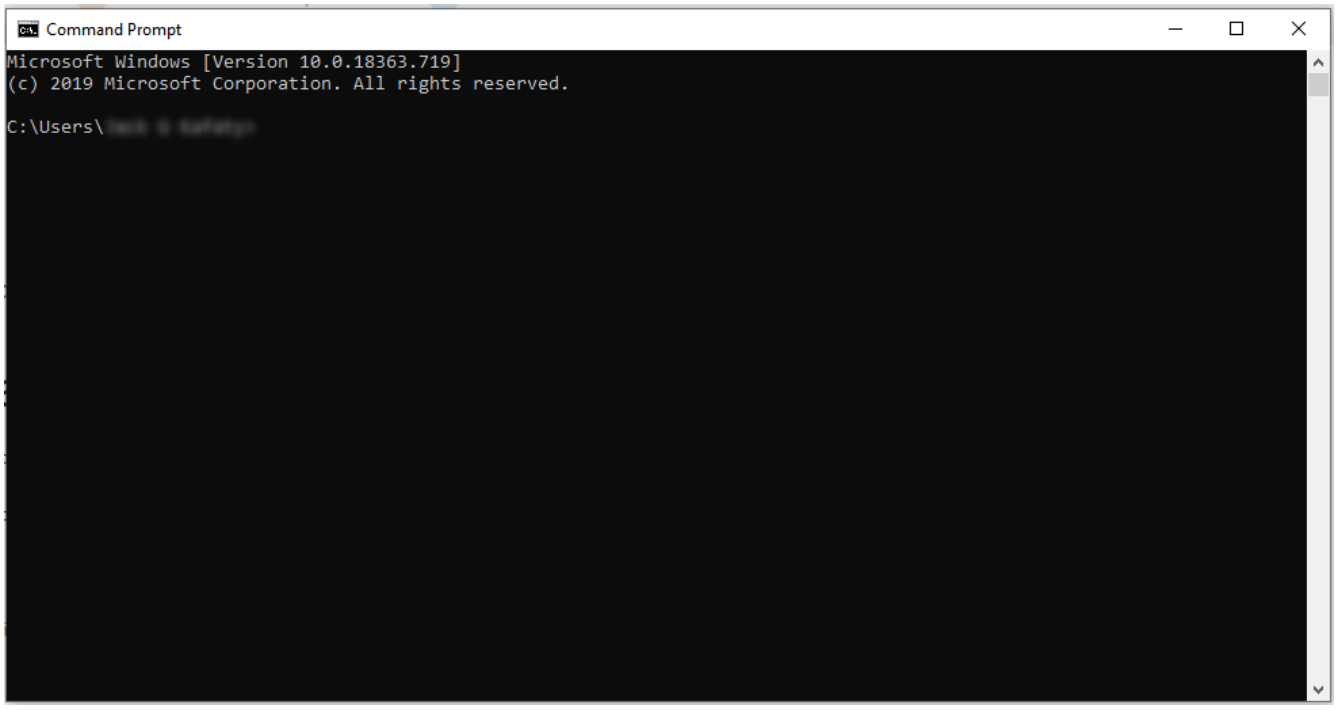
FileCloud Online GovCloud Verification Guide

FileCloud is the leading self-hosted, file sharing, sync, and mobile access solution for government agencies and public sector organizations. With the addition of FileCloud on Amazon Web Services (AWS) GovCloud, government organizations can now deploy a secure file sharing and sync solution that can meet the most stringent data security requirements used by the government.

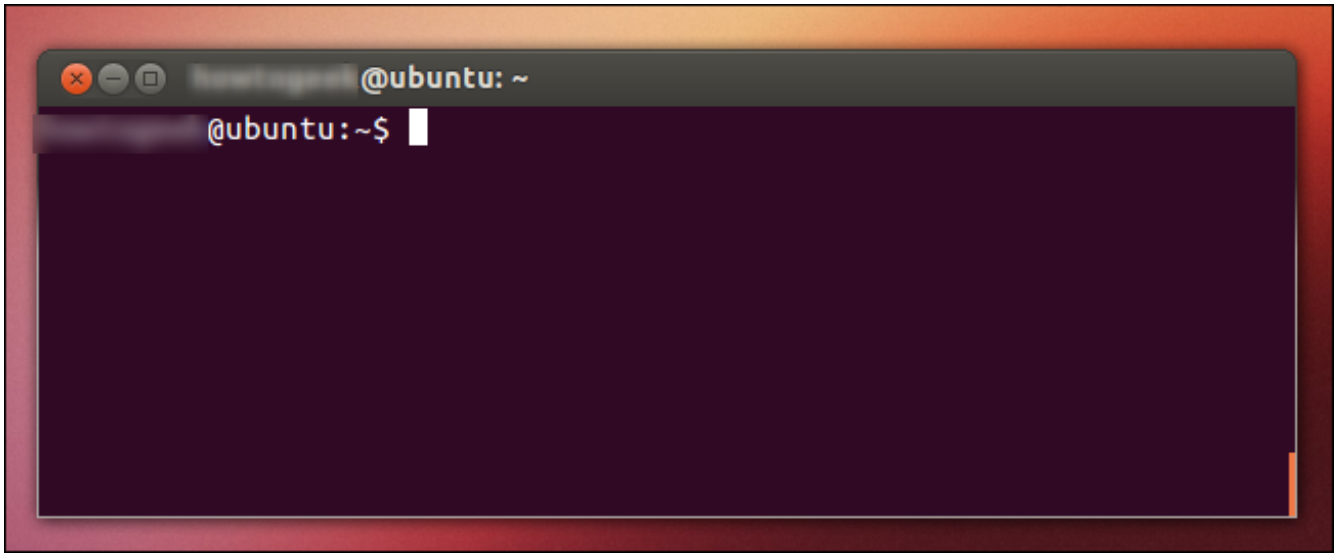
How to obtain your IP and Hosting

In order to verify that your FileCloud Online is hosted in GovCloud, you can execute the following steps:

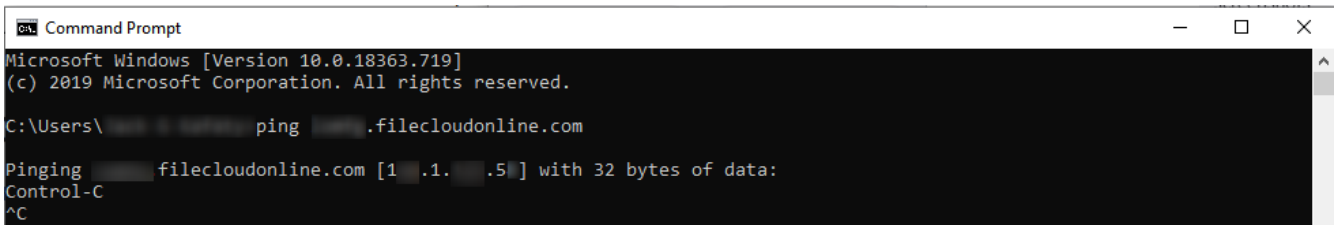
1) In your windows or Linux computer, open the command prompt.
Windows: Windows logo/Search Icon> type CMD> hit Enter.



Linux: Press. Ctrl + Alt + T.This will launch the Terminal.

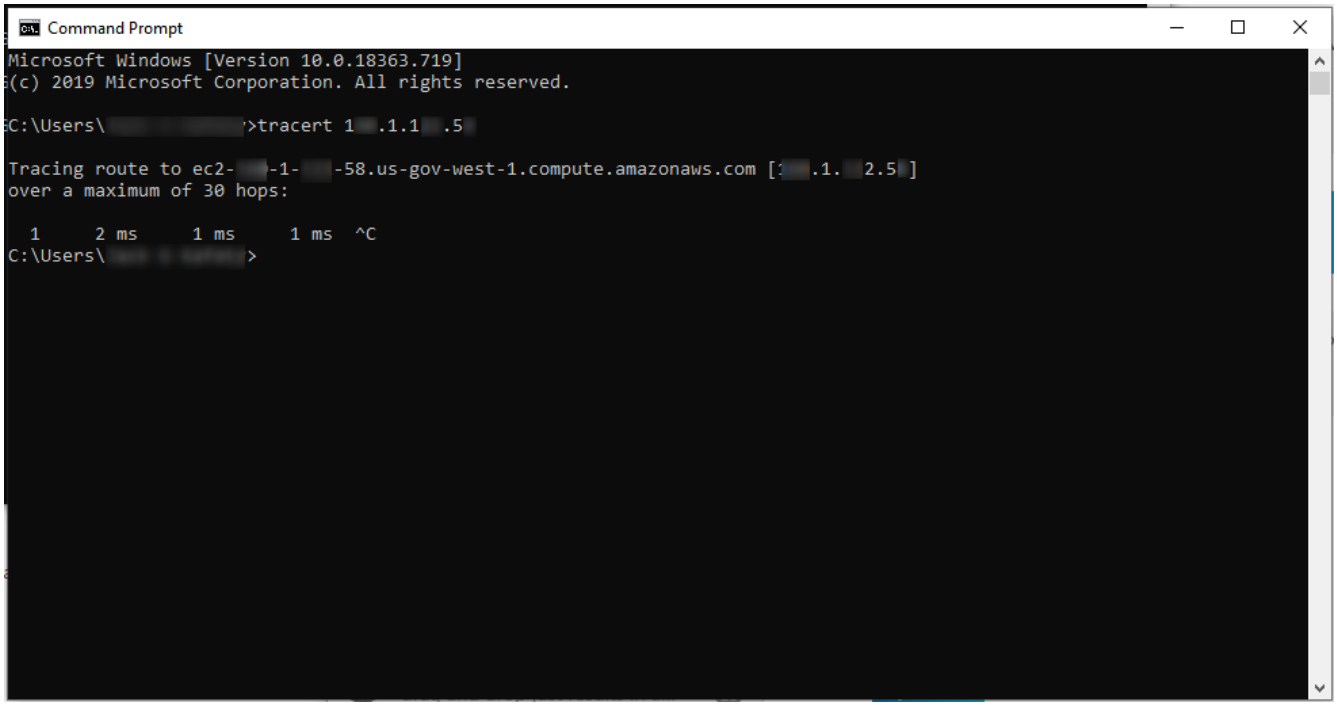


2) Modify the following command accordingly and copy and paste it in the terminal/command prompt and hit enter. Once the IP appears (**example [52.11.222.333]**), cancel the command by using **Ctrl + C** at the same time.
Windows: ping GOVCHECK.filecloudonline.com
Linux: ping GOVCHECK.filecloudonline.com



NOTE: Change GOVCHECK to your FileCloud's URL name or team name before running the command.

3) Once you have obtained the IP address of your FileCloud you can do a traceroute to verify where your FileCloud is being hosted. This takes about 20 seconds. Once the initial address appears, press **Ctrl + C** at the same time to cancel.
Windows: tracert 52.11.222.333
Linux: traceroute 52.11.222.333



NOTE: Before running the command, change the IP address on the example provided with the IP obtained from step 2.

Interpreting the Result

FileCloud Docker installation

Docker images are mainly created for trialing/testing the product and are not optimized for production servers.

Installing Docker

1. Install **docker-compose** in your Docker server:

```
apt-get install docker-compose
```

2. Download **docker-compose.yml** using the below command:

```
wget https://patch.codelathe.com/tonidocloud/live/scripts/fc/docker-compose.yml
```

3. Pull the four FileCloud images:

```
docker-compose pull
```

4. Start the containers:

```
docker-compose up -d filecloud.server filecloud.mongodb filecloud.preview
filecloud.solr

(Do not change these names.)
If you do not want to start the optional containers filecloud.solr and
filelcoud.preview, remove filecloud.solr and filecloud.preview from the command.
```

Now you can access the FileCloud admin portal at **http://<hostip>/ui/admin/index.html**. The user name is **admin** and the password is **password**. You can access the FileCloud user portal at **http://<hostip>/ui/core/index.html**.

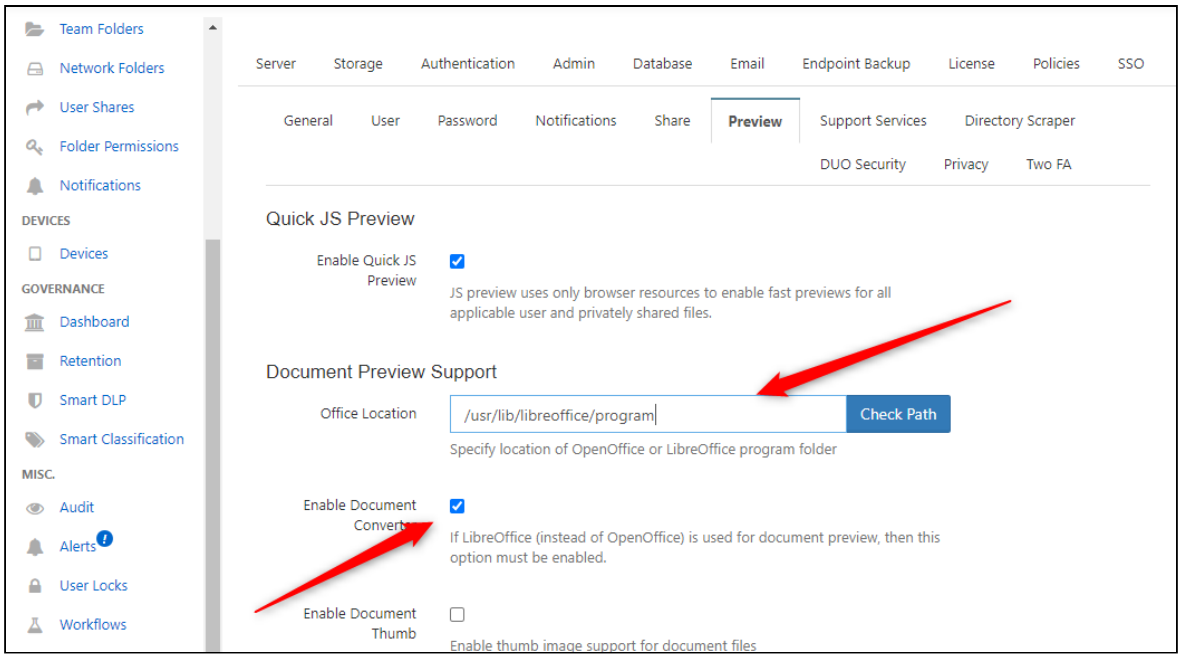
Setting up LibreOffice preview

Filecloud has two preview methods:

- Built-in web preview
- LibreOffice preview

To use LibreOffice

1. Start the filecloud.preview container.
2. In the Admin portal, go to Settings > Misc > Preview.
   a. In **Office Location,** enter **/usr/lib/libreoffice/program**
   b. Check **Enable Document Converter**.



Confguring Solr

1. To configure Solr, start the filecloud.solr container.
2. Enter the Solr container shell:

```
docker exec -it filecloud.solr bash
```

3. Copy the skeleton:

```
cp -R /var/www/html/thirdparty/overrides/solarium/Solarium/fcskel/* /var/solr/
data/fccore/
```

4. Go to Admin portal > Settings > Content search.
   a. Click **Configure**.
   b. To start indexing, click the green **Index** button.

By default, FileCloud uses host mount volumes for the Database and Filecloud storage folder.

Upgrading the Docker Image from Version 22.x or older to Version 23.x

FileCloud versions 23.x require MongoDB version 6. To upgrade to MongoDB version 6, you must upgrade the Docker image to 23.x.

Before upgrade, make a backup or take a snapshot of your server.

To upgrade the Docker image:

1. To create a dump of the database, enter the following into the command line:

```
docker exec -i filecloud.mongodb /usr/bin/mongodump
```

2. Copy the dump folder from the container to the host machine.
   Note: Do not delete the dump folder. You are required to use it in step 7 to restore the database.

```
docker cp filecloud.mongodb:/dump .
```

   To make sure the dump folder has been copied successfully to the host machine, enter:

```
ls -l dump
```

3. List the volumes:

```
root@docker:/# docker volume ls

DRIVER    VOLUME NAME
local     nsadm_cloud_data
local     nsadm_mongo_database
local     nsadm_solr_data
```

```
local     nsadm_var_html
```

4. Delete the database volume and the Filecloud server volume where the application code files are stored, as shown in the following commands.
   Please be careful to delete these volumes only.

```
root@docker:/home/nsadm# docker volume rm nsadm_mongo_database
root@docker:/home/nsadm# docker volume rm nsadm_var_html
```

5. Edit your **docker-compose.yml** file, and change the version of MongoDB to **mongo:6.0.8** and FileCloud server to **filecloud/filecloudserver23.1:latest** as shown below:

```
version: '3'

services:
    filecloud.mongodb:
        container_name: 'filecloud.mongodb'
        image: mongo:6.0.8
        environment:
            - mongodb_data_container=/data/db
        volumes:
            - mongo_database:/data/db
  filecloud.server:
          container_name: 'filecloud.server'
          image: filecloud/filecloudserver23.1:latest
          depends_on:
              - filecloud.mongodb
              - filecloud.preview
          volumes:
              - cloud_data:/var/clouddata
              - var_html:/var/www/html
          links:
              - filecloud.mongodb
          ports:
              - "80:80"
              - "443:443"
```

6. Start Docker using the new **docker-compose.yml** file

```
docker-compose up -d
```

7. Copy the dump folder created in step 2 to the **filecloud.mongodb** container, and restore the database.

```
docker cp dump filecloud.mongodb:/
docker exec -i filecloud.mongodb /usr/bin/mongorestore --noIndexRestore --drop
```

8. Confirm that the containers are running.

```
root@docker:/home/nsadm# docker ps -a

CONTAINER ID   IMAGE                                      COMMAND
 CREATED         STATUS            PORTS
                        NAMES
31a8167e2731   filecloud/filecloudserver23.1:latest    "bash /usr/local/bin…"   3
 minutes ago   Up 23 seconds     0.0.0.0:80->80/tcp, :::80->80/tcp, 0.0.0.0:443->4
43/tcp, :::443->443/tcp    filecloud.server
5bdb04b9f5fb   mongo:6.0.8                                "docker-entrypoint.s…"   3
 minutes ago   Up 34 seconds     27017/tcp
                        filecloud.mongodb
b1466b6088ab   filecloud/filecloudsolr21.3:latest      "sh /opt/solr/docker…"   3
 minutes ago   Up 23 seconds     8983/tcp
                        filecloud.solr
304de38d3fa0   filecloud/filecloudpreview22.1:latest   "/opt/libreoffice/in…"   3
 minutes ago   Up 24 seconds
                        filecloud.preview
```

9. Set the compatibility version for MongoDB to 6.0.

```
root@docker:/home/nsadm# docker exec -it filecloud.mongodb bash -c 'mongosh --eval
"db.adminCommand( { setFeatureCompatibilityVersion: \"6.0\" } )"'

Current Mongosh Log ID: 64b8b48af3fc5d6bfffc1149
Connecting to:          mongodb://127.0.0.1:27017/?
directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+1.10.1
Using MongoDB:          6.0.8
Using Mongosh:          1.10.1

For mongosh info see: https://docs.mongodb.com/mongodb-shell/


To help improve our products, anonymous usage data is collected and sent to
MongoDB periodically (https://www.mongodb.com/legal/privacy-policy).
You can opt-out by running the disableTelemetry() command.

------
   The server generated these startup warnings when booting
   2023-07-20T04:12:49.344+00:00: Using the XFS filesystem is strongly recommended
with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-
filesystem
   2023-07-20T04:12:49.774+00:00: Access control is not enabled for the database.
Read and write access to data and configuration is unrestricted
   2023-07-20T04:12:49.774+00:00: vm.max_map_count is too low
------

{ ok: 1 }
```

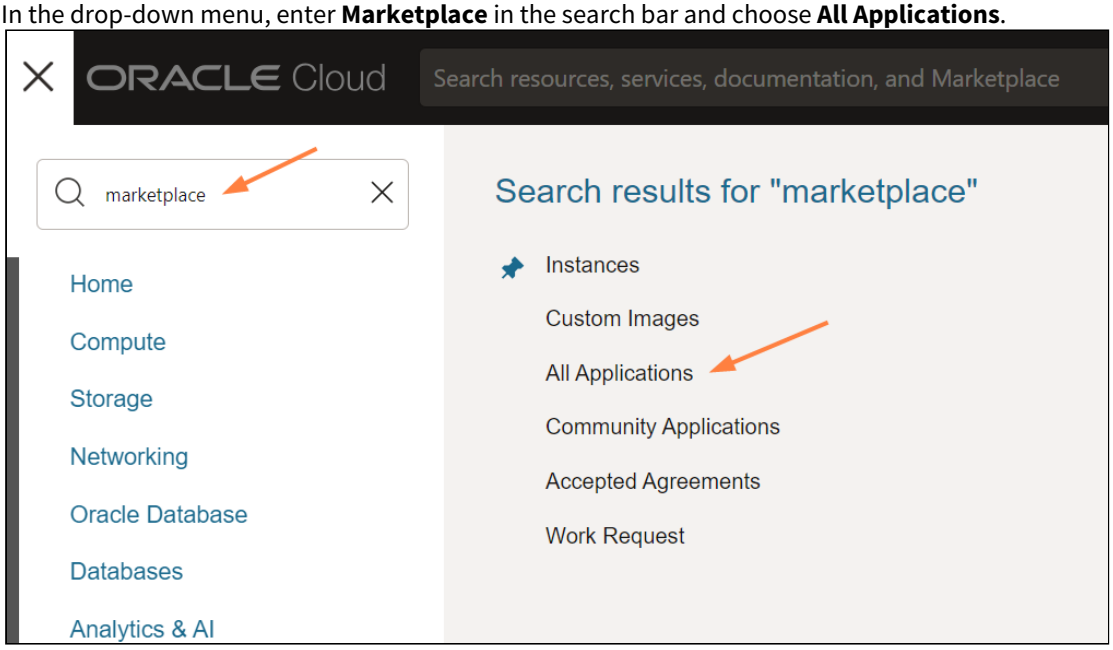
10. Confirm that everything is working as expected in the FileCloud user portal and admin portal.

Oracle Cloud Installation

FileCloud is available from the Oracle Cloud Marketplace for installation on the Oracle Cloud Infrastructure.

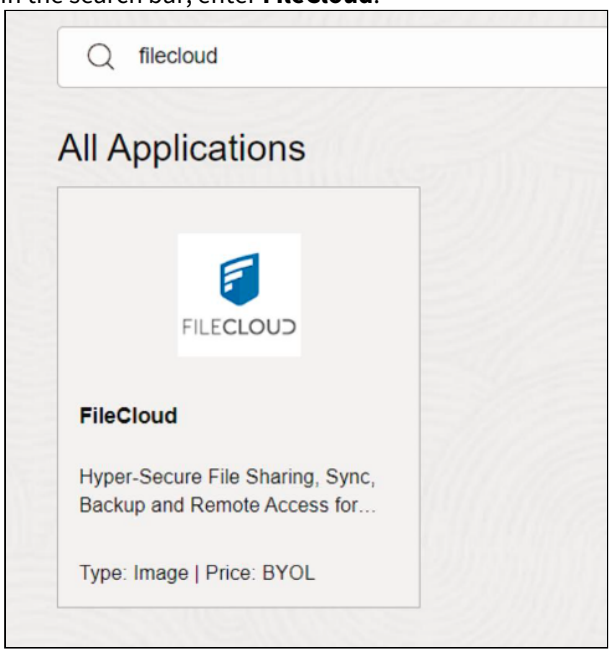
To install FileCloud on the Oracle Cloud Infrastructure (OCI):

Choose the FileCloud application in Oracle Cloud Marketplace.

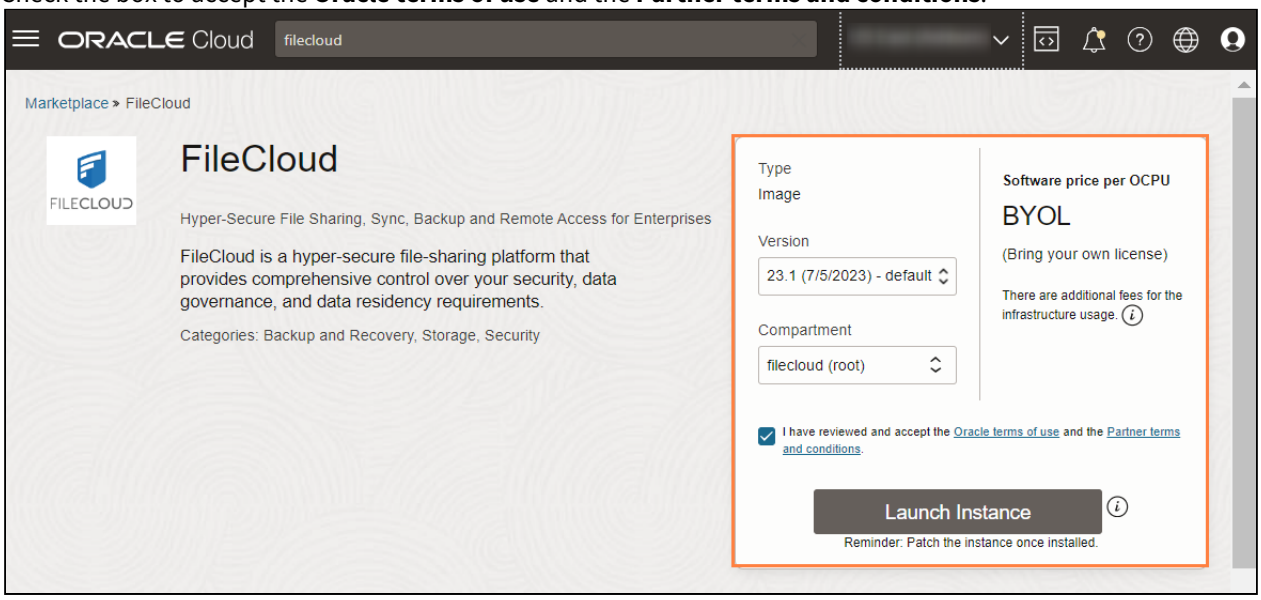
1. Log in to your Oracle account at:
   https://www.oracle.com/cloud/sign-in.html
   or, if you do not yet have an Oracle account, create one at:
   https://signup.cloud.oracle.com/?sourceType=_ref_coc-asset-opcSignIn&language=en_US
2. Click the navigation icon in the upper-left corner:
   
3. In the drop-down menu, enter **Marketplace** in the search bar and choose **All Applications**.
   

Oracle Cloud Marketplace opens to a view that shows all applications.

4. In the search bar, enter **FileCloud**.



5. Click the FileCloud app box.
   The box opens up a new window as seen in the below screenshot.
6. In **Version**, choose a version. The latest version is labelled **default**.
7. In **Compartment**, choose **filecloud (root)**.
8. Check the box to accept the **Oracle terms of use** and the **Partner terms and conditions**.

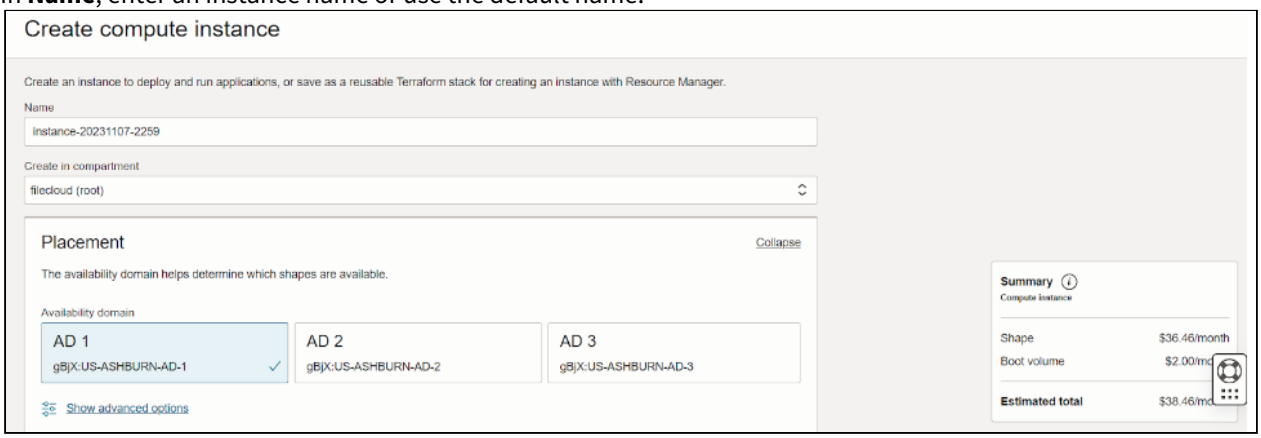


9. Click **Launch Instance**.
   The page **Create compute instance** opens.

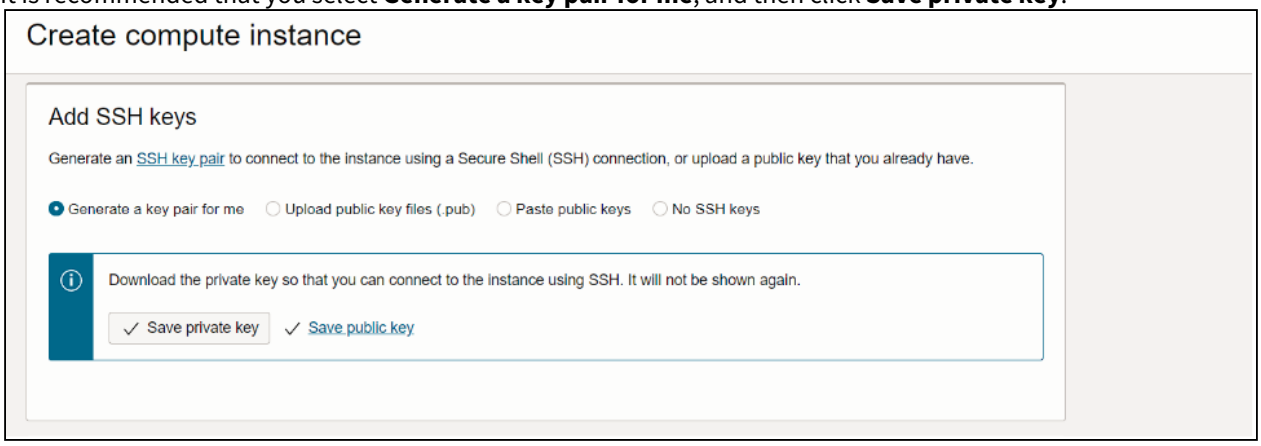
Configure the details of the instance

In the **Create compute instance page**, enter the details of the instance.

1. In **Name**, enter an instance name or use the default name.

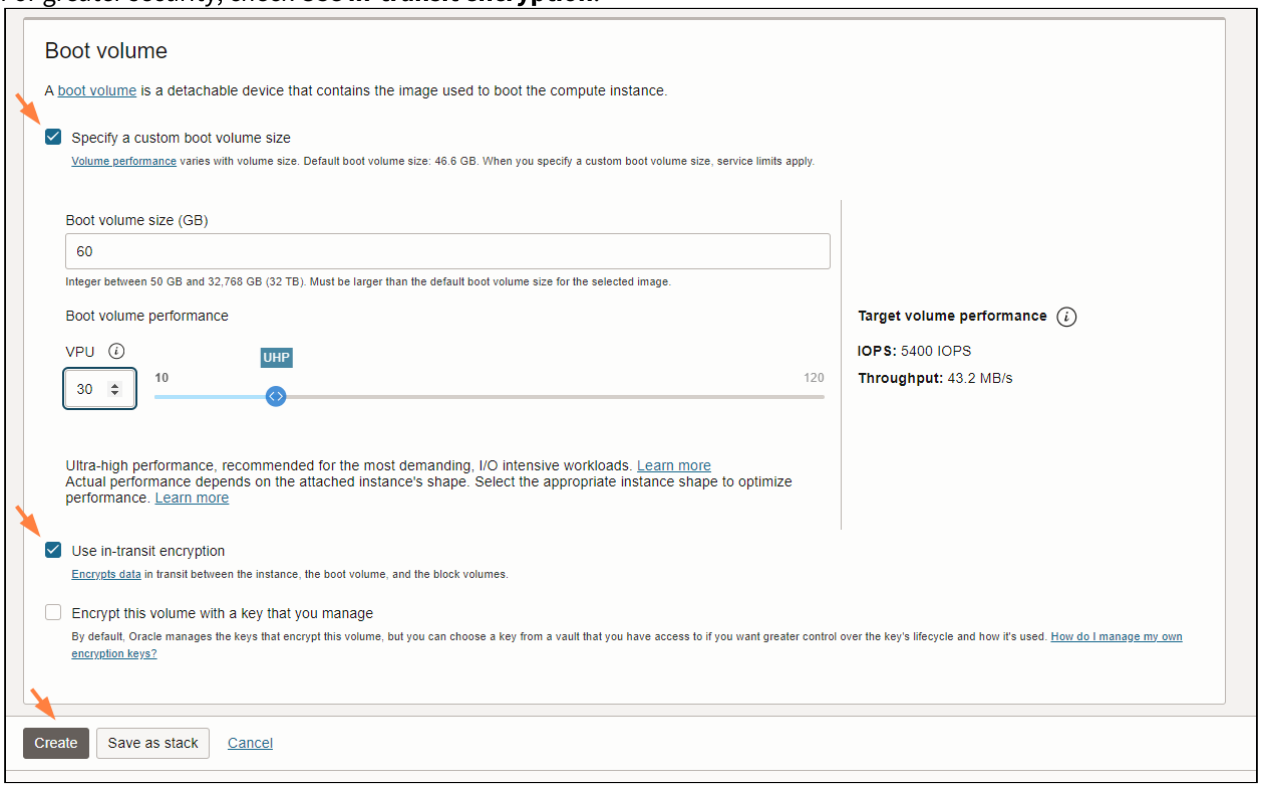


2. Scroll down to the **Add SSH keys** box, and generate and save the SSH private key.
   It is recommended that you select **Generate a key pair for me**, and then click **Save private key**.

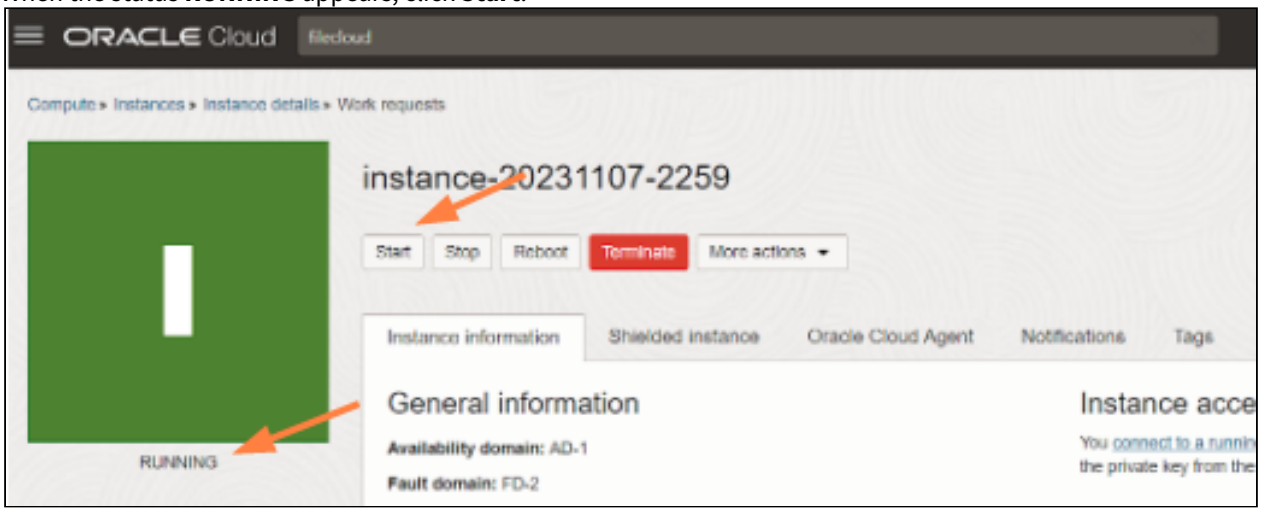


3. Scroll down to the **Boot volume** box.
4. By default, the boot volume size is 46.6 GB. You may check **Specify a custom boot volume size** and enter a custom size.
5. For better performance, increase **VPU** (volume performance units) to 30 or higher.

6. For greater security, check **Use in-transit encryption**.



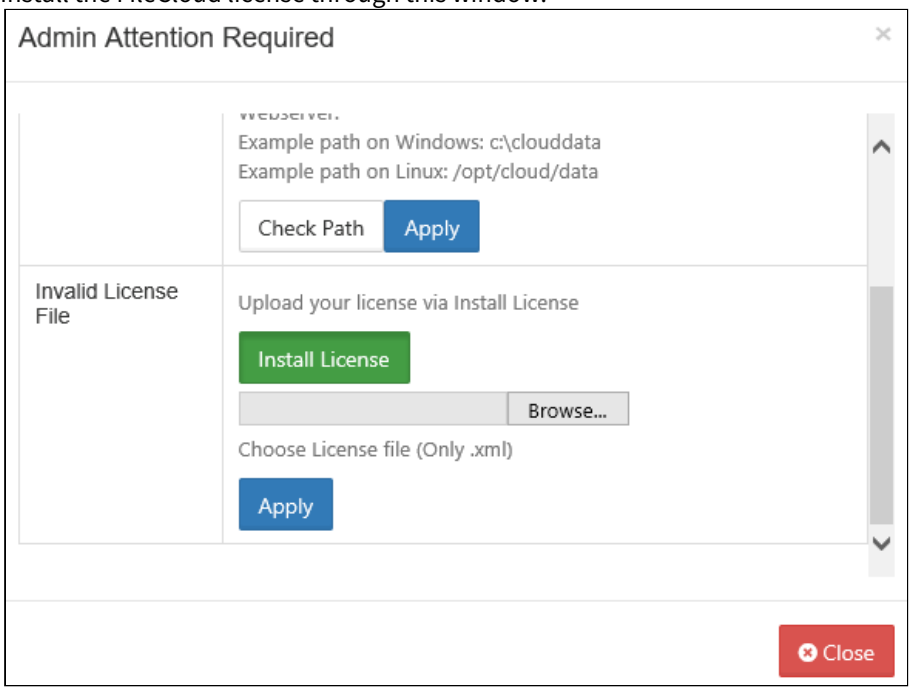
7. Click **Create**.
   A page with the instance details opens.
8. When the status **RUNNING** appears, click **Start**.



Connect to the instance

1. If you do not have a FileCloud License, register for one at portal.filecloud.com.
2. In a web browser, enter the FileCloud admin portal URL:
   http://<public_dns_name>/ui/admin/index.html

3. In the login page, enter the username and password **admin/password**.
   You must change the username and password after your first login.
   The **Admin Attention** window opens.
4. Install the FileCloud license through this window.



Perform post-installation tasks

After you have connected to your instance, perform post-installation tasks:

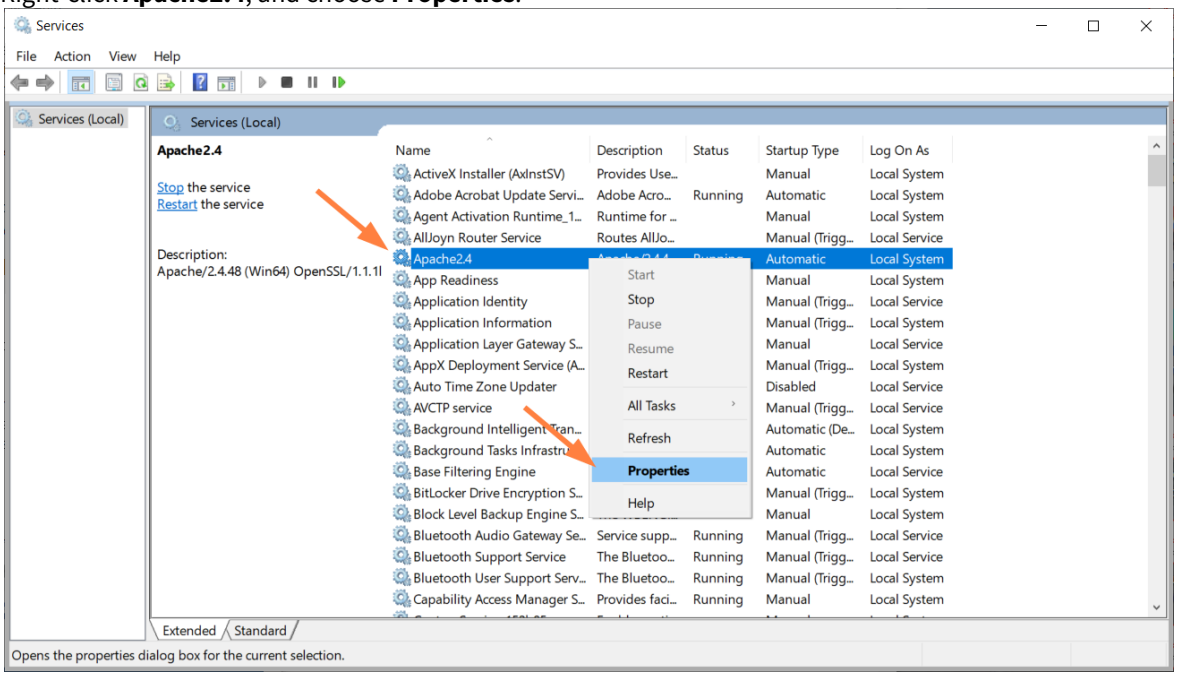
1. Delete the installation folder.
2. For better security, change the default SMTP servers and accounts used to send emails to your own servers.
   See Email Settings.
3. In **Settings** > **Email**, and set a valid **Email Reply To Address**.
4. View and familiarize yourself with the FileCloud components by navigating to http://<public_dns_name>/install in a web browser.
5. To set up FileCloud, follow the instructions at FileCloud Site Setup.
6. Take periodic snapshots of your running instance for disaster recovery and as additional backup for the FileCloud database and app.

Post Installation

After the FileCloud installation is completed, the following steps will help you prepare FileCloud for use:

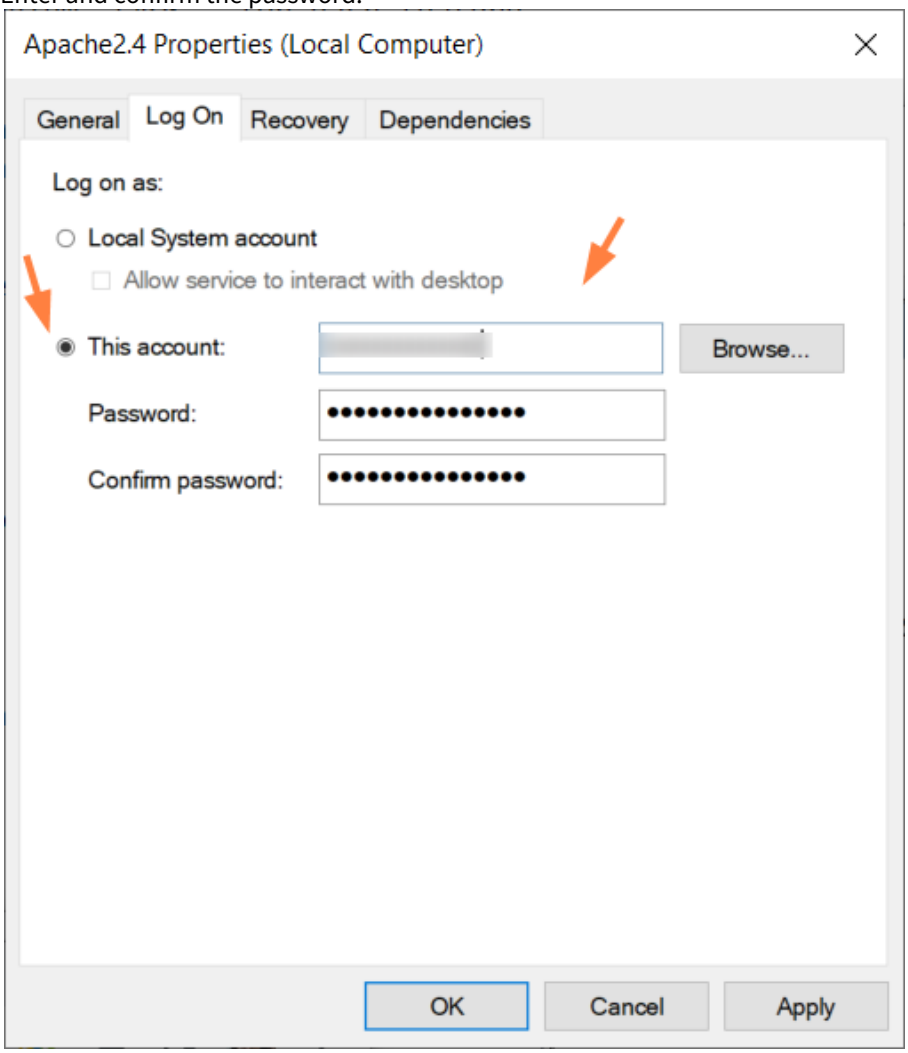
1. Verify Your Installation.
2. Install the FileCloud License.
3. Configure the Managed Storage Path.
4. Enable MongoDB Bind IP and Authentication.
5. Configure SSL if desired.
6. Change the account used to run Apache, FileCloud Cron Service, FileCloud Docconverter, FileCloud helper and FileCloud Message Queue Service to an account that is not Local System.
   To change accounts from Local System

   a. Open Windows Services.
   b. Right-click **Apache2.4**, and choose **Properties**.



   c. In the **Properties** dialog box, click the **Log On** tab.
   d. Select **This account**.
   e. Enter a Windows account to use for running the service.

f. Enter and confirm the password.



g. Click **Apply.**
h. Restart the service
i. Repeat this procedure for each of the services (**Apache24**, **FileCloud Cron Service**, **FileCloud Docconverter**, **FileCloud Helper**, and **fcorchestrator** (for FileCloud Message Queue)).

7. Delete your installation folder.
To delete your installation folder

Delete the Installation Folder

Once you have verified your installation and can log in to the Admin portal, it is recommended that you delete in the installation directory.

> This step provides increased security. If someone can guess the location of your installation folder and access it they could potentially overwrite your site by running the installer again.

The installation folder exists in the following location by default:

OS	Location
Windows	C:\xampp\htdocs\install
Linux	/var/www/html/install or /var/www/install

To delete the installation folder:

a. On the FileCloud server, locate the installation folder for your operating system.
b. On Windows, to delete the folder, right-click its name or icon, and then choose Delete from the pop-up menu.
c. On Linux, to remove all files and directories within that directory, with no prompt for deleting each file, use the following command:

```
rm -rf install
```

⚠ Failing to delete your FileCloud install folder after you verify installation may cause your system to leak sensitive data.

FAQs

To configure storage, SSL, and other post-installation settings, I need the File Cloud Control panel. How do I open it?

In the following section, to display more information, click on a topic.

Open the File Cloud Control panel

There are several ways to open the FileCloud Control Panel:

Using the Windows Start Menu

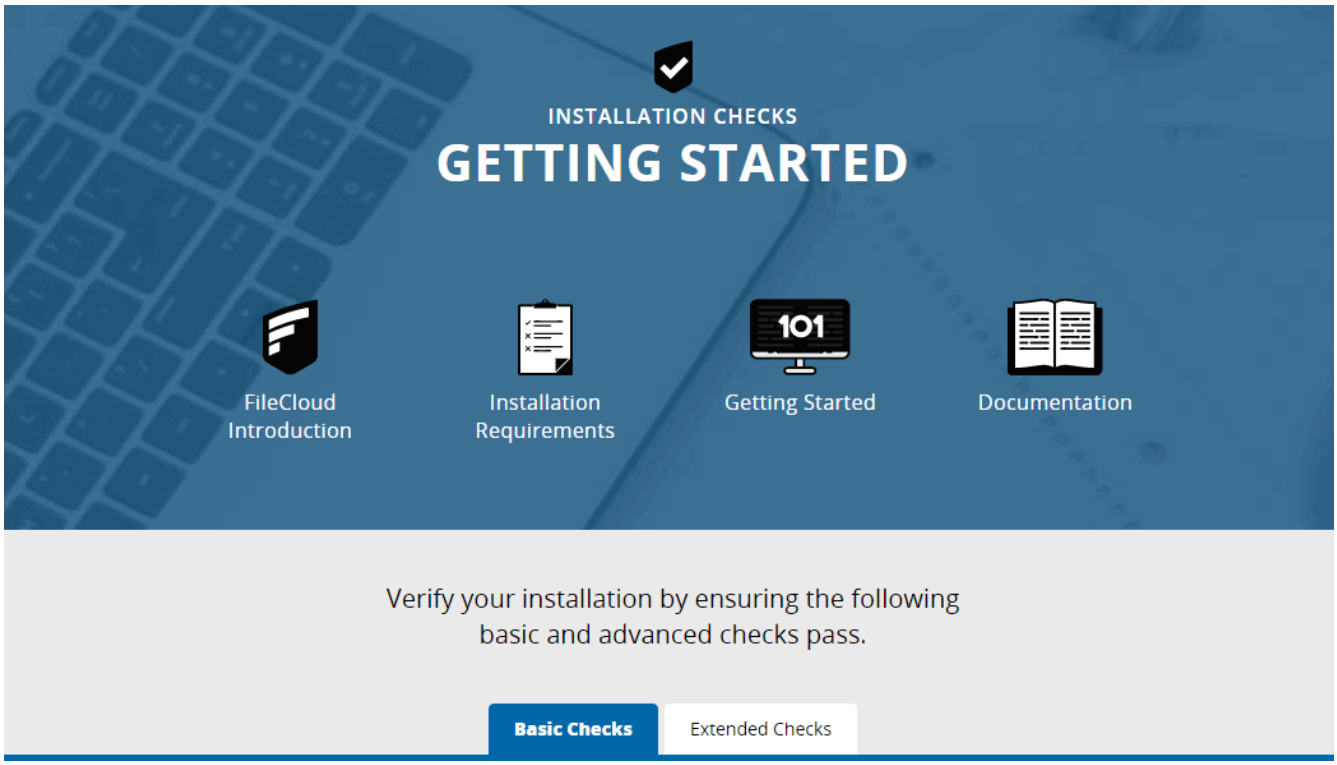
1. On the server, from the *Windows Start* menu, select the *FileCloud Control Panel*.

Finding the FileCloud control panel executable file (cloudcp.exe)

1. On the server, find the *xampp* folder.
2. Inside the folder, double-click the cloudcp.exe file.

Verify Your Installation

FileCloud is bundled with a verification tool to help you test your installation. You can run this tool from the server where FileCloud is installed or remotely from a different system. This tool will perform various configuration checks related to your FileCloud environment.



Verification checks are grouped into two categories: basic and extended. It is strongly recommended that you review the basic checks to ensure that the required components are available to FileCloud. Once the Basic checks pass, Extended checks should be reviewed to verify that required directories and configurations are available.

Basic Checks	Extended Checks
Apache Web Server	CloudConfig.php readable
Apache Mod Rewrite	Localstorageconfig.php readable
.htaccess Present	Scratch Directory Writable
PHP 7.4	Config Directory Readable
PHP MongoDB (mongodb ext) driver 1.2.3 or higher	Mod Rewrite Apache Configuration Setup Check
PHP GD Library	PHP Memcache Server (Optional)
PHP Zip library	Verification of Mongo DB connection

PHP Curl Library	
PHP OpenSSL library	
PHP ionCube extension 4.4.1 or higher	
PHP bcmath extension	
PHP SimpleXML extension	
PHP mbstring extension	
PHP LDAP library (optional)	
PHP Memcache Extension (optional)	
Install in Server WWW root folder	
CloudConfig.php Readable	

Exif Extension

In FileCloud Server version 19.1 and later, a new entry has been added for the Exif extension installation.

- The Exif extension is used when uploading an image to generate a thumbnail
- It is also used to extract information for the built-in metadata set for images

When Exif is disabled in PHP:

- In the logs the Exif extension is listed as disabled
- Uploaded images do not have a thumbnail, and the Image metadata set is empty
- To disable: Open the php.inic file, comment out the exif extension, and restart the web server

When Exif is enabled in PHP:

- Uploaded images have a thumbnail
- The Image metadata set contains attributes for all image files
- This is the default behavior

> FileCloud does not apply Image metadata for Azure/S3 Network Folders.

This tool will also report problems so you can correct them before using FileCloud.

> All failures reported by the verification tool must be fixed before attempting to use FileCloud.

Reviewing the Verification Checks

To verify your FileCloud installation:

1. From the FileCloud server, or the VM instance, open a web browser and enter the following address:

```
http://<yourdomain>//install
```

> **Notes**
>
> - By default, the address is: http://127.0.0.1/install
> - To run verification tests from a system that does not have the FileCloud installation, replace 127.0.0.1 with the IP of the system where FileCloud is installed.

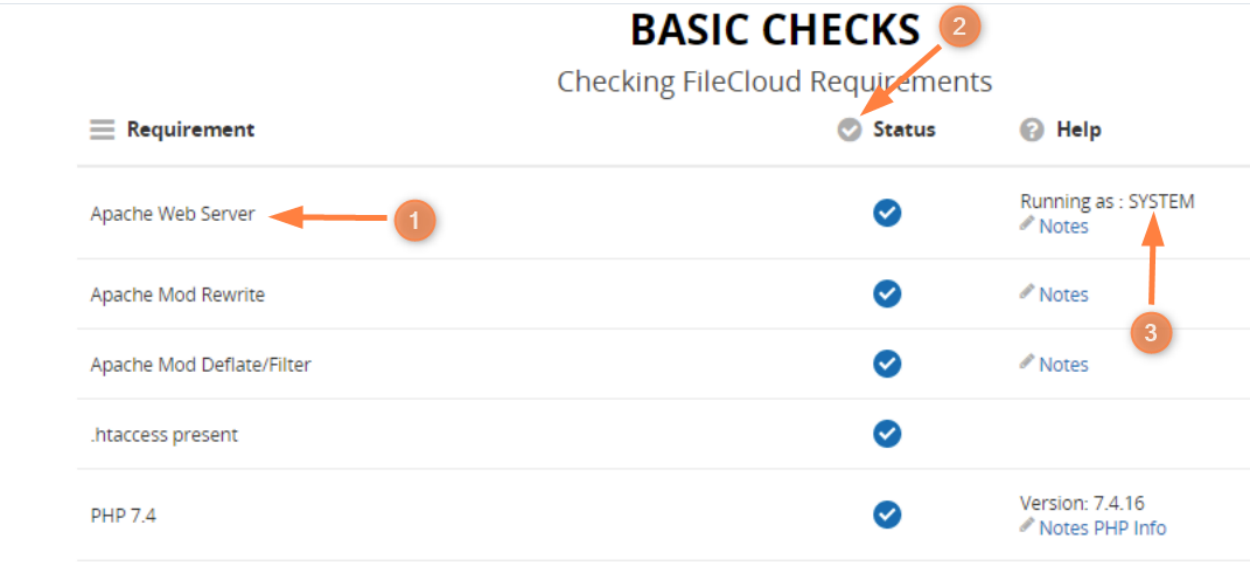
2. To review basic tests, select Basic Checks.

3. To review more thorough tests, select Extended Checks.

Basic Checks

Clicking on the Basic Checks tab displays:

1. The name of the item that was checked.
2. The result of the check. A blue checkmark = PASS, and a red X = FAIL.
3. Additional information for installing, troubleshooting, or correcting an issue for this item.



You should review each item in the list to understand how your system is configured and functioning.

In the following section, to display more information, click on a step.

To review Basic Checks:

1. How to review basic checks

How to review basic checks

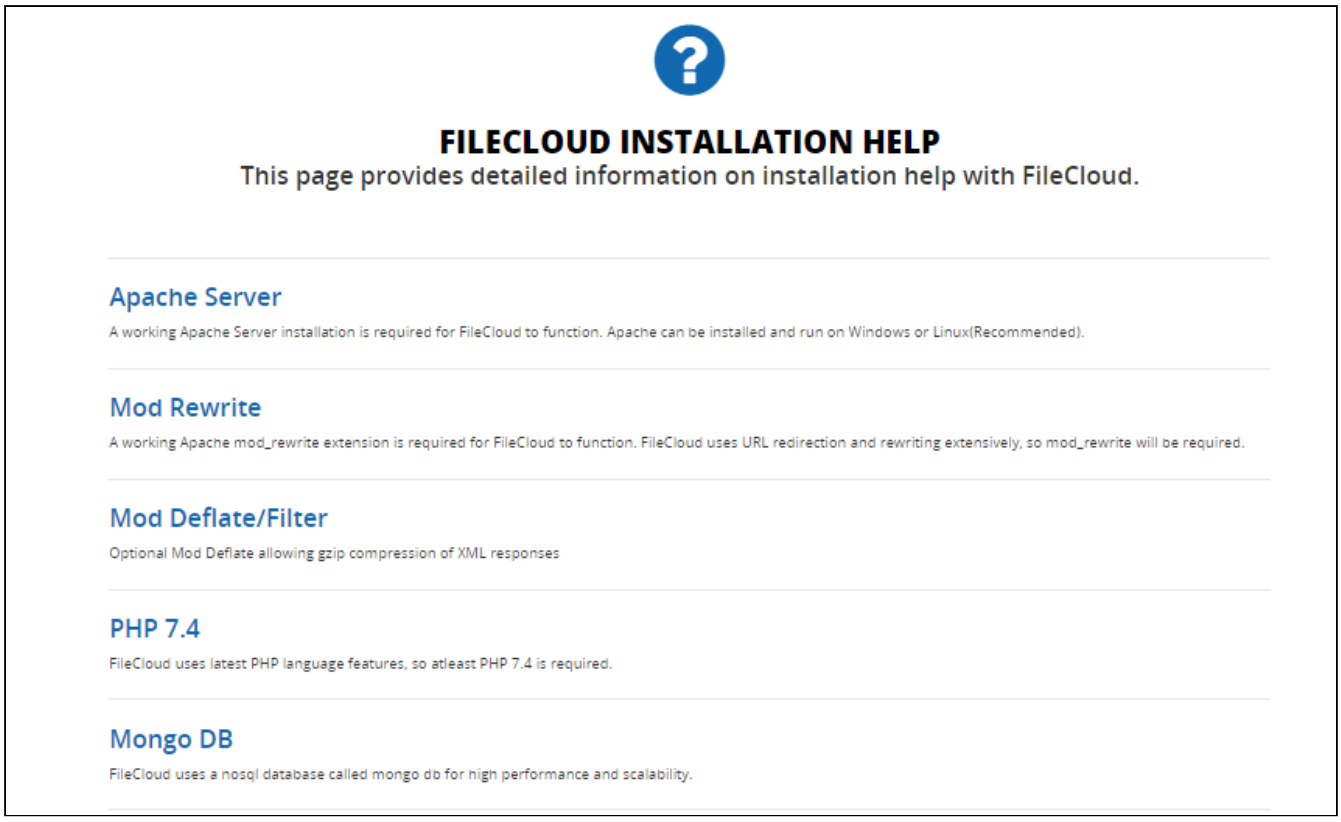
The following table explains how to use the Basic Checks information:

What You See			What It Means
`.htaccess present`	✓		For a blank entry with a blue checkmark, the item has passed the verification test and there is nothing further for you to do.

What You See			What It Means
Apache Mod Rewrite		Notes	For a notes entry with a blue checkmark, the item has passed the verification test. *Optional:* To read more about the item, click on Notes (the Notes icon).
PHP Memcache Extension		version 3.0.9-dev Notes	For a version entry with a blue checkmark, the item has passed the verification test using the specific version. *Optional:* To read more about the item, click on Notes (the Notes icon).
PHP ionCube extension 10.1.0 or higher		Version: 10.2.0 Install ionCube Loader	For a version entry with a blue checkmark and links, the item has passed the verification test using the specific version and you must complete the items listed by clicking on the link. *REQUIRED:* To install this component, click the Install link.
PHP LDAP Library (optional, for AD/LDAP support)		Ignore failure if AD/LDAP is not needed Notes	For an Ignore - IF entry with a blue checkmark, the item has passed the verification test conditionally. 1. Check the condition. In this example, determine whether you need AD/LDAP. 2. If the condition is true, then there is nothing further for you to do. In this example, you do NOT need AD/LDAP. 3. If the condition is false, then resolve the issue. In this example, if you DO need AD/LDAP, then you must go and install it. *Optional:* To read more about the item, click on Notes (the Notes icon).
PHP Memcache Server (optional)		Version: Notes	For any entry with a red X, you must correct the issue. For help resolving an issue, use the following resources: • Read more about the item in the Notes. • Review the Requirements page. • Review the installation procedures. • Review the Installation Troubleshooting page.

The Help column provides information and resources for understanding how your system is working.

In the Help column, if you click on Notes (the Notes icon), the FileCloud Help page opens.



2. Resolve Failed Checks

Resolve Failed Checks

To resolve an issue:

1. Return to the FileCloud control panel and install any missing required components or start any required services.
2. For help resolving an issue, use the following resources:

- Read more about the item in the Notes.
- Review the Requirements page.
- Review the installation procedures.
- Review the Installation Troubleshooting page.

Here are details about some of the important extended checks performed.

This is the set of basic checks performed on your FileCloud installation environment.

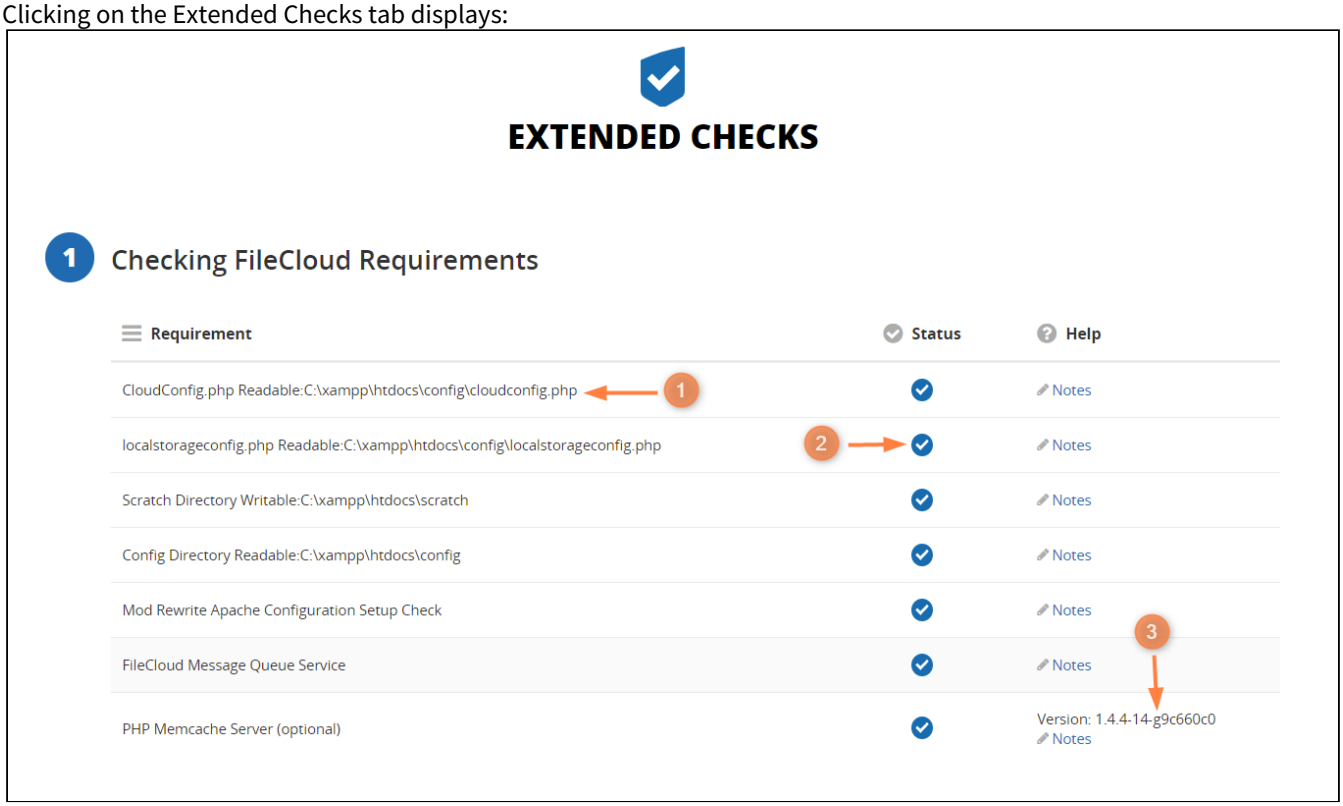
Check	Details

Apache Web Server	Checks if your environment has a working Apache server installation.
Apache Mod Rewrite	Checks if mod rewrite module is enabled and activated.
Apache Mod Deflate/ Filter (optional)	Checks if the Apache mod_deflate module is present. This is optional.
.htaccess Present	Checks if the .htaccess is present in the root WWWROOT folder
PHP 7.4 or higher	Checks if the environment has PHP v7.4 or higher.
PHP MongoDB (mongodb ext) driver 1.6.0 or higher	Checks if PHP Mongo DB drivers are installed properly and are version 1.6.0 or higher.
PHP GD Library	Checks if GD library is installed properly.
PHP Zip library	Checks if Zip library is installed properly
PHP Curl Library	Checks if PHP Curl library is installed, this is required if you are using open stack, Amazon S3 or NTFS permissions or Multi-tenancy.
PHP OpenSSL library	Checks if OpenSSL library is installed properly.
PHP ionCube extension 10.4.0 or higher	FileCloud PHP files are protected by ioncube encoder. So ioncube decoder is essential for FileCloud to function. Click on the "Install ionCube Loader" link to get instructions on configuring ionCube loader on your environment. Choose "Local Server" when selecting your environment.

PHP bcmath extension	Checks if PHP bcmath extension is installed.
PHP SimpleXML extension	Checks if PHP SimpleXML extension is installed.
PHP mbstring extension	Checks if PHP mbstring extension is installed.
PHP LDAP library (optional)	Checks if PHP LDAP extension is installed. This is optional and only required if your environment will be using LDAP or Active Directory authentication.
PHP Memcache Extension (optional)	Checks if PHP Memcache extension is installed. This is optional and only required if you will be using encryption for Local Storage (Managed Storage)
Install in Server WWW root folder	Checks if FileCloud installation is in the main server root and not in the subfolder, ie. http://mydomain.com and not http://mydomain.com/cloud
CloudConfig.php Readable	Checks if cloudconfig.php exists and readable. cloudconfig.php file is present in WWWRoot/config folder

Extended Checks

Clicking on the Extended Checks tab displays:



1. The name of the item that was checked.
2. The result of the check. A blue checkmark = PASS, and a red X = FAIL.
3. Additional information for installing, troubleshooting, or correcting an issue for this item.

In the following section, to display more information, click on a step.

To finish verifying your installation using Extended Checks, complete the following steps:

1. Resolve Failed Checks

Resolve Failed Checks

To resolve an issue:

1. Return to the FileCloud control panel and install any missing required components or start any required services.
2. For help resolving an issue, use the following resources:

- Read more about the item in the Notes.

- Review the Requirements page.
- Review the installation procedures.
- Review the Installation Troubleshooting page.

Here are details about some of the important extended checks performed.

Check	Details
CloudConfig.php readable	Checks if the cloudconfig.php file is present in the config folder
Localstorageconfig.php readable	Checks if the localstorageconfig.php file is present in the config folder
Scratch Directory Writable	Checks if WebServer process has write permissions to WEBROOT/scratch directory. In Linux, usually chown -R www-data:www-data WEBROOT/scratch followed by chmod -R 700 WEBROOT/scratch would be sufficient.
Config Directory Readable	Checks if Apache web server process has read permissions to WEBROOT/config directory.
Mod Rewrite Apache Configuration Setup Check	Checks if Apache website configuration has mod rewrite rules allowed.
FileCloud Message Queue Service	Checks to see if Message Queue Service is up and running.
PHP Memcache Server (Optional)	Checks if Memcache server is running. This is currently optional.

2. Verify the Mongo Database Connection

Verify Mongo Database Connection

In step 2, if you see the following:

Then you can move on to step 3, and install any missing updates.

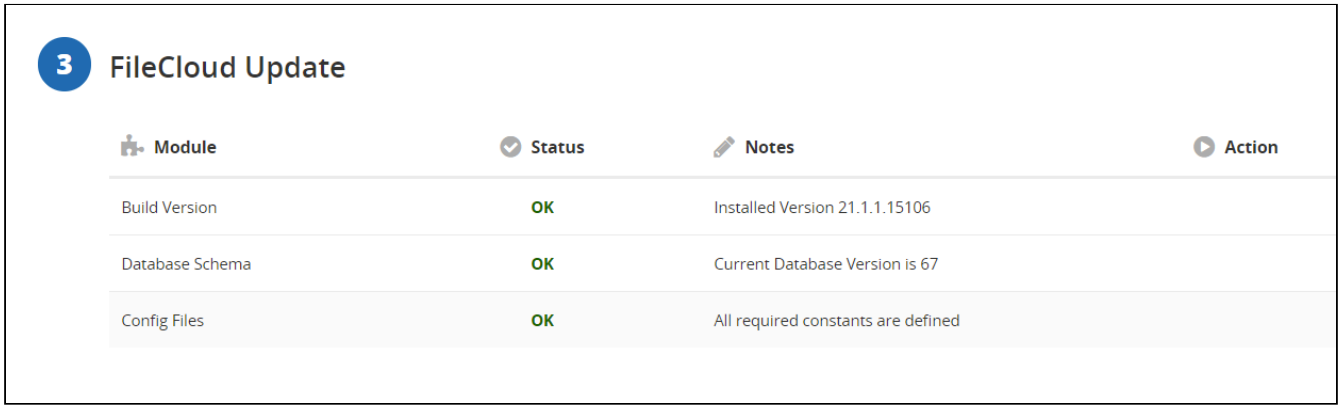
⚠ If your connection is not OK, then return to the FileCloud control panel to troubleshoot and resolve the issue.

3. Install Any Required Updates

Install Any Required Updates

In step 3, review the Status for the following required modules, and take any required Actions:

MODULE	ACTION
Build Version	After finishing the Post Installation steps, you can upgrade FileCloud from the Admin portal.
Database Schema	Click on the **Update** link to update your database to the latest schema version.
Config Files	To see the configuration entries that need to be added, in the Action column, click the link. Whenever you update to a new version, it is normal to have to add new entries.



4. Set Up Outside Access

Set Up Outside Access

In step 4, if you want to allow someone from outside your organization to access FileCloud, then you can configure your Web server ports for port forwarding. Port forwarding, or port mapping, is an application of network address translation (NAT) that redirects a communication request from one address and port number combination to another while the packets are traversing a network gateway, such as a router or firewall. The process for this will vary depending on the operating system you are using.

To set up outside access:

1. To ensure port 80 is accessible from the outside, forward the ports from your Public WAN IP to the internal IP address of the FileCloud server.
2. Ensure port 80 is accessible through any organizational firewalls.
3. For additional security, it is recommended that you use only port 443 for secure access via HTTPS.
4. For additional security, purchase and install and SSL certificate for your domain.

For more information on port forwarding, see the following references:

- Windows - Remote access and server management
- Ubuntu - SSH/OpenSSH/PortForwarding
- Debian 8 - Port forwarding with IP tables

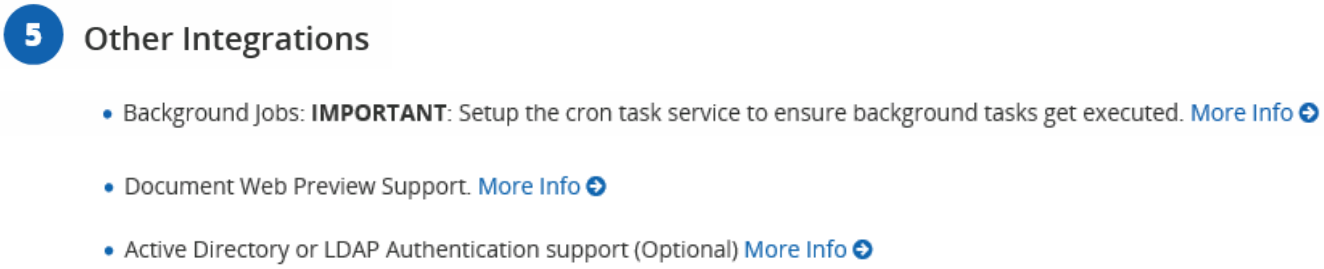
5. Configure Any Missing Integrations

Configure Any Missing Integrations

In step 5, you should make sure you have the Cron task service configured so background tasks will be run. FileCloud uses a cron job to perform certain ongoing maintenance tasks, such as sending email notifications for file changes, share notification etc.

Other optional items can be configured at this time too.

For additional details, click More Info:



6. Log In to the Admin Portal

Log In to the Admin Portal

In step 6, use the link provided to log in to the Admin portal.

When you log in to the Admin portal for the first time, you may see informational flags for configuration tasks and a Welcome wizard.
You do not have to complete these tasks in step 6, but before users can log in to the User portal, those tasks must be completed.

The first time you log in, the Admin Username is **admin,** Admin Password is **password.**
It is recommended that you change this password using the FileCloud control panel.
To reset the password for the Admin portal:

1. Open the FileCloud control panel.
2. Under *Miscellaneous*, click *Reset Admin Password*.

To verify login ability:

1. To log in to the Admin portal, click the URL link for the *Admin Portal*.
2. Make sure your Dashboard loads.
3. If you can log in and see the dashboard, move on to step 7 to delete the installation directory.

7. Delete the Installation Folder

Delete the Installation Folder

Once you have verified your installation and can log in to the Admin portal, it is recommended that you delete in the installation directory.

This step provides increased security. If someone can guess the location of your installation folder and access it they could potentially overwrite your site by running the installer again.

The installation folder exists in the following location by default:

OS	Location
Windows	C:\xampp\htdocs\install
Linux	/var/www/html/install or /var/www/install

To delete the installation folder:

1. On the FileCloud server, locate the installation folder for your operating system.
2. On Windows, to delete the folder, right-click its name or icon, and then choose Delete from the pop-up menu.
3. On Linux, to remove all files and directories within that directory, with no prompt for deleting each file, use the following command:

```
rm -rf install
```

Install the FileCloud License

Your FileCloud license provides legally binding guidelines on the use and distribution of your newly installed FileCloud software.

Obtaining a FileCloud License

Obtaining a FileCloud License

The length of access and site configuration will vary depending on your license type.

There are two basic forms of FileCloud licenses:

License Type	Duration	Features	Availability
Trial (free)	Temporary 30 days for a server license 15 days for an online license	• All features • Mobile and desktop apps • Free support 💡 Deployment URL will be set as "*" (accessible from any URL)	Server (Self-host) Online (Hosted by us)
Production	Permanent based on length paid for Usually 1 year	• All features • Mobile and desktop apps • Choose from 3 levels of support 💡 Deployment URL can be set to use your specific domain (URL accessibility from within your company and outside access managed by Administrators)	Server (Self-host) • Essentials • Advanced • Service Provider Online (Hosted by us) • Essentials • Advanced • GovCloud

➡ For more information, read the license descriptions and Key Features on the FileCloud Pricing page.

➡ To purchase a license, see License Purchase and Renewal

➡ For a trial license, go to https://www.filecloud.com/#hostedTrial and follow the instructions in the wizard.

⚠ When you register on the FileCloud web site to access the installation software, you should receive your trial license, although it still needs to be installed.
- If you already downloaded your license, proceed to the steps for installing it.
- If you did not download your license yet, use the next procedure to download it, and then proceed to the steps for installing your license.

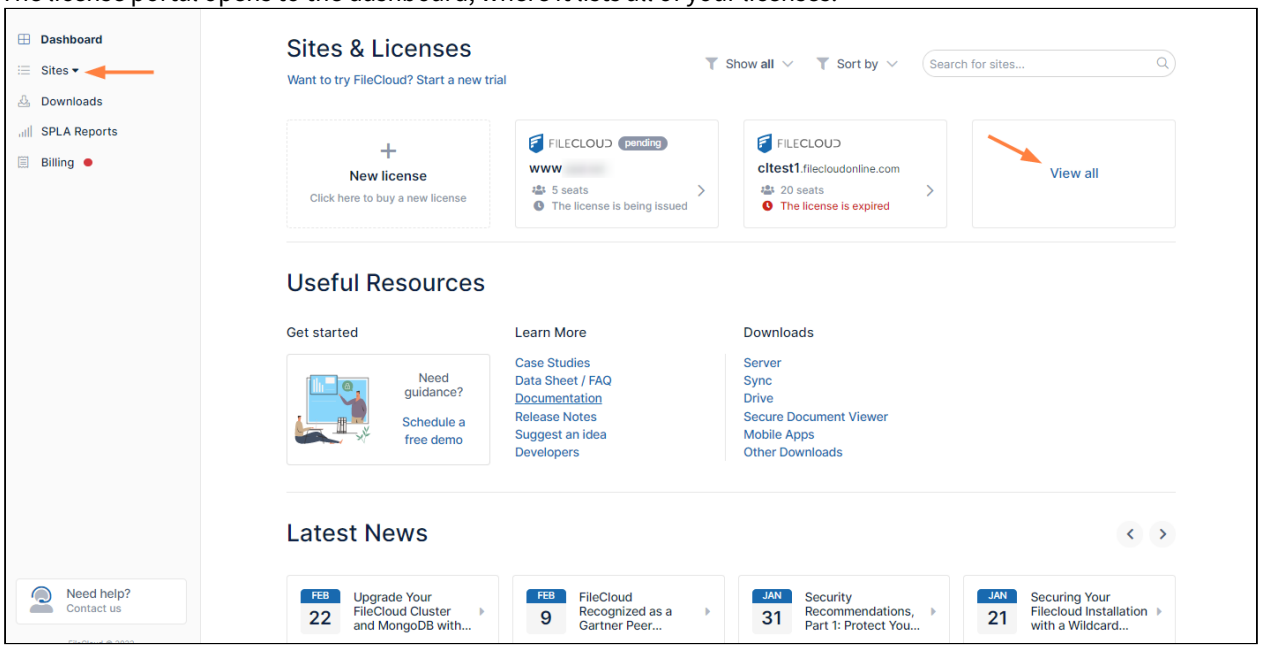
Downloading your license

Downloading your License

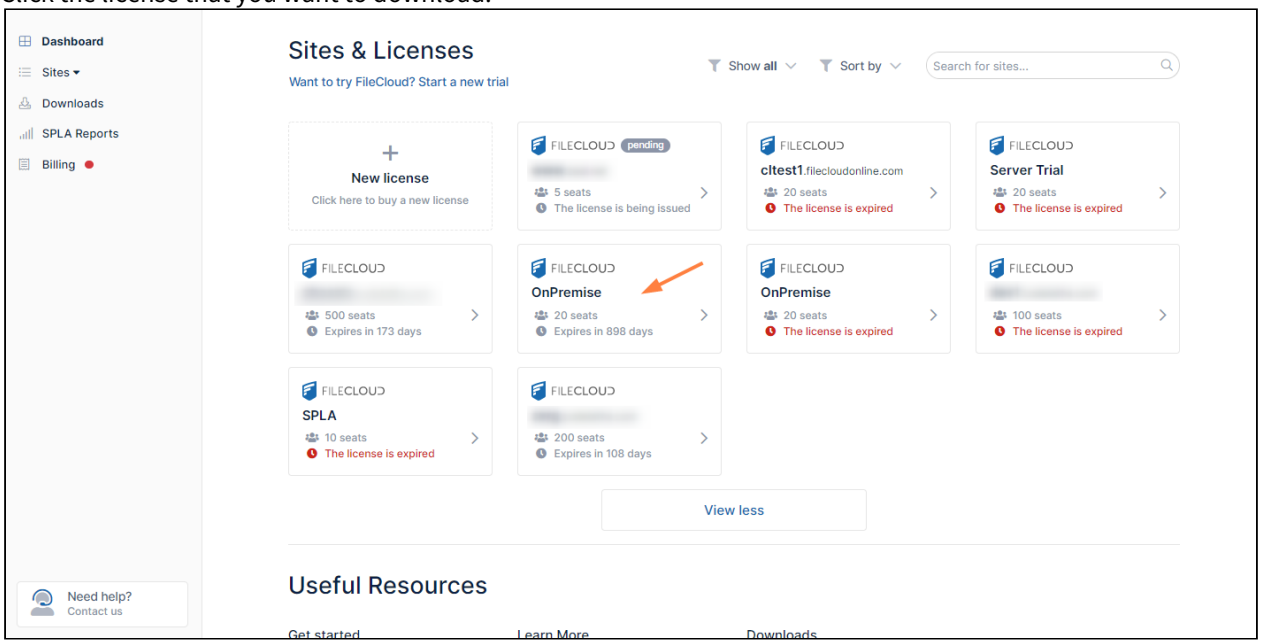
To downloading your license:

1. Navigate to https://portal.getfilecloud.com/ui/user/index.html

2. Type in the registered email and the password provided to access the license portal.
   The license portal opens to the dashboard, where it lists all of your licenses.



3. If you don't see the license you want to download listed, click **View all** to see all of your licenses. (You can also expand **Sites** in the navigation pane to access links to all of your licenses).
4. Click the license that you want to download.



5. The license is stored on your server as license.xml.

Installing Your License

> The ability to install license components such as SALESFORCE is available in FileCloud Server version 18.2 and later.

Installing Your License

You can operate FileCloud Server using any of the license types.

- If you do not need to use individual additional components, such as SALESFORCE, and Pattern Search, you can use an Essentials license.
- However, if you need to use individual additional components, such as SALESFORCE, and Pattern Search, then you must use an Advanced or Service Provider license.

There are multiple places where you can install your FileCloud license:

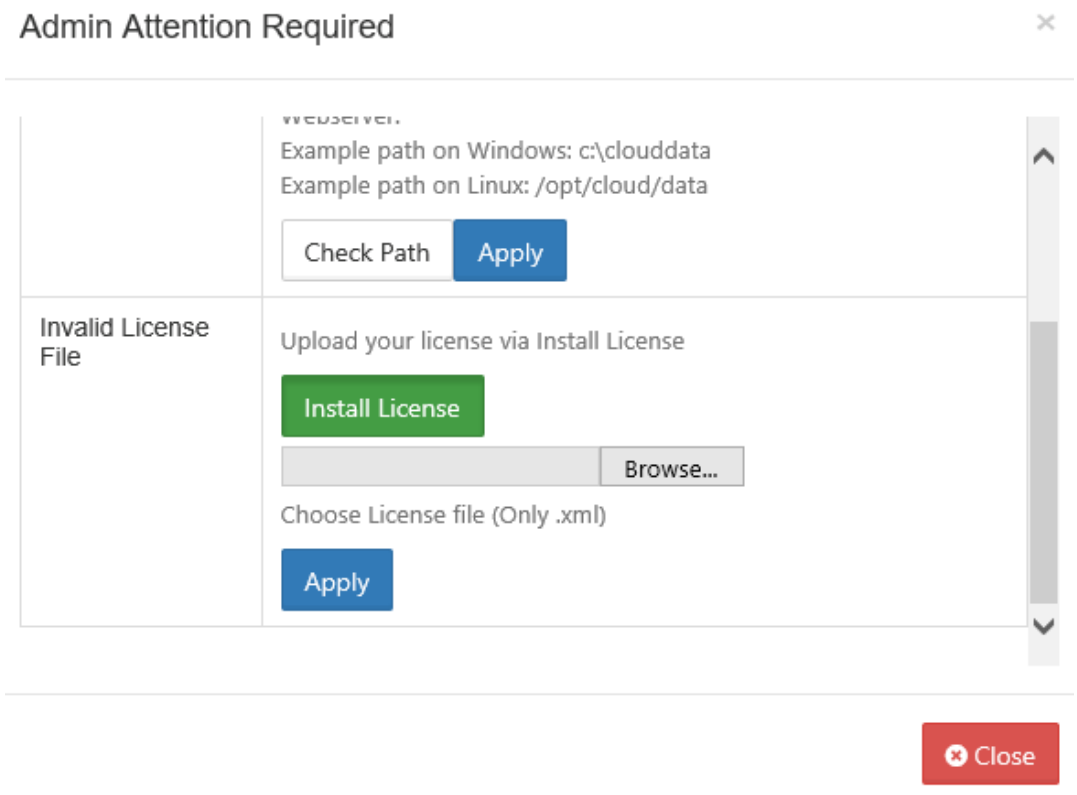
- Admin alert dialog box
- The dashboard's **License Information** widget
- The admin portal's **Settings > License** tab

It doesn't matter which one of these places you use; they all perform the same task.

After installation, to update or manage licenses, use the dashboard's **License Information** widget or the admin portal's **Settings > License** tab.

Admin Alert Dialog

During initial setup, when you log in to the admin portal, you see the **Admin Attention Required** dialog box, which allows you to upload your **license.xml** file and apply the license.



To install your license from the Admin dialog:

1. In the **Invalid License File** row, click **Install License**.
2. In the new section that appears, click **Browse**.
3. Locate the license.xml file, and then click **Apply**.
4. The installed license appears in green under the textbox.

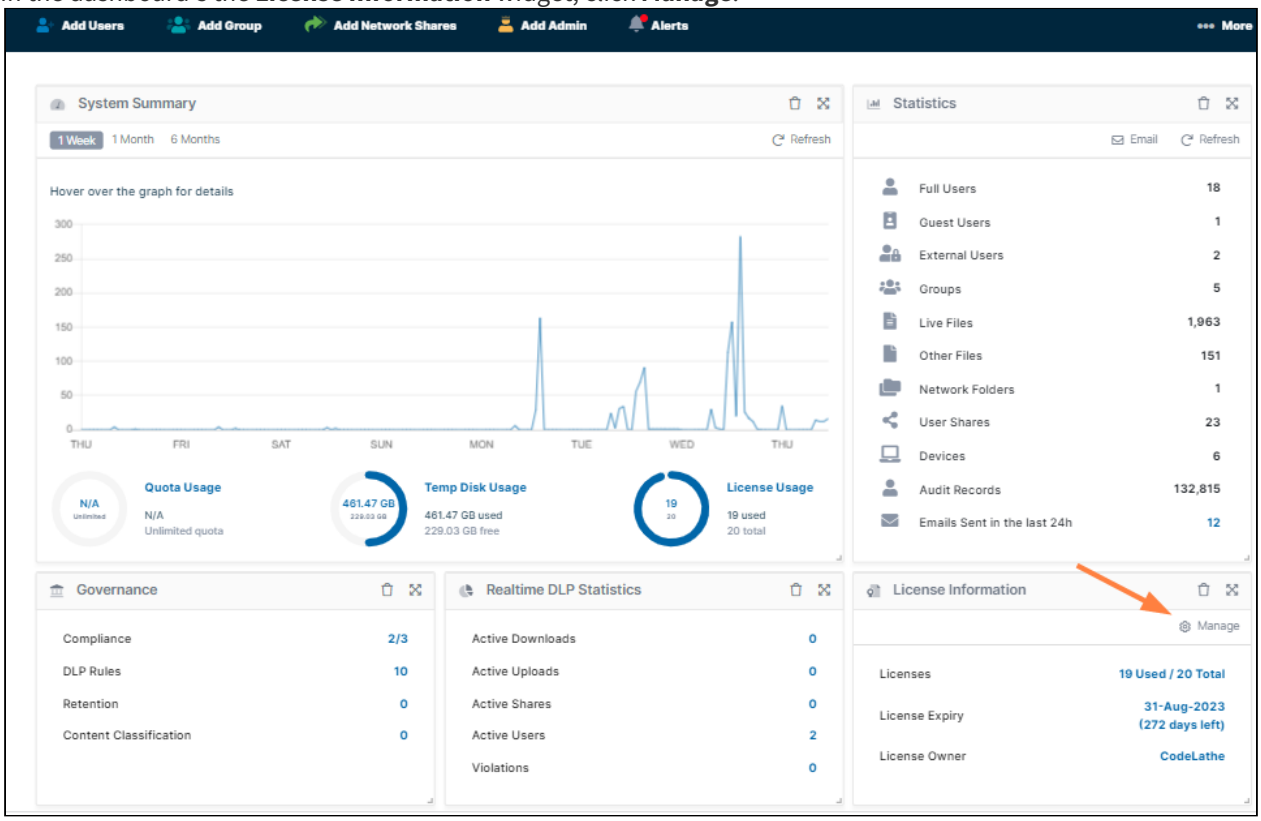
Dashboard

If you close the Admin dialog without installing a license, you can always use the FileCloud dashboard to manage your licenses. You can also use it to update a license.

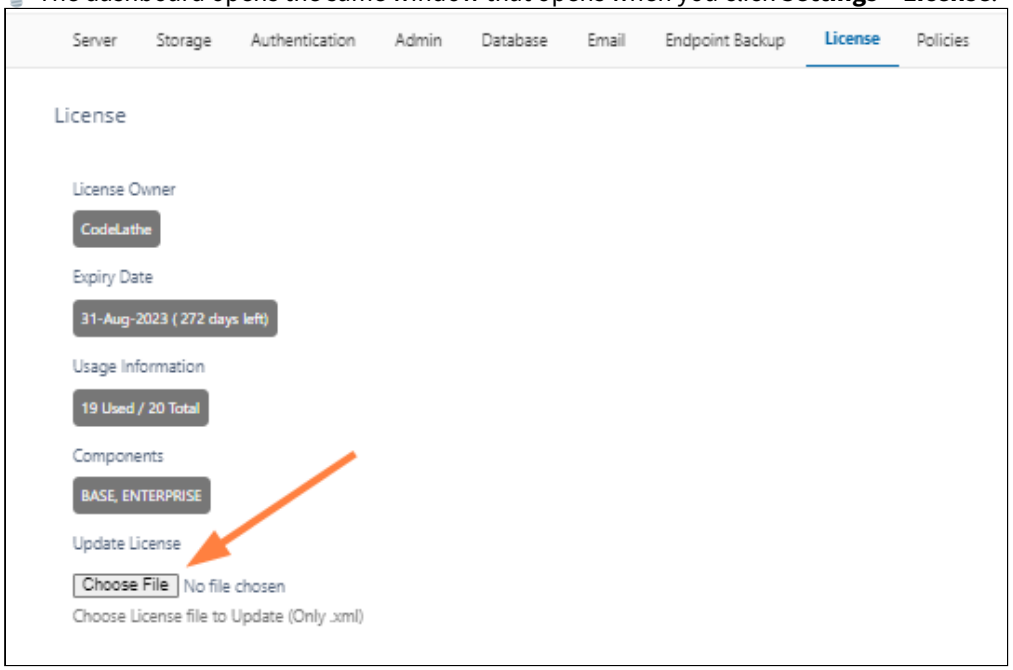
The dashboard opens the same window that opens when you click **Settings > License**.

To install your license from the Dashboard:

1. Log in to the **Admin Portal**.
2. In the dashboard's the **License Information** widget, click **Manage**.



The dashboard opens the same window that opens when you click **Settings > License**.



3. On the **License** page, click the **Choose File** button.
4. Select the license.xml file and click **OK**.
5. On the License page, click **Save**.

Also see:

- Installing FileCloud License On Multiple Sites
- Viewing Your License Details

Installing FileCloud License On Multiple Sites

If you are an administrator of a multi-site installation and need to update the site license of all your sites, you can use the steps described below:

Installing a License on Specific Sites

To install a license on a subset of your sites:

1. Create a file named **license.txt** that lists the sites that you want to update in the format:

```
site1.test.com
site2.test.com
```

2. Install the **license.txt** file into your backup folder:
   Linux: **/var/www/html/resources/backup**
   Windows: **c:\xampp\htdocs\resources\backup**
3. Copy the **license.xml** to the **/resources/backup** folder. Do not change its name.

4. In a command line enter:

   For Windows:

   ```
   cd c:\xampp\htdocs\resources\backup
   PATH=%PATH%;C:\xampp\php
   ```

   For Linux:

   ```
   cd /var/www/html/resources/backup/
   ```

5. Then, for both Windows and Linux, enter:

   ```
   php  licenseinstaller.php license.xml
   ```

   The license is only applied to the sites listed in **license.txt**.
   Note: If **license.txt** is blank, the license is applied to all sites.

Viewing Your License Details

License components information is available in FileCloud version 18.2 and later.
It identifies the areas of FileCloud Server that you have purchased access to.
For information on the different license types, read about the key features on the Pricing page.

The details of your license are displayed in the following places:

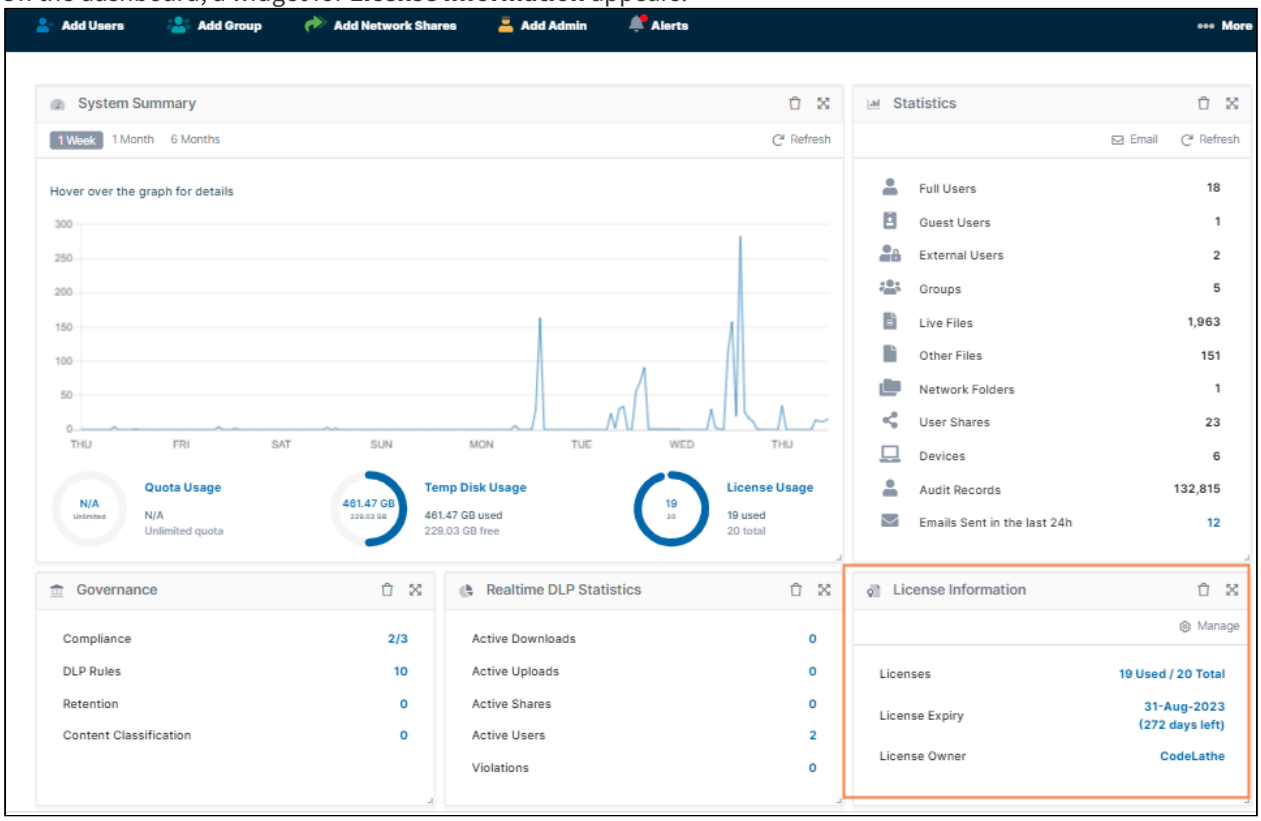
- **The Admin portal dashboard** - Use this to see quick details about your license, such as when it expires.
- **The License tab in the Settings screen** - Use this to update your license or to see the license components that are available.

From the Dashboard

To review your license details:

1. Log in to the admin portal.

2. On the dashboard, a widget for **License Information** appears.



.

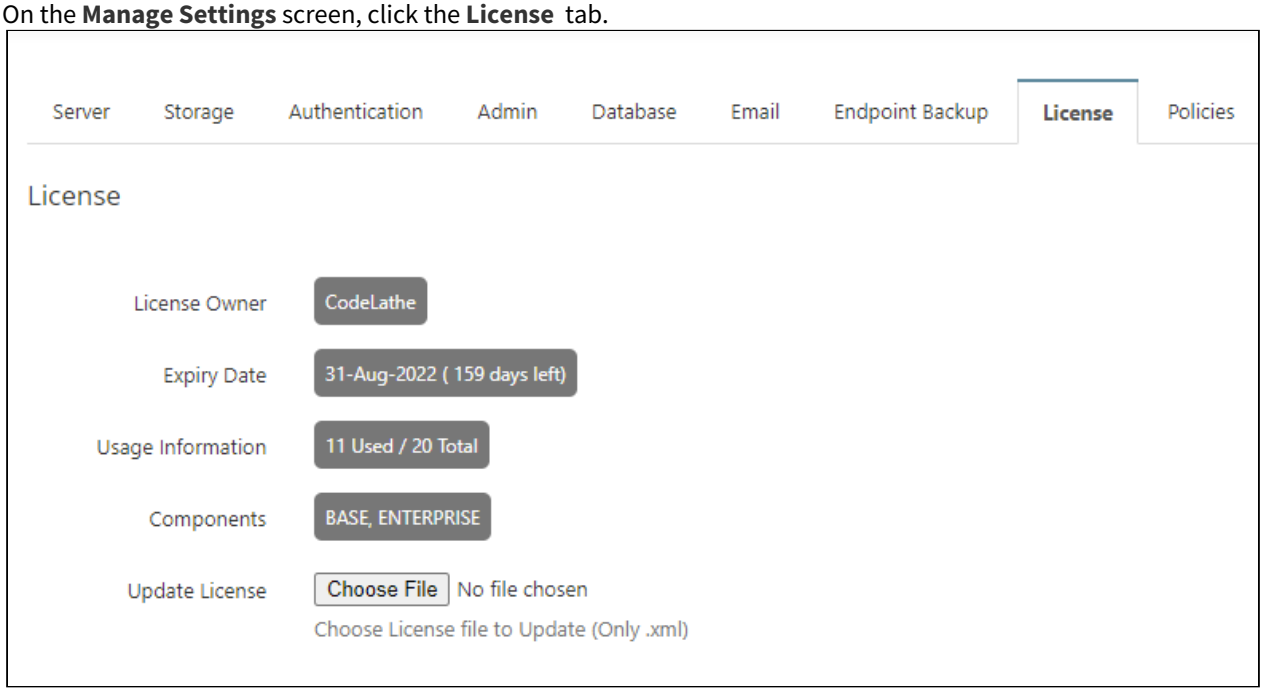
3. In the upper-right corner, click **Manage** to go to the License tab in **Settings**, shown below.

In the Settings screen

To update your license details:

1. Log in to the admin portal.
2. From the left navigation panel, click **Settings**.

3. On the **Manage Settings** screen, click the **License** tab.



4. Review the license information.
5. In **Components**, make sure the features you need are listed.
6. To install a new license, click **Choose File**.

Configure the Managed Storage Path

FileCloud Server is sometimes called on-premises. This is because you are using the storage space you have locally in your infrastructure to store the files managed by FileCloud Server.

- Managed Disk Storage is just a path to the location where the user files are stored locally and can be accessed directly by FileCloud Server
- When you specify the path to managed storage, you allow FileCloud complete control over the management of user content
- Managed storage can be a path to file systems, a local hard disk, and Storage Area Network (SAN) or Network Area Storage (NAS) disks

When setting up FileCloud, a critical setting is the path where FileCloud stores its files.

> Setting up Managed Storage Path for Local Storage is only needed if you are using FileCloud Local Storage. If you are using Amazon S3, you don't need to set this path.

In the following section, to display more information, click on a step.

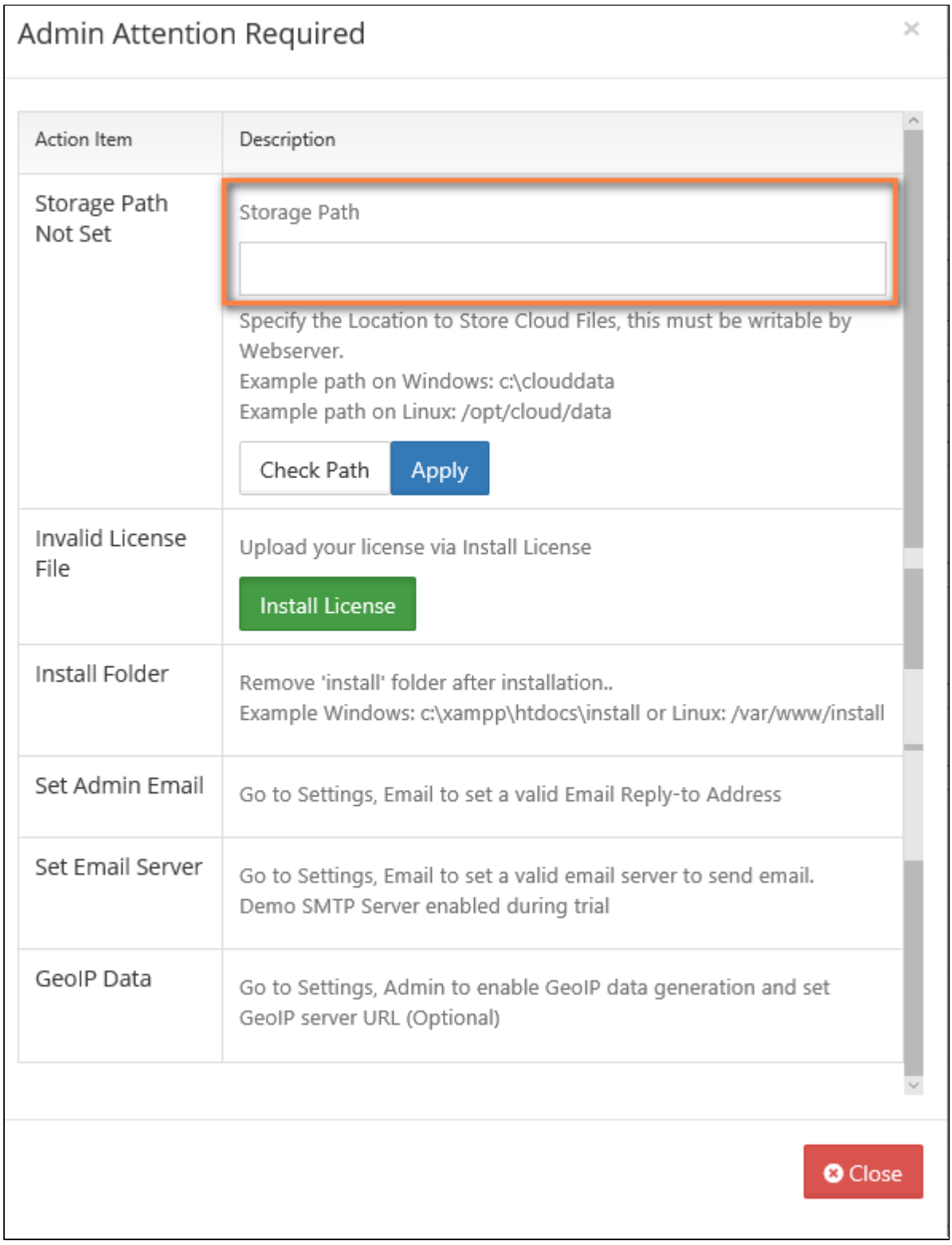
To configure the storage path:

1. Use the Admin Attention Required dialog for the initial setup.

Initial Setup

Initial Setup

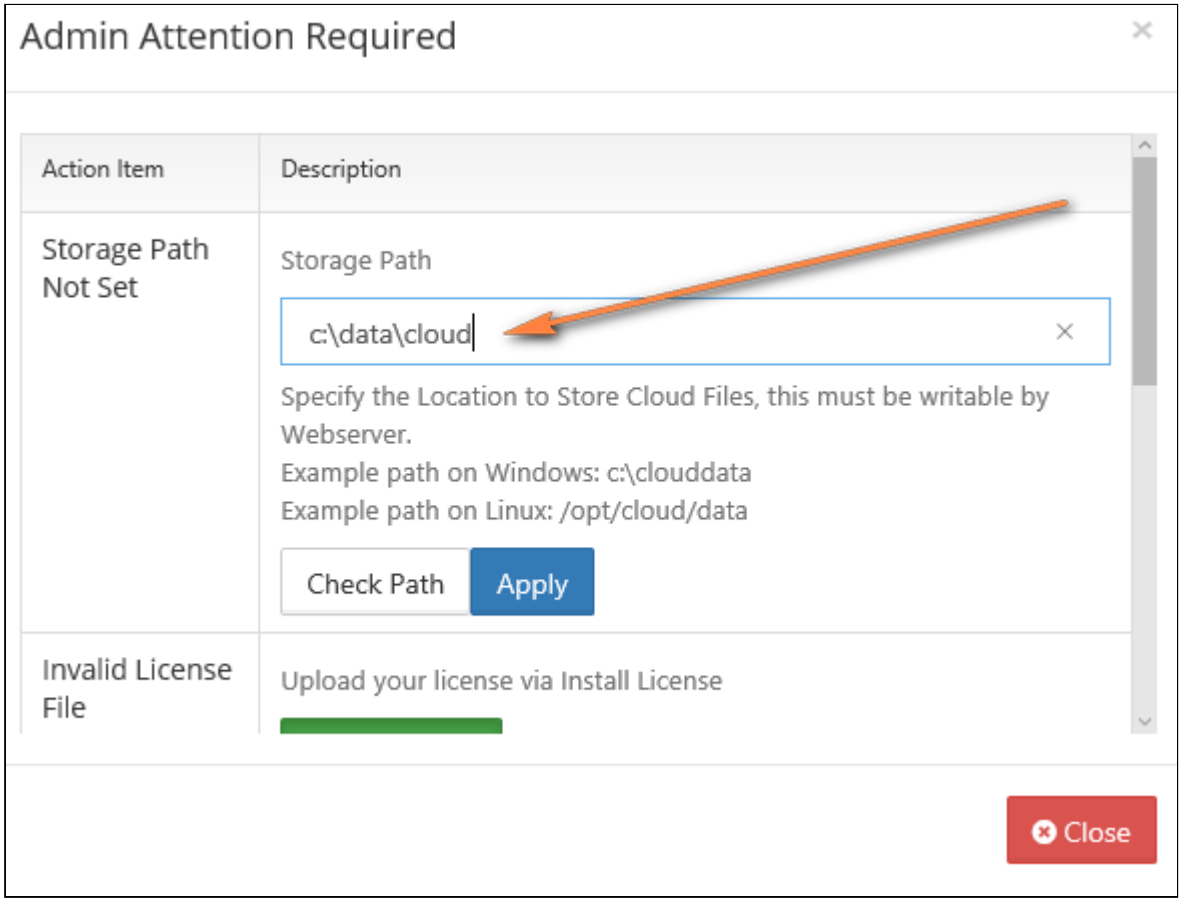
On initial login into the Admin Portal, if the storage path is not set or not writable, an "Admin Attention Required" dialog is shown as below.



Type in the path to the storage location in the box. You can click on the "Check Path" button to verify that the path exists and write permissions are available. Click on "Apply" button to set the storage path correctly.

Example Paths for Windows Installs: "c:\data", "e:\filecloud‌data"

Example Path for Linux Installs: "/opt/filecloud‌data"



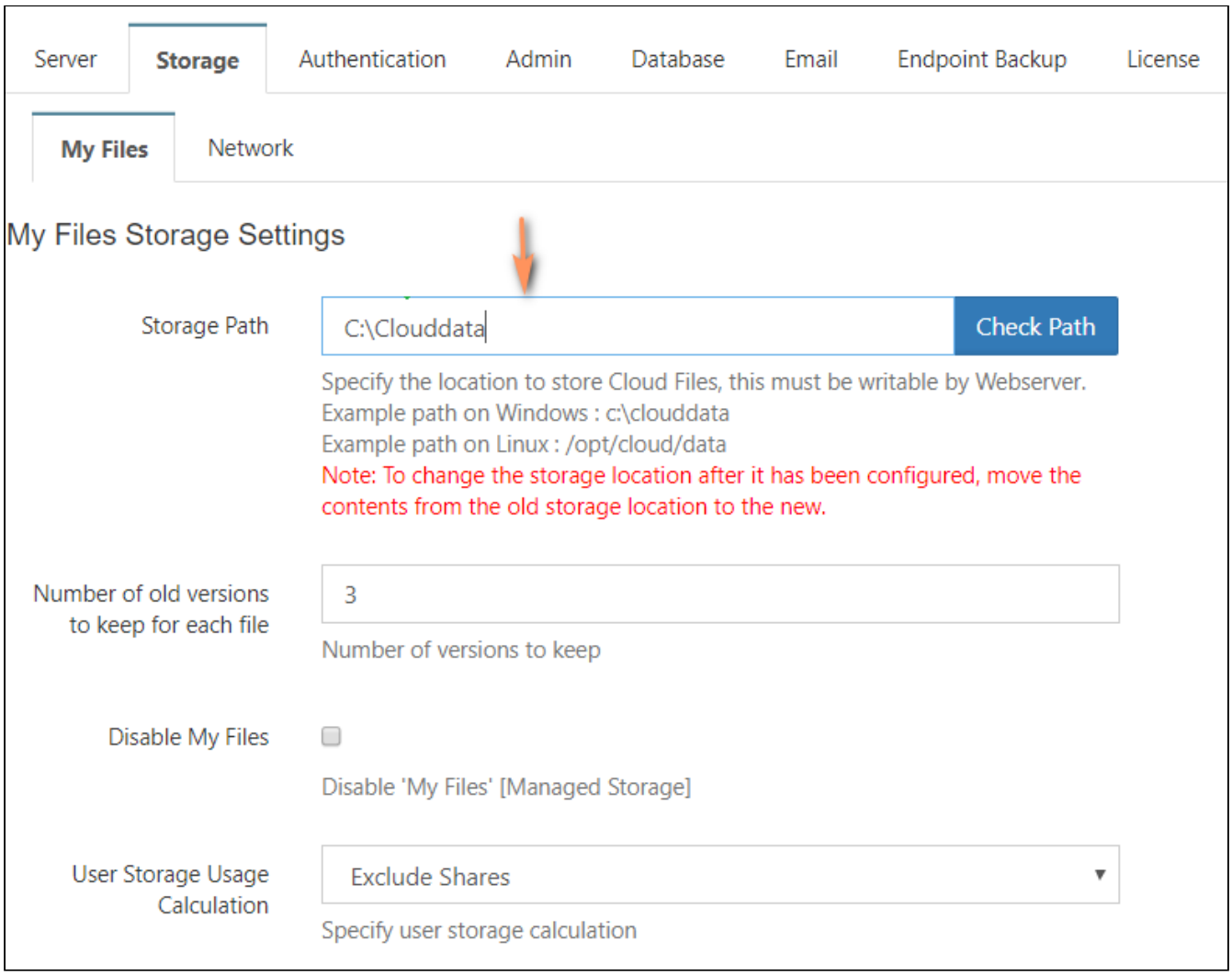
2. Use the Admin portal to manage storage path changes.

Managing the Storage Path

Managing the Storage Path

To set or change storage path, open the FileCloud Admin Portal and then open the Settings->Storage Tab. Set the path as needed (for example on Windows c:\filecloud, or on Linux /opt/filecloud) and finally save the settings. Note that making this change after users have started uploading the files to the system will make many files missing unless the original files are carefully copied over to the new location.

> ⓘ Do not change the storage path to the new location without copying over ALL folders and file that exist in the old path. Not copying the old data might lead to data loss.



3. After setting the path, you can rerun the install checks.

Enable MongoDB Bind IP and Authentication

By default, FileCloud installs the Mongo database server on the same machine as the web server without any authentication settings.

However, you may need to enable authentication for the following reasons:

- Added security
- Hosting the database server on a different machine than the web server.

Follow the steps here to enable authentication for MongoDB.

Set Up a Database User

A DB user has to be first created in MongoDB and this user can be later used in FileCloud for secure database access. Assuming we will add a user with following details:

User Name	Password
dbuser	passw0rd1

Use a command line mongo client and execute the following commands to create the required DB user.

The following command lists all the databases in the system (depending on the configuration one or more dbs may not exist (or new ones may be present). So it is important to set authentication for each of the DB in the system. (Ignore the "local" database that shows up when you type "show databases")

For MongoClient v3.0 and above

```
use admin
db.createUser( { user:"dbuser", pwd:"passw0rd1", roles:[ "root" ] })
```

For Mongo Client v 2.4

Mongo Client

```
> show databases
admin            0.078GB
tonidoauditdb    0.078GB
tonidoclouddb    0.078GB
tonidos3storage  0.078GB
tonidosettings   0.078GB
tonidostoragedb  0.078GB
tonidosyncdb     0.078GB

> use admin;
> db.addUser('dbuser','passw0rd1')
> use tonidoauditdb;
> db.addUser('dbuser','passw0rd1')
> use tonidoclouddb;
> db.addUser('dbuser','passw0rd1')
> use tonidostoragedb;
> db.addUser('dbuser','passw0rd1')
> use tonidosyncdb;
> db.addUser('dbuser','passw0rd1')
> use tonidosettings;
```

```
> db.addUser('dbuser','passw0rd1')
```

Upon executing all the above commands, 'dbuser' is added as a valid database user.

FC Push Service Configuration

In FileCloud version 23.1, a Push service has been added to allow clients (in particular, FileCloud Desktop) to receive server-initiated notifications (for example, file upload, share). Upgrading to FileCloud 23.1 or higher on systems running with MongoDB replica set or standalone MongoDB require the push service **env** file to be updated based on the MongoDB configuration.

To configure the Push service in Linux:

1. Open and edit the .env file from path: **/opt/fcpushservice/**

   ```
   vi /opt/fcpushservice/.env
   ```

2. Update the MongoDB connection string:

   ```
   FCPS_DB_DSN=mongodb://dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017
   ```

3. Restart the **fcpushservice**.

   ```
   systemctl restart fcpushservice
   ```

To configure the Push service in Windows:

1. Open the file **xampp\pushservice\.env** for edit.
2. Update the MongoDB connection string to:

   ```
   FCPS_DB_DSN=mongodb://dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017
   ```

3. Restart the Push service in the FileCloud control panel.

Changing the MongoDB IP binding

To change the MongoDB IP binding:

1. Open the mongodb configuration file:
   Linux: **/etc/mongodb.conf**
   Windows: **C:\xampp\mongodb\bin\mongodb.conf**
2. Find **bind_ip** and change its value to the IP or hostname that you want MongoDB to listen to.
   For example, if you want MongoDB to listen on the **hostname** mongosrv1.myfilecloud.com set **bind_ip** as follows:

```
bind_ip = mongosrv1.myfilecloud.com
```

Configure Settings DB URL

FileCloud's settings database is where all the information is bootstrapped from. The default implicit URL for this database is "mongodb://127.0.0.1". Set this URL explicitly to reflect the fact that a database user needs to be used and the database server resides on different server. To do this, edit the configuration file WWWROOT/config/cloudconfig.php and add the following line:

Override Settings DB URL

```
define("TONIDOCLOUD_SETTINGS_DBSERVER", "mongodb://
dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017");
```

In the above example, we assumed the database server is installed on a different machine (i.e., mongosrv1.myfilecloud.com) than the webserver. In collocated scenarios, 127.0.0.1 can be used as well.

Note: If you use special characters in the password, make sure to URI encode them. For example: using 'password@2090' as the password, you will need to specify it like

mongodb://dbuser:password%402090@localhost:27017

Configure Other DB URLs In Config File

If you have never updated the database URLs in the admin UI, follow this sub-section. If not, skip to the next sub-section.

Other database URLs required for FileCloud needs to be changed to reflect the database user as well.
To do this, edit the configuration file WWWROOT/config/cloudconfig.php and update the following lines:

Update DB URLs in cloudconfig.php

```
// ... Cloud Database
define("TONIDOCLOUD_DBSERVER", "mongodb://
dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017");
// ... Audit Database
define("TONIDOCLOUD_AUDIT_DBSERVER", "mongodb://
dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017");
// ... Settings Database
define("TONIDOCLOUD_SETTINGS_DBSERVER", "mongodb://
dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017");
```

and configuration file WWWROOT/config/localstorageconfig.php and update the following line:

Update DB URLs in localstorageconfig.php

```
// ... Cloud Database
define("TONIDO_LOCALSTORAGE_DBSERVER", "mongodb://
dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017");
```

Configure Other DB URLs In Settings DB

If you have updated the database URLs in the admin UI, then changing the values in the config files as described above will not work.

In this case use a mongodb client and update the URLs with the following information.

Update settings database with a mongo client

```
Database: tonidosettings
Collection: sites
Records:  {
    "name" : "TONIDOCLOUD_DBSERVER",
    "value" : "mongodb://dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017"
    }, {
    "name" : "TONIDOCLOUD_AUDIT_DBSERVER",
    "value" : "mongodb://dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017"
    }, {
    "name" : "TONIDO_LOCALSTORAGE_DBSERVER",
    "value" : "mongodb://dbuser:passw0rd1@mongosrv1.myfilecloud.com:27017"
}
```

Encrypting the DB User's Password

You may optionally encrypt the DB User's password so that it does not appear in cloudconfig.php.

To encrypt the password:

1. Generate a secure key for encryption.
   First run the tool **genkey** to create a random password.
   a. In a command line enter:
      For Windows:

      ```
      cd c:\xampp\htdocs\resources\tools\security
      PATH=%PATH%;C:\xampp\php
      ```

      For Linux:

```
cd /var/www/html/resources/tools/security
```

b. Then, for both Windows and Linux, enter the genkey.php script to generate the secure key you will use to encrypt the plain ext password. Since genkey.php outputs to the screen by default, direct the output to the file securekey.key:

```
php  genkey.php > securekey.key
```

2. Use the fcencrypt.php script with the key generated in the previous step (securekey.key) to encrypt the plain text password ("aSecretPassword" in the example below).

a. At the command prompt, enter the first line. The encrypted message is returned.

```
php fcencrypt.php --message "aSecretPassword" --key "securekey.key"
Encrypted message:
PgxQKdMU+k5756194hlIcUcp5Qod7oXe2XgaQNO+qri9nHIoTBVYBA7PuLthEu7Eq+Mx4vZ/vQ==
```

b. Copy and save the encrypted message, which you will use as your encrypted password.

3. Save the key file and the encrypted password in cloudconfig.
   a. Open the cloudconfig.php file
   Windows Location: XAMPP DIRECTORY/htdocs/config/cloudconfig.php
   Linux Location: /var/www/config/cloudconfig.php
   b. Enter settings for storing the encrypted password:

```
define('TONIDOCLOUD_ENCRYPTION_KEYFILE', 'c:
\xampp\htdocs\resources\tools\security\securekey.key');
define('TONIDOCLOUD_MONGODB_ENCRYPTED_PASSWORD',
'PgxQKdMU+k5756194hlIcUcp5Qod7oXe2XgaQNO+qri9nHIoTBVYBA7PuLthEu7Eq+Mx4vZ/
vQ==');
```

   Where the value for TONIDOCLOUD_ENCRYPTION_KEYFILE is the location of your securekey.key tool and the value for TONIDOCLOUD_MONGODB_ENCRYPTED_PASSWORD is your encrypted password.
   :
4. Replace occurrences of the plain text password in cloudconfig with the placeholder %tonidocloud_mongodb_password% in the settings:
   - FC_MONGODB_URI_OPTIONS
   - AUTOBACKUP_MONGODUMP_PARAMS

   For example, instead of:

```
define("AUTOBACKUP_MONGODUMP_PARAMS", '--host 127.0.0.1 --username dbuser --
password aSecretPassword --authenticationDatabase admin');
```

   enter:

```
define("AUTOBACKUP_MONGODUMP_PARAMS", '--host 127.0.0.1 --username dbuser --
password %tonidocloud_mongodb_password% --authenticationDatabase admin');
```

Enable MongoDB Security

Now that FileCloud is updated with the security info, enable security in MongoDB. To do this open the file mongodb.conf that can be typically found in the following location:

Windows	C:\xampp\mongodb\bin\mongodb.conf
Linux	/etc/mongodb.conf

Edit this file and add/update with the following line. If the line is already there, ensure it is not commented.

Enable MongoDB security in Windows and mongodb v2.x on Linux

```
# Turn on/off security.  Off is currently the default
#noauth = true
auth = true
```

If you are using a version of MongoDB that creates a YAML conf file, you might need to enable authentication using the following format.

Enable MongoDB v3.x on Linux

```
security:
  authorization: enabled
```

For MongoDB replica set cluster configurations:

1. Run the below command to generate a key file.
   This key will be used for internal replicaset authentication:

   ```
   openssl rand -base64 741 >"/var/lib/mongodb/mongodb-keyfile"
   ```

2. Copy the file **/var/lib/mongodb/mongodb-keyfile** to the other 2 database nodes.

3. Run the below commands to set permission and ownership.

```
chmod 400 /var/lib/mongodb/mongodb-keyfile
chown mongodb. /var/lib/mongodb/mongodb-keyfile
```

4. Add the below lines to **/etc/mongod.conf**

```
security:
 authorization: enabled
 keyFile: /var/lib/mongodb/mongodb-keyfile
```

Restart services

Finally, it is necessary to restart both MongoDB and Apache to get the security in-place.

Note

- In case of any issues, disable security in mongodb and fix the problems.
- To disable security, mongodb auth has to be disabled and the database URLs has to be reverted back.

SSL Configuration

FileCloud runs on Apache web server.

- Apache server can be configured to serve the website securely using HTTPS protocol.
- To enable the HTTPS protocol, you will need an SSL certificate.

In the following section, to display more information, click on a question.

What if I want to use SSL to secure AD?

If you are using Active Directory and want to:

- Add AD users
- Change AD passwords
- Secure the connection to Active Directory

Then you will need to configure additional settings and also install an SSL certificate on the AD server.

This topic does not relate to securing connections with your AD Server.

For that information, please read Connecting to AD via SSL

What is an SSL certificate?

SSL (Secure Sockets Layer) is the standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral. SSL is an industry standard and is used by millions of websites in the protection of their online transactions with their customers.

To be able to create an SSL connection a web server requires an SSL Certificate. When you choose to activate SSL on your web server you will be prompted to complete a number of questions about the identity of your website and your company. Your web server then creates two cryptographic keys - a Private Key and a Public Key.

The complexities of the SSL protocol remain invisible to your customers. Instead their browsers provide them with a key indicator to let them know they are currently protected by an SSL encrypted session - the lock icon in the lower right-hand corner, clicking on the lock icon displays your SSL Certificate and the details about it. All SSL Certificates are issued to either companies or legally accountable individuals.

To learn more about SSL, read knowledge base articles on the SSL web site.

What is an intermediate certificate?

To enhance the security of the Root certificate, two intermediate certificates are created from which SSL certificates are signed and issued.

- An intermediate certificate is a subordinate certificate issued by the trusted root specifically to issue end-entity server certificates.

The result is a certificate chain that begins at the trusted root CA, through the intermediate and ending with the SSL certificate issued to you. Such certificates are called chained root certificates.

Creating certificates directly from the CA root certificate increases the risk of root certificate compromise, and if the CA root certificate is compromised, the entire trust infrastructure built by the SSL provider will fail. The usage of intermediate certificates for issuing SSL certificates to end entities, therefore, provides an added level of security. You must install the intermediate certificate in your Web server along with your issued SSL certificate to complete the trust chain and allow the certificate to be effective.

Once you've got your certificate files, seeing your file extension will allow you to know what's in the file, and if you need to convert them.

What are the different file types?

File Extension	Contents
*.pem	Concatenated certificate container files Frequently required for certificate installations when multiple certificates are being imported as one file.
*.crt *.cer	The *.crt and *.cer file formats are interchangeable and contain the same information. the *.crt file is a Microsoft convention and can be easily converted to *.cer. An SSL certificate contains both: *.key = the private key to the certificate *.crt = the signed certificate
*.ca-bundle	A file that contains root and intermediate certificates. • The end-entity certificate along with a CA bundle constitutes the certificate chain. The chain is required to improve compatibility of the certificates with web browsers and other kind of clients. This allows browsers to recognize your certificate so that no security warnings appear.
*.pfx	This is an archive file format for storing several cryptographic objects in a single file. • contains the end-entity certificate (issued to your domain) • a matching private key • may optionally include an intermediate certification authority (a.k.a. CA Bundle). All this is wrapped up in a single file which is then protected with a pfx password.

What do you want to do?

Use SSL on Windows

Use SSL on Linux

Convert a PFX to a PEM SSL Certificate

Use SSL on Windows

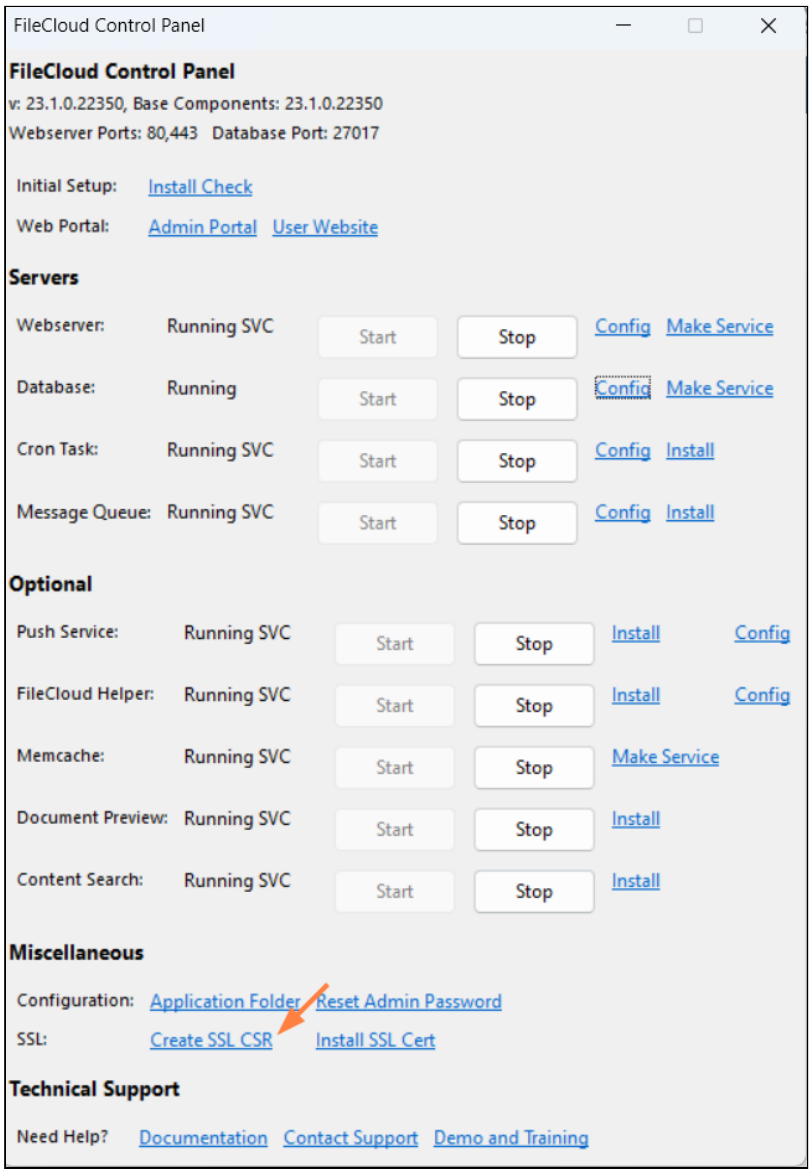
You can use the standard security technology to establish an encrypted link between the FileCloud server and a client browser.

- This link ensures that all data passed between the web server and browsers remain private and integral.
- SSL is an industry standard and is used by millions of websites in the protection of their online transactions with their customers.

After you install the SSL certificate on your Apache web server, there is no additional configuration you need to do in FileCloud Server. Once a certificate is installed, all connections between to the FileCloud Server and clients are secured over SSL.

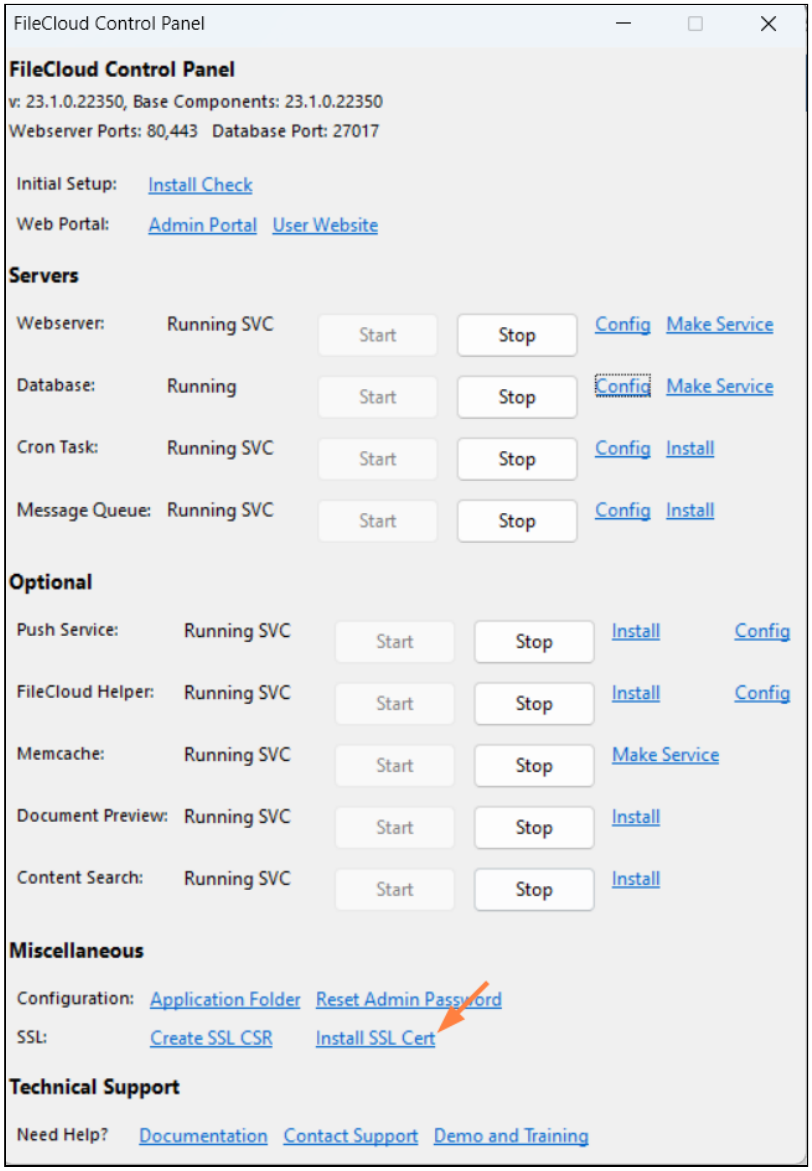
To Use SSL on Windows:

1. Create a CSR in the FileCloud Control Panel.



2. Submit the CSR to your SSL provider.
3. The provider will verify and then issue an SSL certificate. You may be given options to download the SSL certificate as a bundle certificate or as a main and bundle certificate. If you are given both download options, download both. If it comes in just one download option, download that.

4. Install the certificate.



5. Follow the HTTPS Best Practices for FileCloud.

If you encounter issues using the FileCloud control panel, you can:

- Manually create a CSR to receive an SSL certificate
- Manually install a CRT file

Create a CSR in the FileCloud Control Panel

When using SSL on Windows, you must create a Certificate Signing Request (CSR) to receive an SSL certificate.

- A CSR is a data file that contains a Public Key and your domain details.

- You will submit the CSR to your SSL provider.
- Your provider will verify and then issue an SSL certificate file

If you encounter issues using the FileCloud control panel, you can:

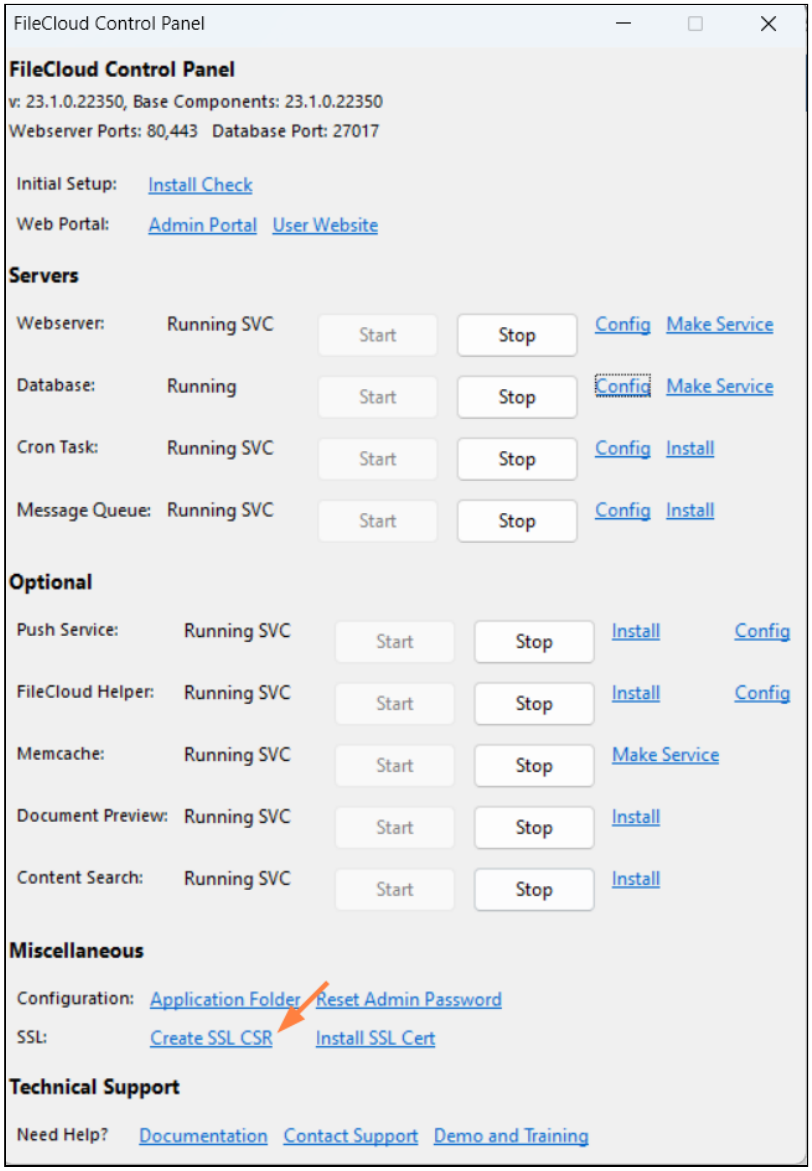
Manually create a CSR to receive an SSL certificate

In the following section, to display more information, click on a topic.

To create a CSR in the FileCloud control panel:

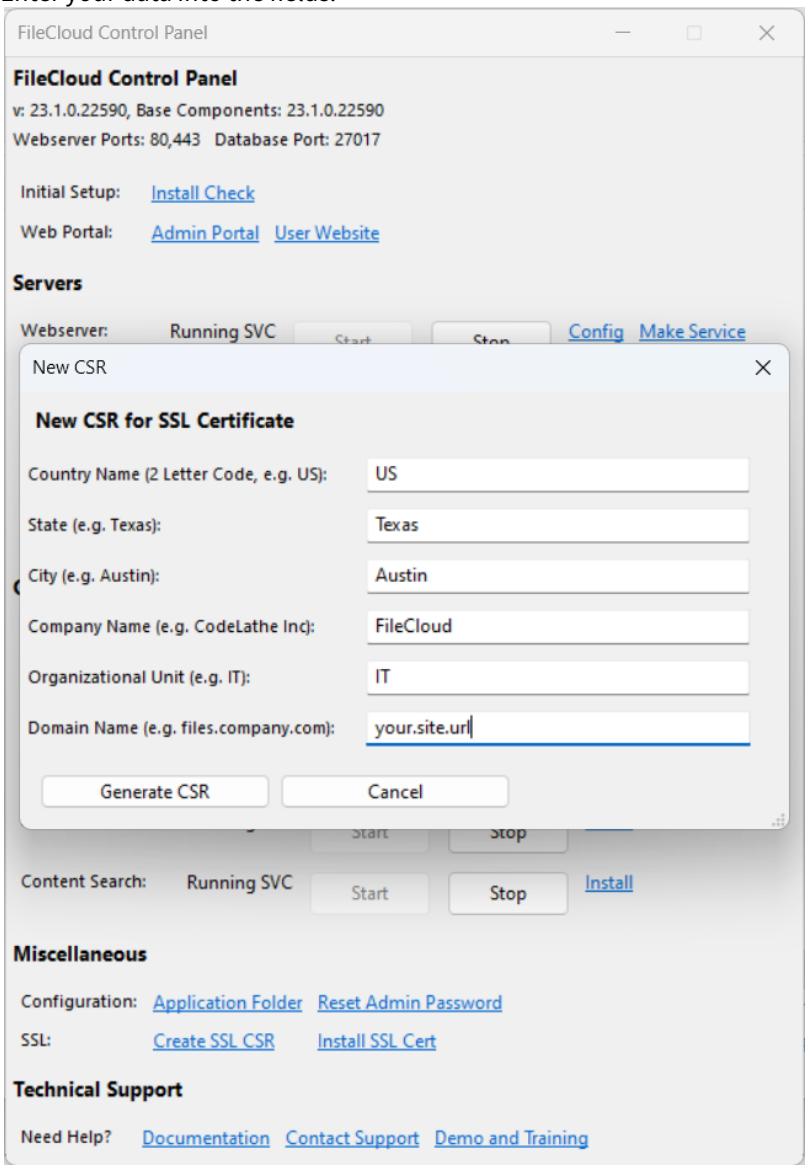
1. Open the **FileCloud Control Panel**

2. Click **Create SSL CSR**.



New CSR fields appear.

3. Enter your data into the fields.

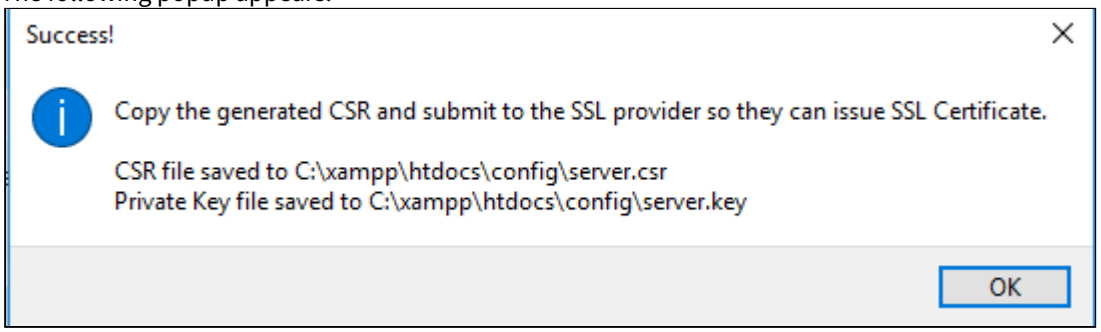


Information	Example	Notes
Country Name	US	`2letter code`
State	TEXAS	`full name - no abbreviations`
City	Austin	`full city name`
Organization Name	MyCompany	`company name`

Information	Example	Notes
Organizational Unit Name	IT	`section name`

Domain Name	filecloud.IWPL.com	`server FQDN or YOUR name`
		
		Be sure to enter the actual server's fully qualified name
		`filecloud.yourdomain.com`
		
		If it is a wildcard certificate for all sub domains (for example for using multi tenancy), then be sure to enter ***.**yourdomain.com
		`*.yourdomain.com`

4. Click **Generate CSR**.
   The following popup appears:

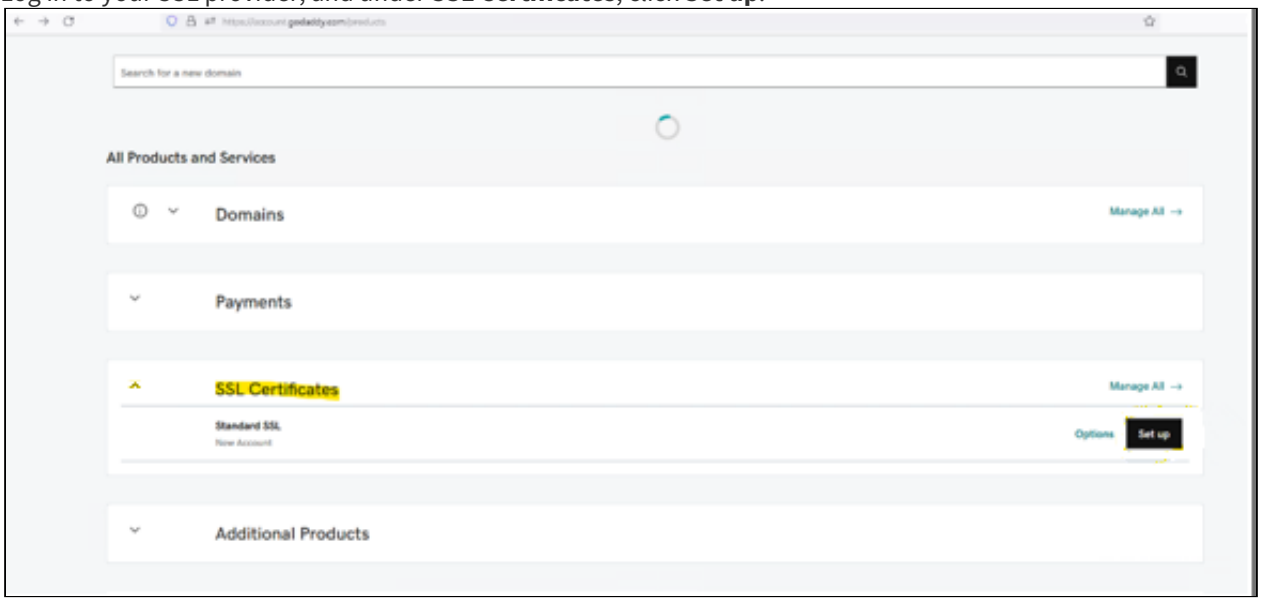


5. Submit the CSR to your SSL provider.

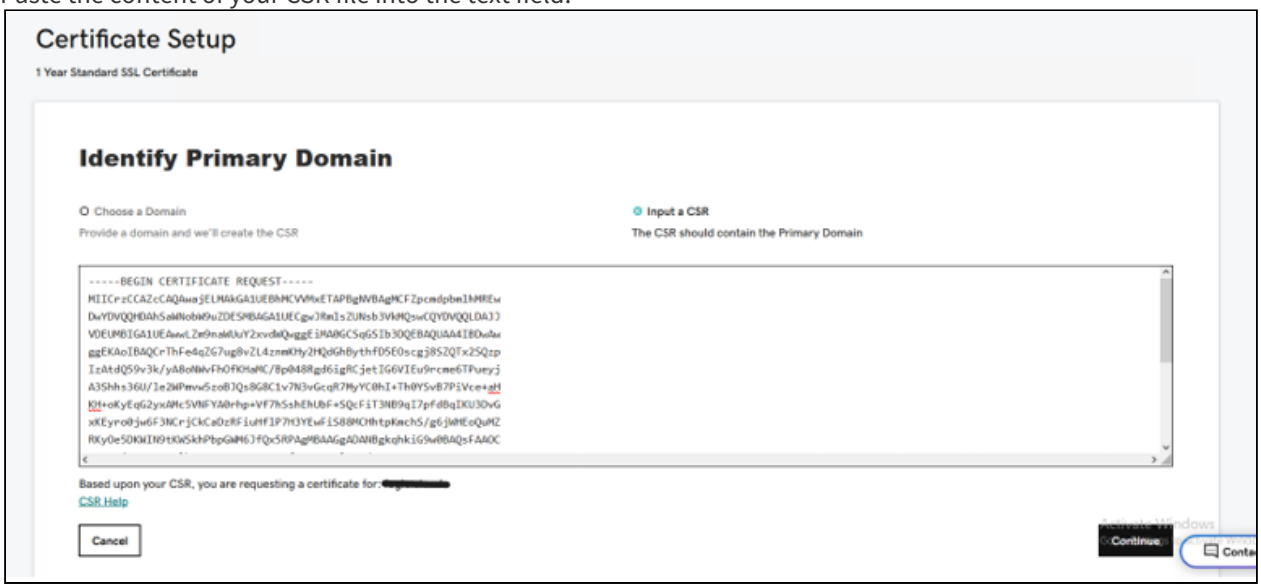
Submit a CSR to Your SSL Provider

You must create your CSR before you can submit it to your SSL provider. The following procedure uses GoDaddy as an example. Change the steps as necessary to perform the same actions in your SSL provider.

1. Log in to your SSL provider, and under **SSL Certificates**, click **Set up**.

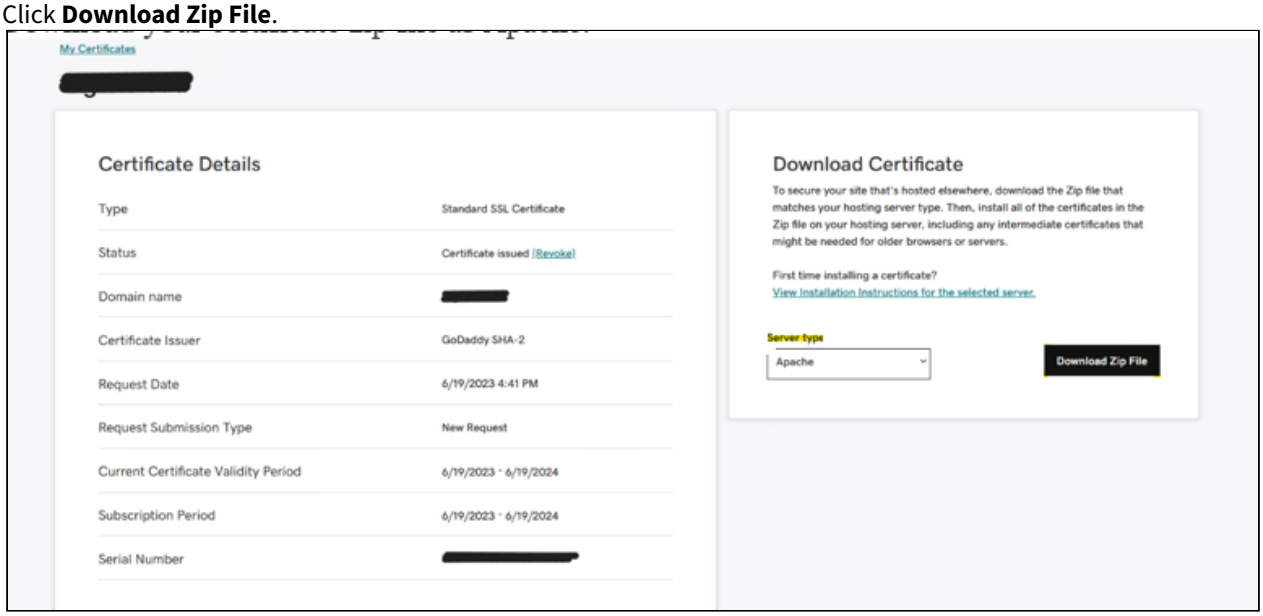


   The **Certificate Setup** screen opens.
2. Click **Input a CSR.**
   Paste the content of your CSR file into the text field.



3. Click **Continue** and complete the certificate setup.
4. Navigate to **Certificates** and select your certificate.
5. In **Server Type**, choose **Apache**.

6. Click **Download Zip File**.



7. Install the certificate.

Install a certificate using the FileCloud Control Panel

> The ability to create and install an SSL certificate from FileCloud Control Panel is available in FileCloud Server version 14.0 and later.
> The option to add an Intermediate Certificate is available in FileCloud Server version 18.2 and later.
> If you want to include an intermediate certificate and do not have one saved locally, see Extracting an Intermediate Certificate from your Browser.

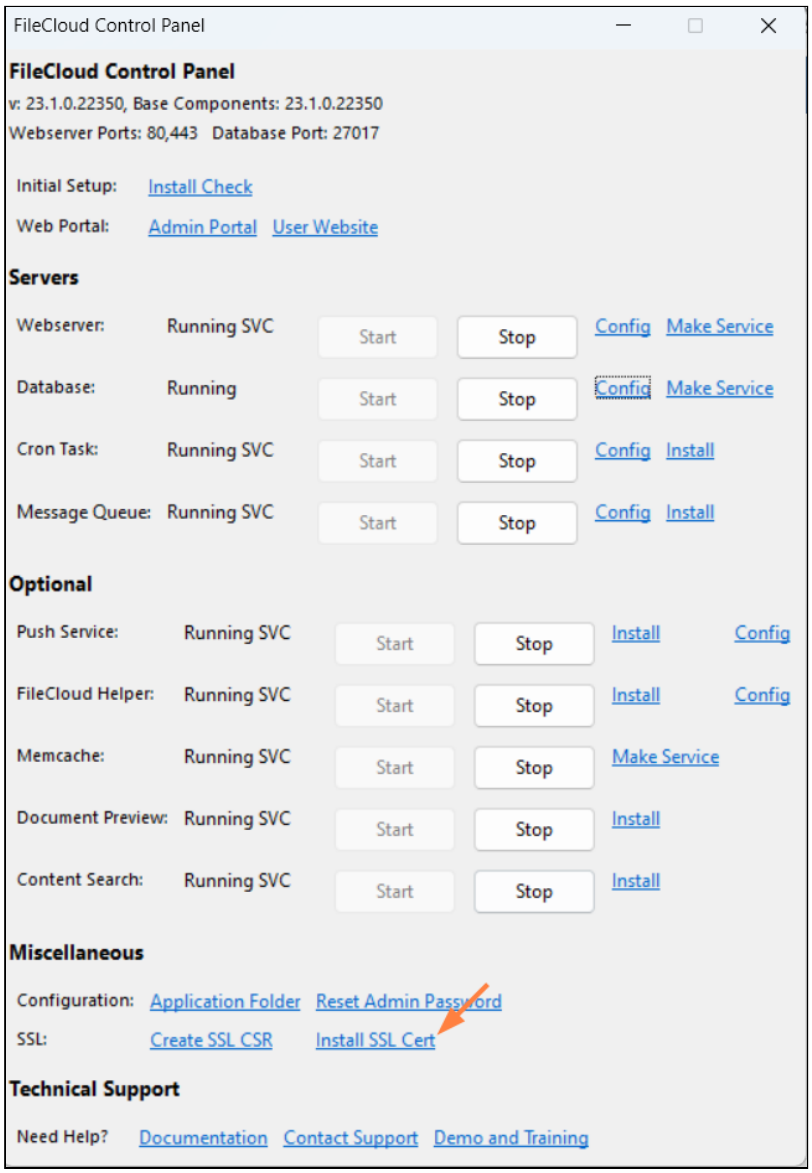
After you receive an SSL certificate, you can use the **FileCloud Control Panel** to install it.

If you encounter issues using the FileCloud control panel, you can:

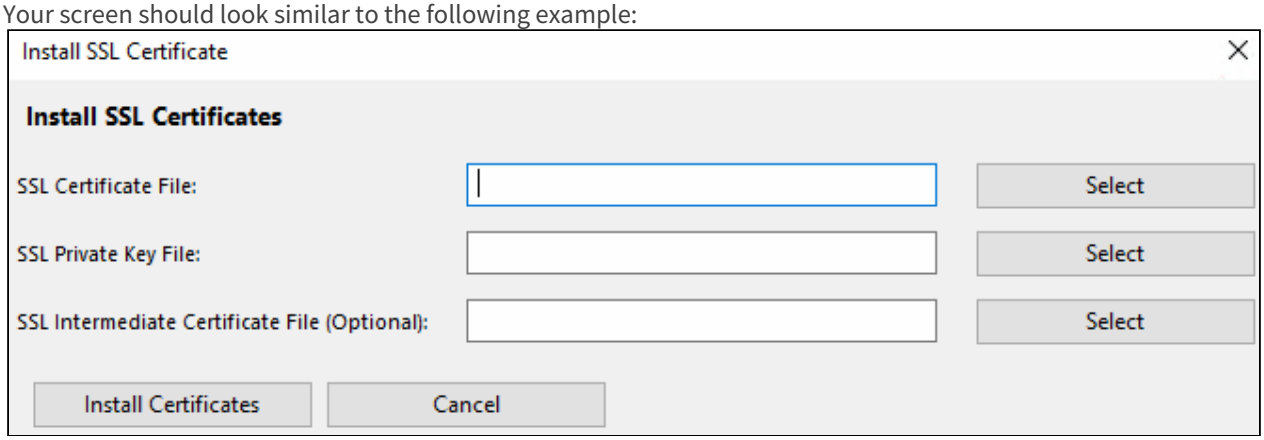
Manually install an SSL certificate in Windows

To install an SSL Certificate using the FileCloud Control Panel:

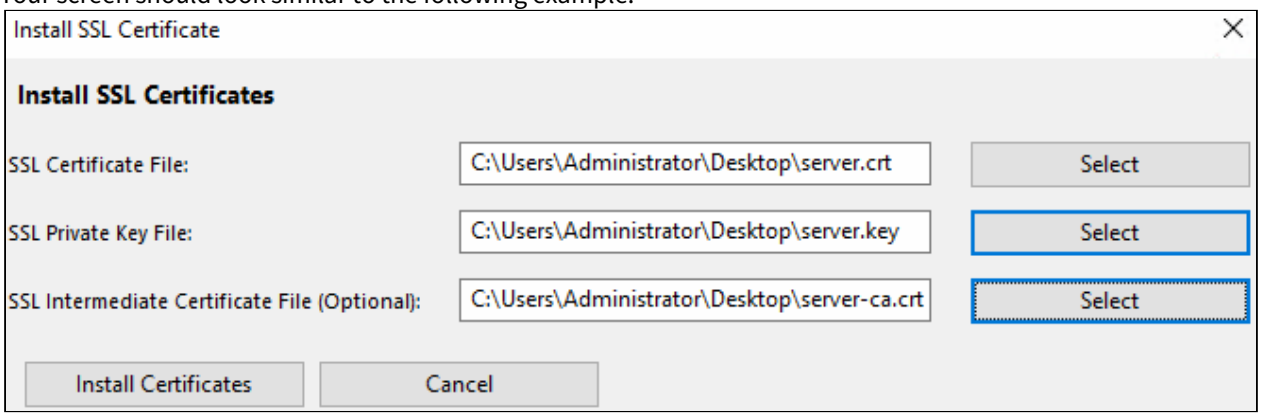
1. On the server, open the **FileCloud Control Panel**.
   Show me the control panel



2. Under **Miscellaneous**, click **Install SSL Cert**.
3. Your screen should look similar to the following example:



4. Across from **SSL Certificate File**, click **Select**.
5. Browse to the default location in: **c:\xampp\htdocs\config\server.crt** or to the place where the file is saved.
6. Across from **SSL Private Key File**, click **Select**.
7. Browse to the default location in: **c:\xampp\htdocs\config\server.key** or to the place where the file is saved.
8. Optionally, to install an intermediate certificate, across from **SSL Intermediate Certificate File**, click **Select**.
9. Browse to the default location in: **c:\xampp\htdocs\config\server-ca.crt** or to the place where the file is saved.
10. Your screen should look similar to the following example:



11. Click **Install Certificates**.
12. On the **Confirm Installation** dialog box, to install the provided certificate and key, click **Yes**.
13. When you see the **Installed OK** dialog box, click **OK**.
14. To allow the changes to take effect, restart the server.

Manually Create a CSR in Windows

When using SSL on Windows, you must create a Certificate Signing Request (CSR) to receive an SSL certificate.

- A CSR is a data file that contains the Public Key and your domain details.
- You will submit the CSR to your SSL provider.
- Your provider will verify and then issue a SSL certificate in a .crt file.

You should use the FileCloud control panel to create a CSR. If you encounter issues, you can create the request manually.

Create a CSR using the FileCloud Control Panel

To manually create an SSL certificate, you can use the openssl tool included with FileCloud Server.

To manually create a CSR:

1. On the FileCloud server, navigate to the following directory:

```
c:\xampp\apache\bin
```

2. To open the tool, double-click OpenSSL.

3. To create a Private Server Key, type the following code: (If your SSL provider does not accept key lengths of 2048, a higher length of 4096 can be used in the follwing command.)

```
C:\xampp\apache\bin>openssl genrsa -des3 -out server.key 2048 -config "C:
\xampp\apache\conf\openssl.cnf"
```

Note

If you encounter any errors related to:
`unable to open configuration file`

Then run the following in the command prompt to set the path.
`set OPENSSL_CONF=c:\xampp\apache\conf\openssl.cnf`

4. To create a Certificate Request (CSR), type the following command:

```
C:\xampp\apache\bin>openssl req -new -key server.key -out server.csr -config "C:
\xampp\apache\conf\openssl.cnf"
```

5. You will be prompted to enter the following information:

Information	Example	Notes
Country Name	US	`2letter code`
State or Province Name	TEXAS	`full name - no abbreviations`
Locality Name	Houston	`full city name`
Organization Name	Internet Widgits Pty Ltd	`company name`
Organizational Unit Name	Accounts Payable	`section name`

Information	Example	Notes

Common Name	filecloud.IWPL.com	`server FQDN or YOUR name`
		
		Be sure to enter the actual server's fully qualified name
		`filecloud.yourdomain.com`
		
		If it is a wildcard certificate for all sub domains (for example for using multi tenancy), then be sure to enter ***.**yourdomain.com
		`*.yourdomain.com`

Email Address	moneyman@iwpl.com	
A challenge password		Use the same passphrase you typed in when opening the tool.

6. Apache won't start up properly if the key is secured with passphrase, so to remove it, type the following command:

```
copy server.key server.key.secure
openssl rsa -in server.key.secure -out server.key
```

7. You can now submit the CSR to your SSL provider.

The provider will sign and give you an SSL certificate usually called as server.crt.

Manually Install SSL Certificates for FileCloud on Windows

This section explains how to manually install the SSL certificate you received from your certificate provider.

If you want to include an intermediate certificate and do not have one saved locally, see Extracting an Intermediate Certificate from your Browser.

You should use the FileCloud control panel to install an SSL certificate. If you encounter issues, you can install the certificate manually.

To install an SSL certificate manually:

1. Install the SSL certificates

To enable SSL in Apache, the following are required:

- A signed certificate received from the certifying authority
- Your private key
- The location where FileCloud is installed, if not under the default location c:\xampp

To install the SSL certificates:

1. Rename your signed certificate to: server.crt
2. Rename your private key file to: server.key
3. Copy these two files using the following commands, replacing the xampp directory with the appropriate path if necessary:

```
copy server.crt C:\xampp\apache\conf\ssl.crt\
copy server.key C:\xampp\apache\conf\ssl.key\
```

2. Open the SSL config file, and enter your server name

1. Open the following file for editing:

```
C:\xampp\apache\conf\extra\httpd-ssl.conf
```

2. Find the following line:

```
ServerName "www.example.com:443"
```

3. Change the ServerName in quotes to your domain name.

⚠️ In the serverName do not use * . For wild card certificates, use the FQDN excluding the *

💡 The domain name should also match the FQDN/common name field of your CSR. Certificate Signing Request (CSR) is a data file that contains the Public Key and your domain details.

3. Install the Certificate Chain file

If your signed certificate needs a certificate chain file containing all the intermediate certificates, then you need to install the certificate chain file as well. To do this, you need to edit a configuration file and specify the chain file's location.

💡 If your intermediate certificates are not part of the standard ca-bundle, you must:

- Install the intermediate certificates on the FileCloud server

This will prevent issues with the Desktop client apps.

To install the certificate chain file:

Merge the chain certificate with your server certificate:

```
copy /Y server.crt+server-chain.crt C:\xampp\apache\conf\ssl.crt\server.crt
```

4. Restart the server

After you have completed:

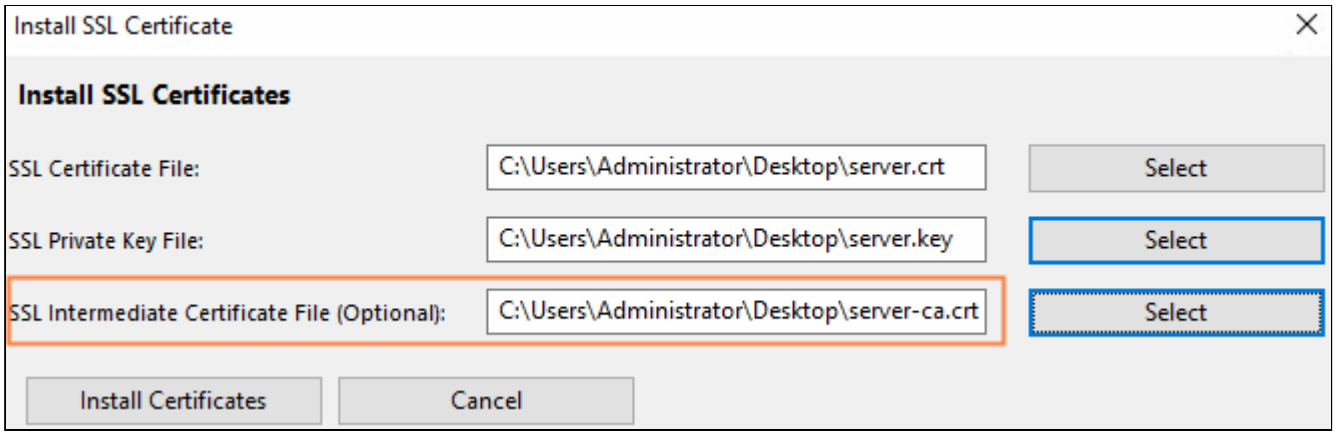
1. Installing the SSL certificate
2. Installing the chain file

You must restart the Apache server.

This will activate the new SSL certificates and allow Apache to operate in HTTPS mode.

Extracting an Intermediate Certificate from your Browser

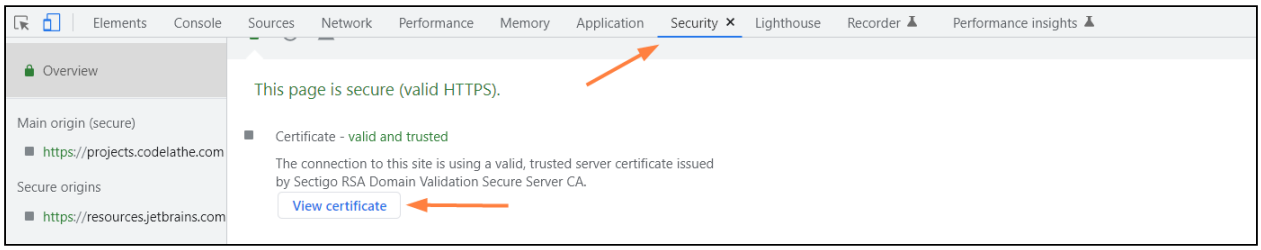
You can specify an SSL intermediate certificate file to include when you install your SSL certificate file on Windows.



If you don't already have an intermediate certificate file stored locally, you can download one from your browser.

To download an SSL intermediate certificate file:

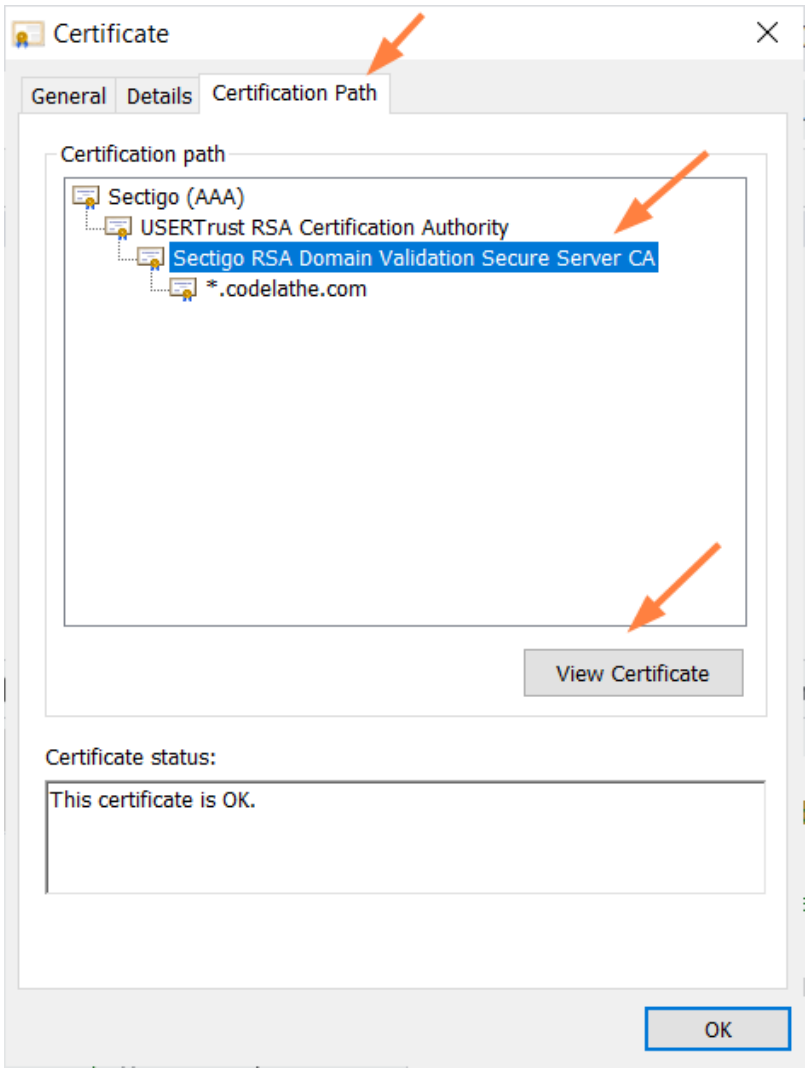
1. Go to a page on your browser that is using HTTPS, and click **F12**.
   The developer tools open.
2. Click the **Security** tab.
   Just under the listing for **Certificate** is a **View certificate** button.
3. Click the **View certificate** button.



   The certificate window opens.

4. Click the **Certification Path** tab.
5. Select the third embedded certificate, which is the intermediate certificate.

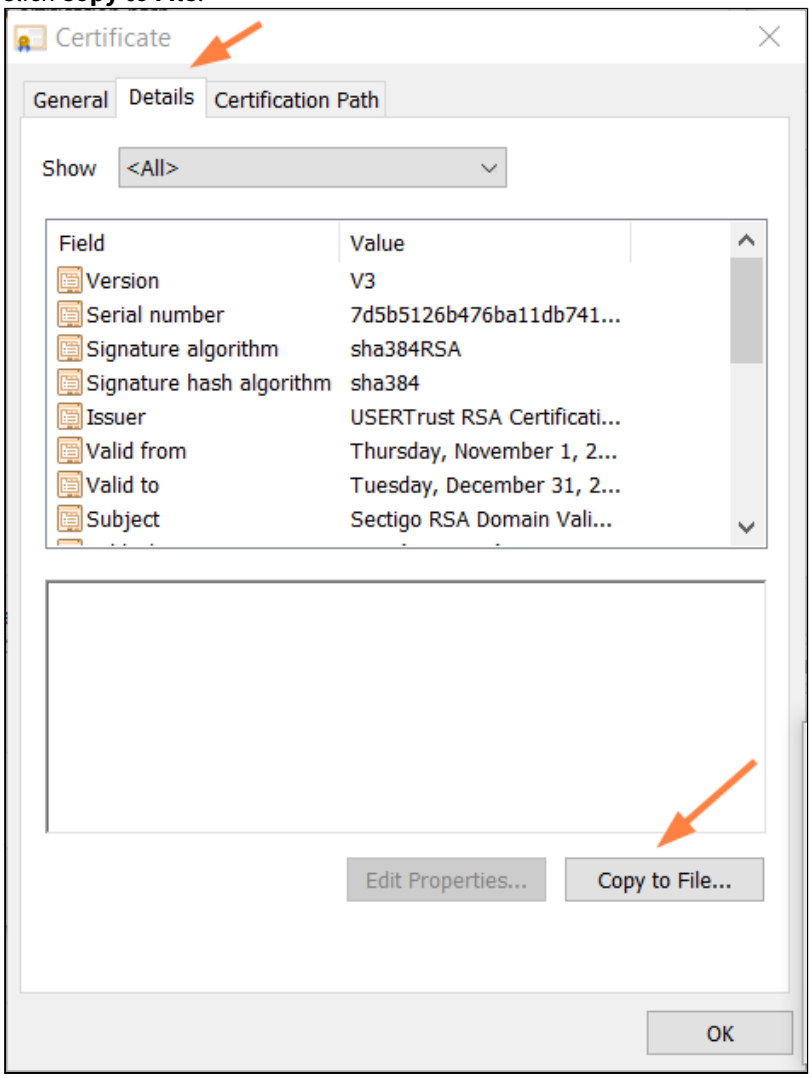
6. Click **View Certificate**.



Another certificate window opens.

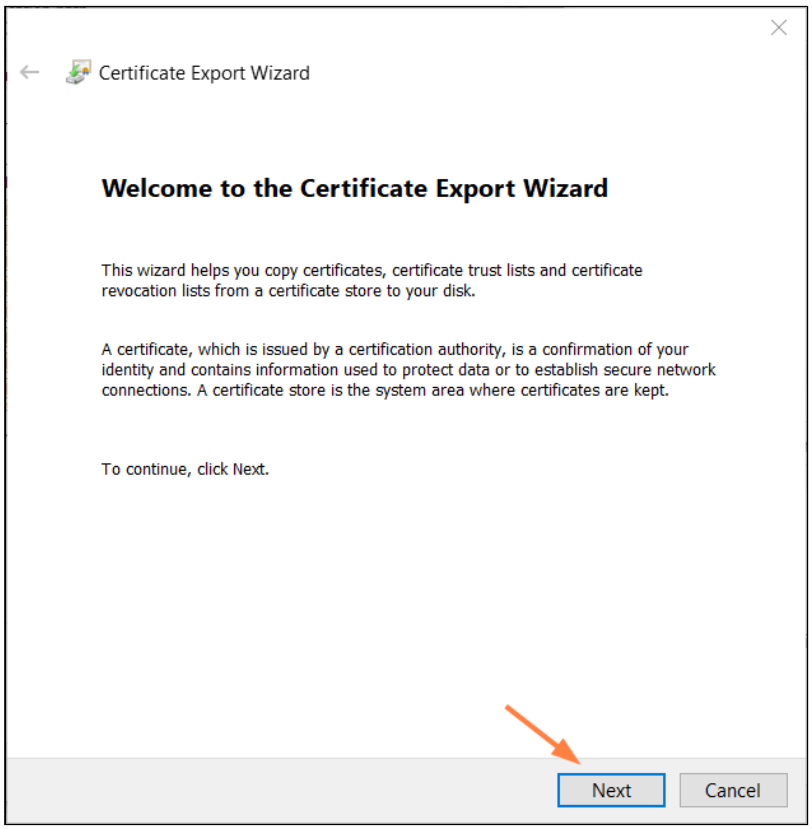
7. Click the **Details** tab.

8. Click **Copy to File**.

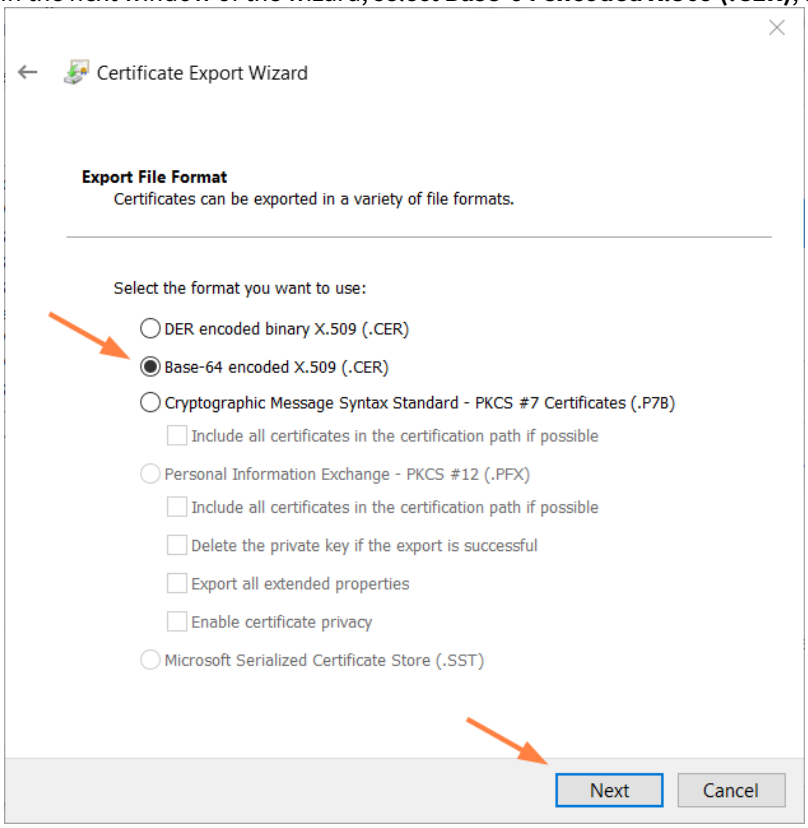


The **Certificate Export Wizard** opens.

9. Click **Next**.

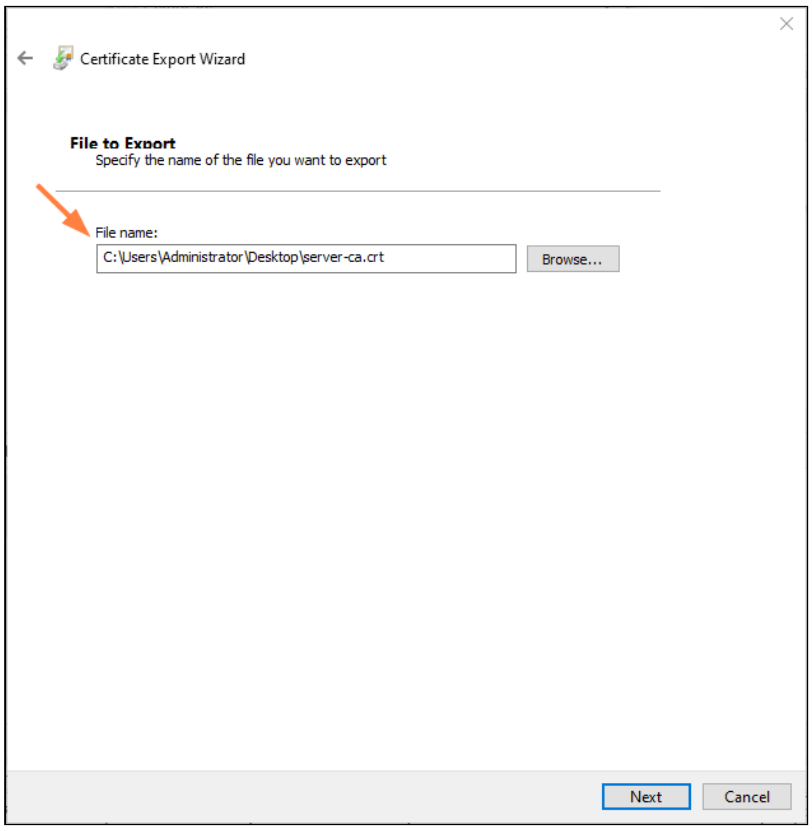

Certificate Export Wizard
Welcome to the Certificate Export Wizard
This wizard helps you copy certificates, certificate trust lists and certificate revocation lists from a certificate store to your disk.
A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept.
To continue, click Next.
Next
Cancel

10. In the next window of the wizard, select **Base-64 encoded X.509 (.CER)**, and click **Next**.



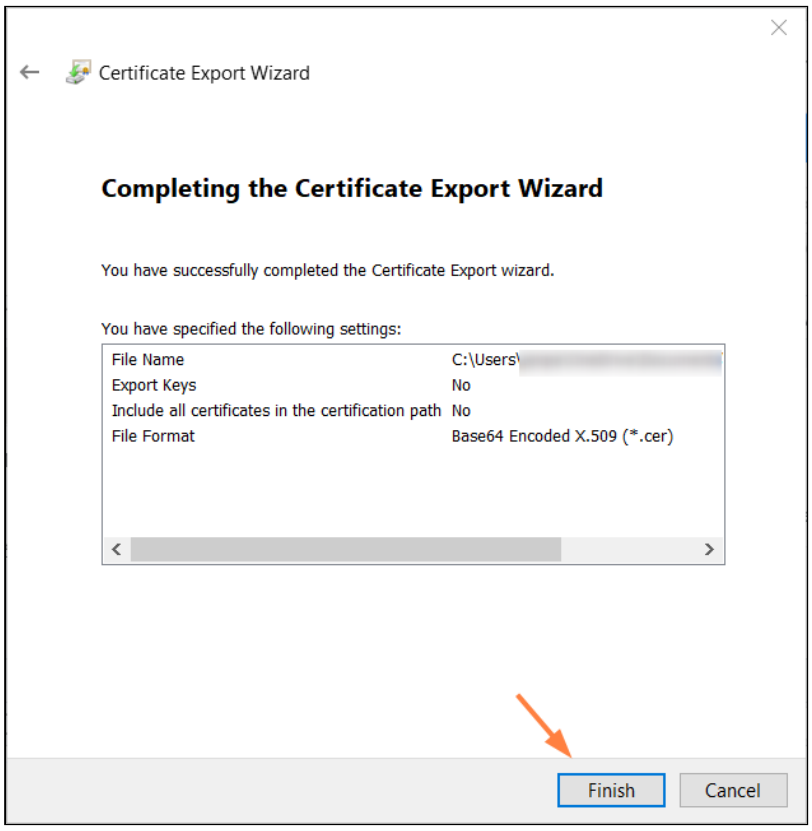
11. In the next window of the wizard, browse to the folder where you want to save the intermediate certificate, and name it with the extension crt.

12. Click **Next**.

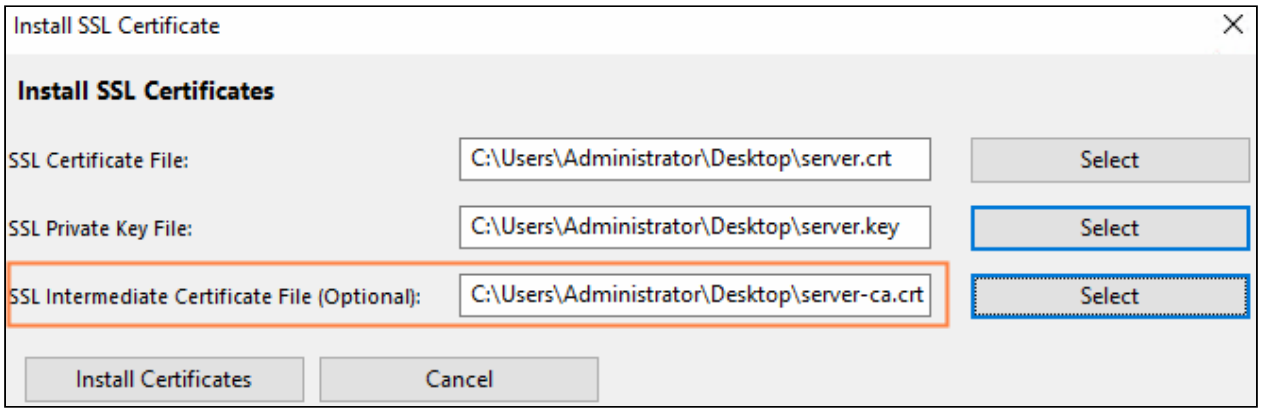


The last window confirms that you have completed the wizard.

13. Click **Finish**.



14. Return to the **Install SSL Certificate** window and select the intermediate certificate for **SSL Intermediate Certificate File**.



Use SSL on Linux

You can use the standard security technology to establish an encrypted link between the FileCloud server and a client browser.

- This link ensures that all data passed between the web server and browsers remain private and integral.
- SSL is an industry standard and is used by millions of websites in the protection of their online transactions with their customers.

After you install the SSL certificate on your Apache web server, there is no additional configuration you need to do in FileCloud Server. Once a certificate is installed, all connections between to the FileCloud Server and clients are secured over SSL.

To Use SSL on Linux:

1. Create a CSR for FileCloud.
2. Submit the CSR to your SSL provider.
3. The provider will verify and then issue a SSL certificate. You may be given options to download the SSL certificate as a bundle certificate or as a main and bundle certificate. If you are given both download options, download both. If it comes in just one download option, download that.
4. Install the certificate on Linux.
5. Follow the HTTPS Best Practices for FileCloud.

Create a CSR for FileCloud

When using SSL on Linux, you must create a Certificate Signing Request (CSR) to receive an SSL certificate.

- A CSR is a data file that contains the Public Key and your domain details.
- You will submit the CSR to your SSL provider.
- Your provider will verify and then issue a SSL certificate in a .cer file.

To create an CSR for you FileCloud Server:

1. To generate a request, use the following command: (The key for the SSL certificate is stored in the server.key file.)

```
openssl req -new -newkey rsa:2048 -nodes -keyout server.key -out server.csr
```

2. You will be prompted to enter the following information:

Information	Example	Notes
Country Name	US	2letter code
State or Province Name	TEXAS	full name - no abbreviations
Locality Name	Houston	full city name
Organization Name	Internet Widgits Pty Ltd	company name
Organizational Unit Name	Accounts Payable	section name

Information	Example	Notes

Common Name	filecloud.IWPL.com	`server FQDN or YOUR name`
		
		Be sure to enter the actual server's fully qualified name
		`filecloud.yourdomain.com`
		
		If it is a wildcard certificate for all sub domains (for example for using multi tenancy), then be sure to enter ***.yourdomain.com**
		`*.yourdomain.com`

Email Address	moneyman@iwpl.com	
`Please enter the following extra attributes to be sent with your certificate request:`		
A challenge password		
An optional company name		

Install an SSL certificate on Linux

It's important to use SSL any time sensitive data is involved such as personal information, and authentication credentials such as passwords.
Your Linux system should be:

- running Ubuntu or RHEL
- accessible over the internet
- using a valid DNS entry that points to your Linux system

1. Copy the SSL certificate provided by your certification provider and SSL private key file to the apache directory. The certificate file is renamed as server.crt and private key file is renamed as server.key

```
etcssl=/etc/apache2/ssl # for Ubuntu
etcssl=/etc/httpd/ssl   # for RHEL
sudo mkdir -p $etcssl
sudo cp server.crt $etcssl
sudo cp server.key $etcssl
```

2. If your signed certificate needs a certificate chain file containing all the intermediate certificates, then you need to install the certificate chain file as well.

```
sudo echo >> $etcssl/server.crt
sudo cat server-ca.crt >> $etcssl/server.crt
```

3. Modify your webserver configuration. **ServerName** must match the server name in the SSL certificate.

   Ubuntu 22.04 or higher: Add this code to **/etc/apache2/sites-enabled/000-default-conf**

   Ubuntu 22.04 or higher

```
<VirtualHost *:443>
# Admin email, Server Name (domain name) and any aliases
 ServerAdmin support@xyz.com
 ServerName server1.xyz.com
# Index file and Document Root (where the public files are located)
 DirectoryIndex index.php
DocumentRoot /var/www/html
 <Directory /var/www/html>
 Options Indexes FollowSymLinks MultiViews
 AllowOverride All
 Order allow,deny
 allow from all
 </Directory>

 ErrorLog ${APACHE_LOG_DIR}/error.log
# Possible values include: debug, info, notice, warn, error, crit,
 # alert, emerg.
 LogLevel warn
 CustomLog ${APACHE_LOG_DIR}/access.log combined

 SSLEngine On
 SSLCertificateFile /etc/apache2/ssl/server.crt
 SSLCertificateKeyFile /etc/apache2/ssl/server.key

</VirtualHost>
```

   RHEL 9.0 or higher: Replace the **SSLCertificateFile** and **SSLCertificateKeyFile** lines in **/etc/httpd/conf.d/ssl.conf** with the following:

   RHEL 9.0 or higher

```
SSLCertificateFile /etc/httpd/ssl/server.crt
SSLCertificateKeyFile /etc/httpd/ssl/server.key
```

4. Restart Apache.

```
sudo systemctl restart apache2 # for Ubuntu
sudo systemctl restart httpd   # for RHEL
```

Converting Existing PFX SSL Certificate to PEM SSL Certificate

Sometimes you will have an existing PFX file that you want to convert to PEM format. Usually this is due to specific server requirements.

To convert PFX to PEM:

1. To find the password used when the PFX was exported, use the following commands:

Linux	$ openssl pkcs12 -in [yourfile.pfx] -nocerts -out [keyfile-encrypted.key] $ openssl pkcs12 -in [yourfile.pfx] -nocerts -nodes -out [keyfile-encrypted.key] # use this command if the first command generates empty certificate.
Windows	C:\xampp\apache\bin\openssl pkcs12 -in [yourfile.pfx] -nocerts -out [keyfile-encrypted.key] C:\xampp\apache\bin\openssl pkcs12 -in [yourfile.pfx] -nocerts -nodes -out [keyfile-encrypted.key] # use this command if the first command generates empty certificate.

2. Convert encrypted key to unencrypted key:

Linux	$ openssl rsa -in [keyfile-encrypted.key] -out server.key
Windows	C:\xampp\apache\bin\openssl rsa -in [keyfile-encrypted.key] -out server.key

3. Extract the server certificate and convert to PEM format:

Linux	$ openssl pkcs12 -in [yourfile.pfx] -clcerts -nokeys -out server.crt
Windows	C:\xampp\apache\bin\openssl pkcs12 -in [yourfile.pfx] -clcerts -nokeys -out server.crt

4. Extract the server certificate chain:

Linux	$ openssl pkcs12 -in [certificate.pfx] -cacerts -nokeys -out [server-ca.crt]
Windows	C:\xampp\apache\bin\openssl pkcs12 -in [certificate.pfx] -cacerts -nokeys -out [server-ca.crt]

5. (optional) In case your file is in p7b format, extract the server certificate and convert to PEM format

Linux	$ openssl pkcs7 -print_certs -in [yourfile.p7b] -out server.crt
Windows	C:\xampp\apache\bin\openssl pkcs7 -print_certs -in [yourfile.p7b] -out server.crt

Now you can use the server.crt, server-ca.crt and server.key files appropriately.

Use Let's Encrypt to Renew SSL Certificates

Starting with Version 19.3, FileCloud supports auto-renewing SSL certificates with Let's Encrypt.

To auto-renew your SSL certificate, you must first contact the Let's Encrypt team.

To use Let's Encrypt's HTTP-01 challenge for adding/renewing SSL certificates:

1. Contact the Let's Encrypt team and request auto-renewal of your SSL certifcate.
2. Open the following file:
   - `Windows:  C:\xampp\htdocs\.htaccess`
   - `Linux: /var/www/html/.htaccess`
3. Find the following code:

```
#----------------------------------------------------
# Let's Encrypt Support
# RewriteRule ^.well-known/(.*)$ .well-known/$1 [L]
#----------------------------------------------------
```

4. Remove # in front of:
   `RewriteRule ^.well-known/(.*)$ .well-known/$1 [L]`

   so that the code appears as:

```
#----------------------------------------------------
# Let's Encrypt Support
RewriteRule ^.well-known/(.*)$ .well-known/$1 [L]
#----------------------------------------------------
```

5. Save and close .htaccess.

HTTPS Best Practices for FileCloud

FileCloud recommends that you run all servers in a production environment only on:

- HTTPS (SSL)
- Port 443

This ensures that all communications between clients and FileCloud are completely encrypted.

To access these secured sites, users will have to type in:

https://<SITENAME>

Best Practice	Reason	Steps
Disable the existing HTTP port.	So that FileCloud can be accessed only securely via HTTPS. Setting **redirects from HTTP to HTTPS is not recommended** because mobile apps and other clients do not follow redirects (for security) Therefore removing the HTTP port completely is the best option. If you must use a redirect, Configure HTTP SSL Redirects.	To Disable HTTP (port 80) for Windows: 1. Open the webserver config file for editing: `c:\xampp\apache\conf\httpd.conf` and 2. Comment out the line with Listen 80. 3. Save and close the file. 4. Restart the server. To Disable HTTP (port 80) for Linux: 1. Open the webserver config file for editing: `/etc/apache2/ports.conf` 2. Comment out the line with Listen 80. 3. Save and close the file. 4. Restart the server.
Verify your certificates are valid.	If you have an invalid SSL configuration, your users would receive various errors on the browser, and iPhone/iPad apps **cannot preview Office documents**.	You can check the validity of the SSL certificate by testing your install against a SSL certificate checker like https://www.sslshopper.com/ssl-checker.html Provide your FileCloud URL and it will report any potential problems your SSL installation might have. These tools should report no errors for your FileCloud to function properly in SSL mode.

Best Practice	Reason	Steps

Change the default listening port (80).	If you have are conflicts with other ports.	For Windows:
		1. Open the following file for editing:
		`c:\xampp\apache\conf\httpd.conf`
		2. Locate the following two lines:
		`Listen 80`
		`ServerName localhost:80`
		3. Change these lines to the following:
		`Listen your_new_port`
		`ServerName localhost:your_new_port`
		4. Save and close the file.
		
		For Linux:
		1. Open the following file for editing:
		`/etc/apache2/ports.conf`
		2. Locate the following line:
		`Listen 80`
		3. Change it to
		`Listen Your_new_port`
		4. Open the following file for editing:
		`/etc/apache2/sites-enabled/000-default.conf`
		5. Locate the following line
		`<VirtualHost *:80>`
		6. Change it to
		`<virtualHost _default:your_new_port>`
		7. Save and close the file.

Best Practice	Reason	Steps
Change the default HTTPS port (443).	If you have are conflicts with other ports.	For Windows: 1. Open the following file for editing: `c:\xampp\apache\conf\extra\httpd-ssl.conf` 2. Locate the following line `Listen 443` 3. Change it to `Listen your_new_port` 4. Locate the following line `<VirtualHost _default_:443` 5. Change it to `<VirtualHost _default_:your_new_port>` 6. Save and close the file. For Linux: 1. Open the following file for editing: `/etc/apache2/ports.conf` 2. Locate the following lines `<IfModule mod_ssl.c>Listen 443</IfModule>` 3. Change it to `<IfModule mod_ssl.c>Listen Your_New_Port</IfModule>` 4. Open the following file for editing: `/etc/apache2/sites-available/default-ssl` 5. Locate the following line: `<VirtualHost _default_:443>` 6. Change it to `<VirtualHost _default_:your_new_port>` 7. Save and close the file.

Best Practice	Reason	Steps

Disable server information in headers.	To prevent the Web application from disclosing the server name and server version in the response header.	1. Open the Apache configuration file:
		Ubuntu location: /etc/apache2/apache2.conf
		CentOS location: /etc/httpd/conf/httpd.conf
		Windows location: C:\xampp\apache\conf\httpd.conf
		2. Add the following:
		`ServerSignature Off`
		`ServerTokens Prod`
		3. Restart the Apache server.

HTTP To HTTPS Redirects

It is recommended that you configure FileCloud Server so that it can be accessed securely only via HTTPS.

Setting **redirects from HTTP to HTTPS is not recommended** because mobile apps and other clients do not follow redirects (for security).

Therefore removing the HTTP port completely is the best option.

If you must use a redirect, add the following lines:

```
<VirtualHost *:80>
 RewriteEngine On
 RewriteCond %{HTTPS} off
 RewriteRule (.*) https://%{HTTP_HOST}%{REQUEST_URI}
 </VirtualHost>
```

- In Windows, the above lines should we added to file c:\xampp\apache\conf\extra\httpd-vhosts.conf. Restart the apache server.
  Also make sure the following line is uncommented in the file C:\xampp\apache\conf\httpd.conf.

  ```
  # Virtual hosts
  Include conf/extra/httpd-vhosts.conf
  ```
- In Linux, the above lines should be added to the /etc/apache.d/sites-enabled/000-default.conf file. If you already have a VirtualHost directive, add only the lines starting with "Rewrite". Restart the apache server.

Configure HTTP SSL Redirects

It is recommended that you configure FileCloud Server so that it can be accessed securely only via HTTPS.

Setting **redirects from HTTP to HTTPS is not recommended** because mobile apps and other clients do not follow redirects (for security).

Therefore removing the HTTP port completely is the best option.

 HTTPS FileCloud Best Practices

If you must use a redirect, you will need to edit the webserver config file.

For Windows:

1. Open the following file for editing:

```
c:\xampp\apache\conf\extra\httpd-vhosts.conf
```

2. Add the following code

```
<VirtualHost *:80>
 RewriteEngine On
 RewriteCond %{HTTPS} off
 RewriteRule (.*) https://%{HTTP_HOST}%{REQUEST_URI}
 </VirtualHost>
```

3. Save and close the file.
4. Open the following file for editing:

```
C:\xampp\apache\conf\httpd.conf
```

5. Make sure the following *Include* line is uncommented:

```
# Virtual hosts
Include conf/extra/httpd-vhosts.conf
```

6. Save and close the file.
7. Restart the server.

For Linux:

1. Open the following file for editing:

```
/etc/apache.d/sites-enabled/000-default.conf
```

2. Add the following code: (If you already have a VirtualHost directive, add only the lines starting with "Rewrite".)

```
<VirtualHost *:80>
```

```
RewriteEngine On
RewriteCond %{HTTPS} off
RewriteRule (.*) https://%{HTTP_HOST}%{REQUEST_URI}
</VirtualHost>
```

3. Save and close the file.
4. Restart the server.

Changing a Default Port or Web Server Setting

The ports and Web servers used by FileCloud are normally set during installation. After installation is completed, if you need to, you can change the default listening ports and Web servers.

By default, FileCloud uses these 3 ports:

- **80 (web server)**
- **443 (web server)**
- **27017 (database)**

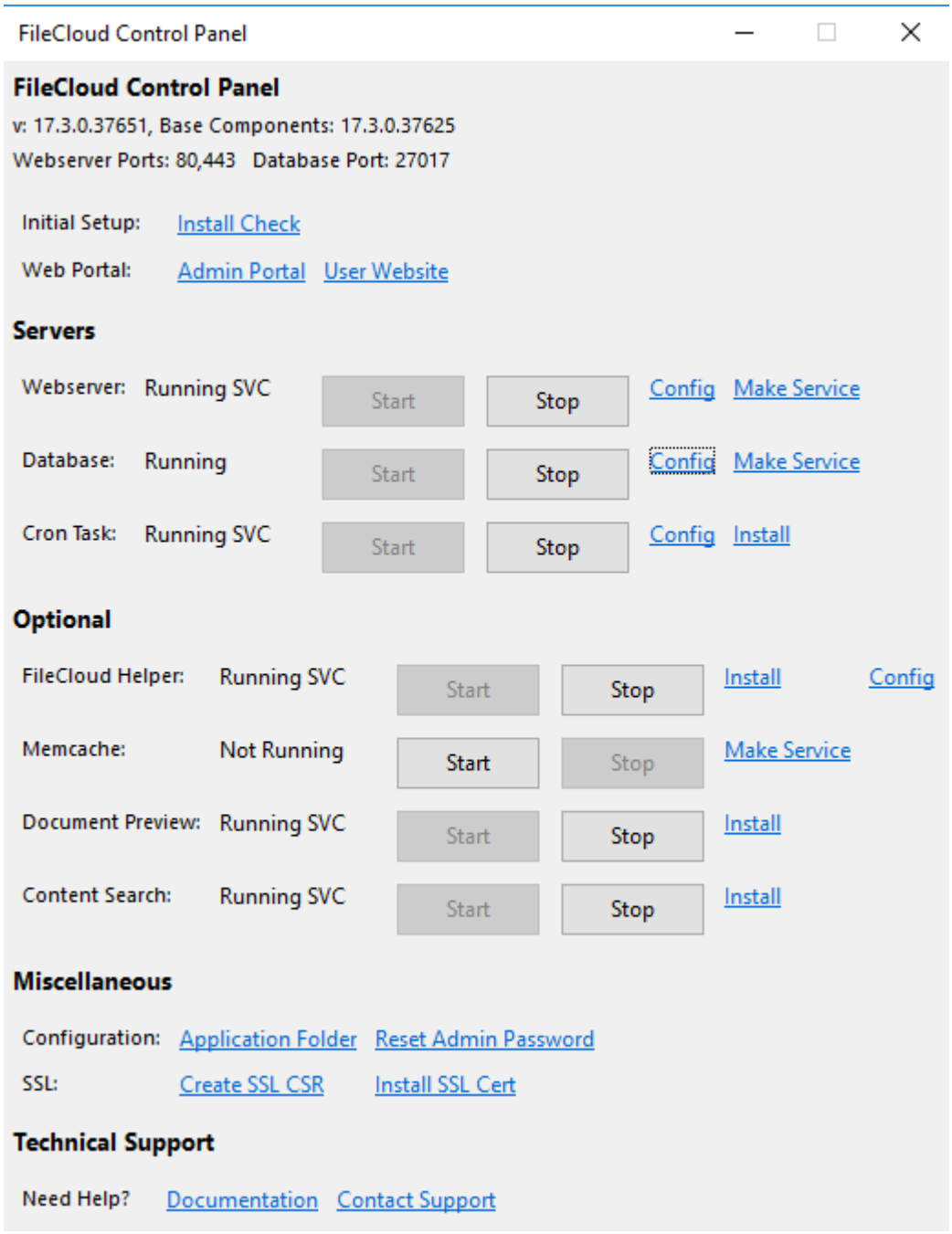
If other programs are using these ports, the FileCloud server will not start up properly.

You might want to change the port numbers or Web servers in some of the following scenarios:

- You need to disable anything that uses port 80 and 443
- You want Apache to run on non standard ports or servers or use firewall rules
- You need to use IIS on standard ports

💡 It is also recommended to disable HTTP port on the FileCloud server.

To change the ports, you will need to open the FileCloud Control Panel.



To change a port or Web server setting:

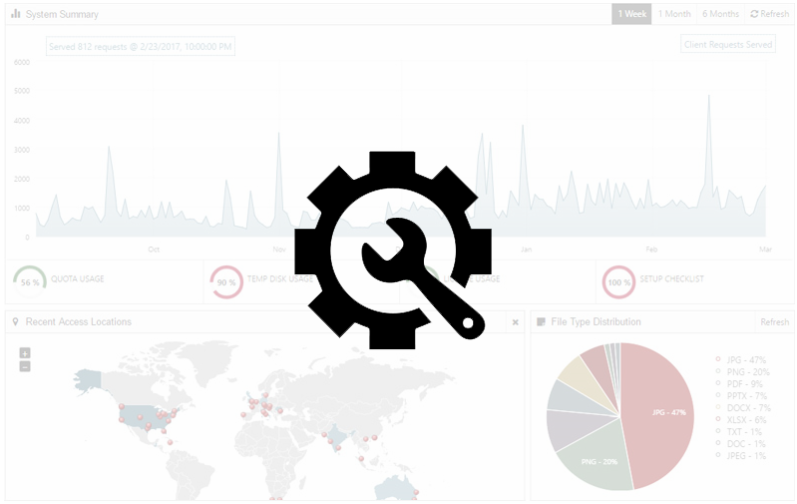
1. On the server, from the *Windows Start* menu, select the *FileCloud Control Panel*, or double-click the *xampp/cloudcp.exe* file.
2. In the Servers section, for Webserver, click Stop.
3. Change the Port configuration according to HTTPS Best Practices for FileCloud.
4. To start the Webserver, click Start next to Webserver.
5. In the Servers section, for Database, click Stop, then Config.
6. Make your changes, save them, and next to Database, click Start.

7. If you have changed the default Web server, open localconfig.php at:
   Windows Location: XAMPP DIRECTORY/htdocs/config/localconfig.php
   Linux Location: /var/www/config/localconfig.php
   and add the following, replacing n.n.n.n with the correct IP address.

```
define("TONIDOCLOUD_APACHE_BIND_IP", "n.n.n.n");
```

.

Installation Troubleshooting



Unexpected problems can happen when you are installing or configuring your new FileCloud software.

The reasons vary, depending on your computer, your operating system, network speed, license, and other factors.

In the following section, to display more information, click on a topic.

The following list presents some of the issues we've encountered.

Webserver or Database Does Not Start

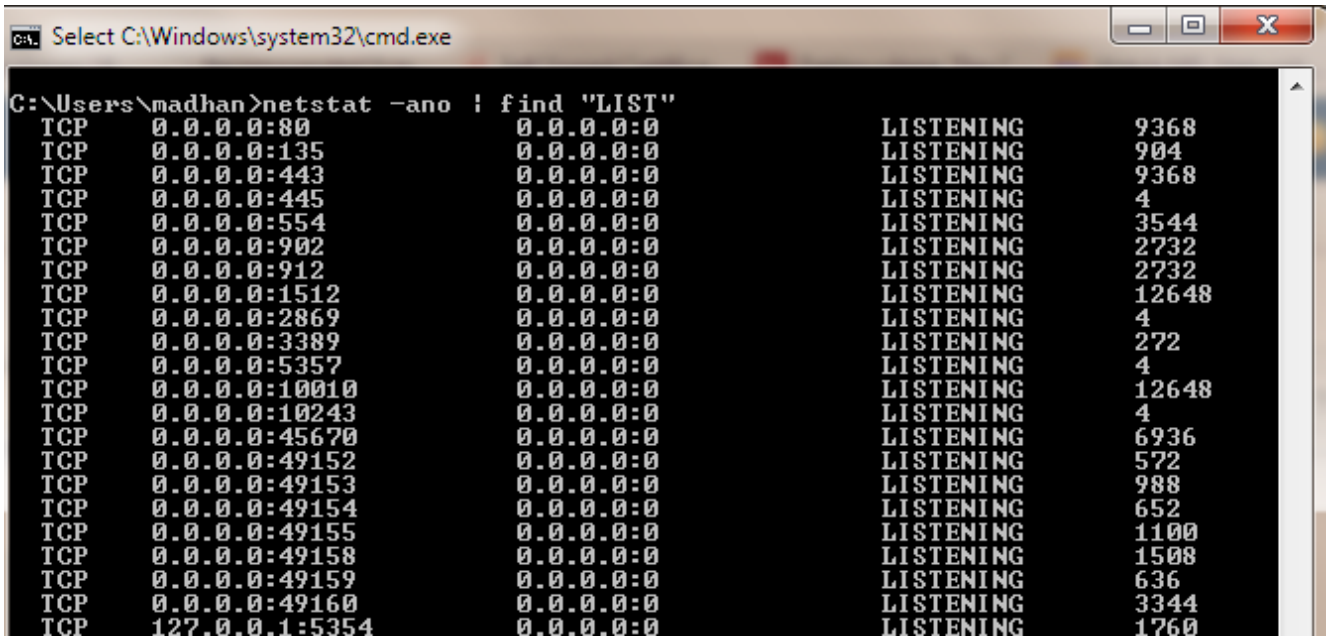
FileCloud Server not starting on Windows

If FileCloud Webserver or Database does not startup, it is most likely that another process is using the ports used by the Webserver and the Database. By default, FileCloud uses these 3 ports (**80, 443, 27017**), so if other programs are using these ports, the servers will not start up properly.

Most common applications that use these ports are Microsoft IIS, Skype, TeamViewer.

To figure out which application is using this port, open a command prompt and type the following command.

```
netstat -ano | find "LIST"
```



You can look at the process using ports 80, 443 or 27017. (for example 0.0.0:80).
The right most column shows the process ID of the process using that port.

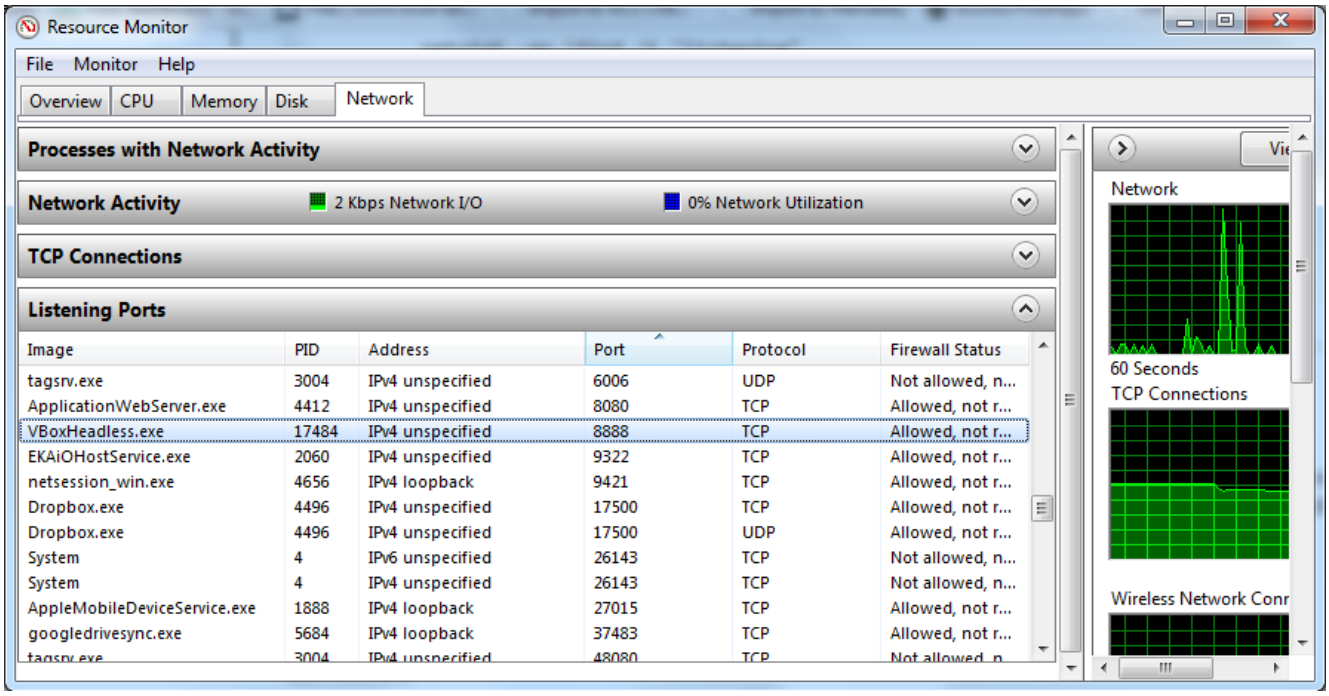
You can get the name of the process, by

> ⚠ tasklist /svc /PI "PID eq 988"

GUI Option

Alternative option to see Process running on ports 80,443 or 27017 is through GUI. Go to *Start>>All Programs>>Accessories>>System Tools>>Resource Monitor* (or **Run** `resmon.exe`)

PID (4) - Image (System) running on port 80 implies IIS may be running. Stop the IIS and try to restart Apache.



Common Services Interfering with Ports using by FileCloud Server

Other Apps Using same Network Services
WWW Publishing Service
Microsoft IIS
Microsoft Skype
HTTPD.sys

For 2012 server, you might need to do this

> **Windows server 2012**
>
> net stop http /y
> sc config http start= disabled
>
> You might need to reboot after this

https://www.devside.net/wamp-server/opening-up-port-80-for-apache-to-use-on-windows

Mod Rewrite Fails

Mod Rewrite Setup Check Fails during Install

1. Verify that the mod_rewrite apache module is properly installed and activated
2. In Apache configuration file for the site, ensure "AllowOverride All" is set correctly for the site.
3. Ensure, that the Apache ***.htaccess*** file is present in the WWW Root (say /var/www or c:\xampp\htdocs)

For HTTPS sites if everything else works but mod rewrite check error still is reported you can ignore it.

If you still have questions, send an email to our FileCloud Support Team (support@codelathe.com)

Mount a Share that FileCloud Can Access

You might need to mount a network share in the following situations:

- For installation purposes
- To allow FileCloud to use storage from devices over the network for both local storage as well as external shares

Use these instructions to mount a share that FileCloud can access without encountering any permission issues.

FAQ's

What is CIFS?

Common Internet File System (CIFS) is a file-sharing protocol that provides an open and cross-platform mechanism for requesting network server files and services.

- CIFS is based on the enhanced version of Microsoft's Server Message Block (SMB) protocol for Internet and intranet file sharing.

CIFS is typically used in workstation and server OSs and was a native file-sharing protocol in Windows 2000.

- CIFS is also used in embedded and appliance systems.
- Recent storage products, like Storage Area Network (SAN) and Network Access Server (NAS), are based on CIFS.

What is NFS?

Network File System (NFS) is a distributed file system protocol originally developed by Sun Microsystems in 1984.

- This file system allows a user on a client computer to access files over a computer network much like local storage is accessed.
- NFS, like many other protocols, builds on the Open Network Computing Remote Procedure Call (ONC RPC) system.
- The NFS is an open standard defined in Request for Comments (RFC), allowing anyone to implement the protocol.

Mounting Scenarios

Shares are mounted using command line statements.

CIFS on Windows

CIFS on Linux

NFS on Linux

Mount a CIFS Share on Linux for FileCloud

You might need to mount a CIFS network share on Linux, so that FileCloud server can use storage from devices over the network for both local storage as well as external shares.

Use these instructions to mount a CIFS share in a way that prevents that FileCloud from encountering any permission issues.

Assumptions

Parameter	Value
Remote CIFS share path	//192.168.1.120/storage
Local mount path	/mnt/storage
CIFS user	username
CIFS password	password
Apache user uid	33. Note: check your server for the right uid
Apache user gid	33. Note: check your server for the right gid

Pre-requisites

Ensure the command mount.cifs is present in your distro. Here is the list of packages that provide this utility in different distros.

Required Packages

Ubuntu: cifs-utils

Installing cifs-utils in Ubuntu

```
user@host:~$ sudo apt-get update
user@host:~$ sudo apt-get install cifs-utils
```

Mounting

Use the following command to mount the CIFS share

Command Line

```
user@host:~$ mount -t cifs -o

username=username,password=password,uid=33,gid=33,rw,nounix,iocharset=utf8,file_mode=077
7,dir_mode=0777 //192.168.1.120/storage /mnt/storage


or if you have credential files at /root/.this-creds-file
user@host:~$ mount -t cifs -o credentials=/root/.the-creds-file,uid=33,gid=33,rw,nounix,
iocharset=utf8,file_mode=0777,dir_mode=0777 //192.168.1.120/storage /mnt/storage
```

Auto Mounting

To perform auto mounting of windows share, you need to create a password file and use that in /etc/fstab. Follow the steps here:

1. Create a file /root/.smbcredentials with the following content.

   Command Line

   ```
   username=winuser
   password=winpass
   ```

   Here *winuser* and *winpass* are the username and password for the remote CIFS share.
2. Change the permissions such that only root can read the file.

   Command Line

   ```
   # sudo chmod 700 /root/.smbcredentials
   ```
3. Now add the following line in /etc/fstab file.

   Command Line

   ```
   //192.168.1.120/storage /mnt/storage        cifs    credentials=/
   root/.smbcredentials,uid=33,gid=33,rw,nounix,iocharset=utf8,file_mode=0777,dir_mod
   e=0777 0 0
   ```
4. Test if the line added in the fstab file works.

Command Line

```
# sudo mount -a
If you are getting any error while mounting like " host not found ", add version
as below at the end of dir_mode=0777 as shown in the below//192.168.1.120/
storage /mnt/storage cifs credentials=/
root/.smbcredentials,uid=33,gid=33,rw,nounix,iocharset=utf8,file_mode=0777,dir_mod
e=0777,vers=3.0 0 0
```

Now the remote share should be mounted at /mnt/storage.

Mount an NFS share on Linux for FileCloud

FileCloud server might need use storage from devices over network for both local storage as well as external shares. This document explains how to mount a NFS network share on Linux.

Pre-requisites

Required Packages
Ubuntu: nfs-common

Installing nfs-common in ubuntu

```
user@host:~$ sudo apt-get update
user@host:~$ sudo apt-get install nfs-common
```

Mounting

Use the following command to mount the NFS share

Commandline

```
user@host:~$ mount simpson.example.com:/misc/export /misc/local
```

In this command, simpson.example.com is the hostname of the NFS file server, /misc/export is the directory that simpson is exporting, and /misc/local is the location to mount the file system on the local machine. After the mount command runs (and if the client has proper permissions from the simpson.example.com NFS server) the client user can execute the command ls /misc/local to display a listing of the files in /misc/export on simpson.example.com.

The mount point directory on local machine (/misc/local in the above example) must exist.

Mount CIFS Shares from Windows Command Line

Connect Network Drive

To map a network drive from windows command line:

1. Click **Start**, and then click **Run** .
2. In the **Open** box, type cmd to open command line window.
3. Type the following, replacing *Z:* with drive letter you want to assign to the shared resource:
   `net use Z: \\computer_name\share_name /PERSISTENT:YES`

Disconnect Network Drive

To disconnect a mapped drive:

1. Open command line window.
2. Type the following, replacing *X:* with drive letter of the shared resource:
   `net use  Z: /delete`

Storage and Client Application Limits

One of FileCloud's most important features is the number of different storage options it offers for the user website and client applications. When choosing your storage options, consider the limitations of each option. The following table lists the most common limitations to consider when using FileCloud with Network Folders, including Drive and Sync applications. Where applicable, the table includes ways of working around these limitations:

Server Component or Client Application	Description of the limitation
Network Folders	Since Network Folders are stored outside of FileCloud, offline syncing of files using the FileCloud Sync app may be slower and cause more server CPU load then offline syncing with Managed Storage. If offline syncing of folders with 5,000 folders or more is needed, we recommend that you use Managed Storage.
	Folder and File listings may be slower: Depending on the network connectivity to the Network Share, it may take more time to access and list files and folders in Network Folders than in Managed Storage.
	When using Network Folders on Windows, you cannot access files or folders if the entire path exceeds 256 characters.
	Files starting with "." are not supported in network folders
FileCloud Sync App & FileCloud Drive App	Windows Operating Systems only allow file and folder names of 256 characters or less, so if an entire file path and name exceed 256 characters, you cannot access it locally using Windows Explorer. Shorten the name or move the file or folder to a higher-level folder within FileCloud.
	Names Ending with "." or "," Files and folders ending with these characters cause processing errors. Rename these files and folders.
	FileCloud Sync and FileCloud Drive don't sync files with characters that are incompatible with certain operating systems. Rename them to something more suitable for use across multiple operating systems. Invalid characters are: * < > : \ / | ? ~

Server Component or Client Application	Description of the limitation
	The following files are **not** uploaded: • tonido.db • Thumbs.db • desktop.ini • files ending with .tmp • files ending with .lnk • files or folders ending with space • .tonidocache • files starting with Conflict_ • sync.ico • .ds_store • hidden files (usually files starting with . in Linux and files with a hidden attribute in Windows) • file names and file extensions which are restricted by the server admin • files that are in use (locked by the system or any other application) Beginning in Version 19.1, FileCloud supports overriding file type restrictions. To allow users to sync file types such as lnk, ini and thumbs.db, as well as hidden files, use the **allowedfilelist** option on the page XML Options for Sync.
FileCloud Drive App	The FileCloud Drive App supports Windows 8+. It can be installed on Windows 7; however, we do not provide support since the components used are no longer supported in Windows 7.
	If Sophos Antivirus is installed, Drive application performance with large files (10MB+) is impacted.
	If a folder in FileCloud (or a Network Folder) has over 1K files and folders inside it, Drive can take approximately 30 seconds or more to list the files/folders, depending on folder content, network speed, Internet access speed, and so on. In some cases, it can fail to list the folder's content. We recommended that you reorganize the content in lower count subfolders (-1K).
	Network Folder and File listings may be slower: Depending on the network connectivity to the Network Share, it may take more time to access and list files and folders in Network Folders than in Managed Storage.

Mounting CIFS and NFS Shares

- How to Mount CIFS Shares from Windows Command Line
- How to properly mount a CIFS share on Linux for FileCloud
- How to properly mount a NFS share on Linux for FileCloud

How to Mount CIFS Shares from Windows Command Line

Connect Network Drive

To map a network drive from windows command line:

1. Click **Start**, and then click **Run** .
2. In the **Open** box, type cmd to open command line window.
3. Type the following, replacing *Z:* with drive letter you want to assign to the shared resource:
   `net use Z: \\computer_name\share_name /PERSISTENT:YES`

Disconnect Network Drive

To disconnect a mapped drive:

1. Open command line window.
2. Type the following, replacing *X:* with drive letter of the shared resource:
   `net use  Z: /delete`

How to properly mount a CIFS share on Linux for FileCloud

You might need to mount a CIFS network share on Linux so that FileCloud can use storage from devices over the network for both local storage and external shares.

Use these instructions to mount a CIFS share in a way that prevents FileCloud from encountering any permission issues.

Assumptions

Parameter	Value
Remote CIFS share path	//192.168.1.120/filecloud
Local mount path	/mnt/storage
CIFS user	username

Parameter	Value
CIFS password	password
Apache user uid	48. Note: check your server for the right uid
Apache user gid	48. Note: check your server for the right gid

Pre-requisites

Ensure the command mount.cifs is present in your distro. Here is the list of packages that provide this utility in different distros.

> **Required Packages**
>
> RHEL: cifs-utils

```
yum update -y
yum install cifs-utils
```

Mounting

Use the following command to mount the CIFS share:

```
mount -t cifs -
o username=username,password=password,uid=48,gid=48,rw,nounix,iocharset=utf8,file_mode=0
777,dir_mode=0777 //192.168.1.120/storage /mnt/storage
```

or if you have credential files at /root/.this-creds-file:

```
mount -t cifs -o credentials=/root/.the-creds-file,uid=48,gid=48,rw,nounix,iocharset=utf
8,file_mode=0777,dir_mode=0777 //192.168.1.120/storage
```

Auto Mounting

To perform auto mounting of a Windows share, create a password file, and use it in /etc/fstab. Follow the steps here:

1. Create a file /root/.smbcredentials with the following content.

```
username=filecloud
password=password
```

2. Change the permissions such that only root can read the file.

```
chmod 700 /root/.smbcredentials
```

3. Now add the following line in /etc/fstab file.

```
//192.168.1.120/storage /mnt/storage        cifs    credentials=/
root/.smbcredentials,uid=48,gid=48,rw,nounix,iocharset=utf8,file_mode=0777,dir_mod
e=0777 0 0
```

4. Reload systemctl daemon.

```
systemctl daemon-reload
```

5. Test if the line added in the fstab file works.

```
mount -a
```

Now the remote share should be mounted at /mnt/storage.

How to properly mount a NFS share on Linux for FileCloud

Introduction

FileCloud server might need use storage from devices over network for both local storage as well as external shares. This document explains how to mount a NFS network share on Linux.

Pre-requisites

Required Packages
Ubuntu: nfs-common

Installing nfs-common in ubuntu

```
user@host:~$ sudo apt-get update
user@host:~$ sudo apt-get install nfs-common
```

Mounting

Use the following command to mount the NFS share

Commandline

```
user@host:~$ mount simpson.example.com:/misc/export /misc/local
```

In this command, simpson.example.com is the hostname of the NFS file server, /misc/export is the directory that simpson is exporting, and /misc/local is the location to mount the file system on the local machine. After the mount command runs (and if the client has proper permissions from the simpson.example.com NFS server) the client user can execute the command ls /misc/local to display a listing of the files in /misc/export on simpson.example.com.

The mount point directory on local machine (/misc/local in the above example) must exist.