

Making the Most of Your StorCenter: Using FTP to Access Files Remotely

The Built-in Remote Access sharing works well for transferring individual files, but is not well suited to transferring entire folders or multiple files. This white paper will walk you through the steps of enabling FTP for remote file access.

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an EMC company

Introduction

The Built-in Remote Access sharing works well for transferring individual files, but is not well suited to transferring entire folders or multiple files. To move larger amounts of files you will want to enable your StorCenter server's FTP server.

FTP or File Transfer Protocol is a common Internet protocol used for file transfers. Although FTP is a very common protocol, it still may require special client software in some situations. For example, the Mac OS X finder supports FTP, but is Read-Only—You will need special software to use FTP to upload files.

To enable FTP for remote access you will need to perform the following tasks.

1. Enable Security
2. Create Users
3. Enable FTP
4. Port Forward Port 21

This white paper describes these processes in detail.

Enabling Security

By default, the Iomega StorCenter device does not burden you with the requirement of creating an administrator, with user name and password, that requires you to log in to your own device. In the default setup, any user on your local network can access and configure your Iomega StorCenter device and security is provided by your local area network. However, if you have data you wish to secure, want to create unique users or groups, would like to create secure folders, plan to use Active Directory, or require additional security, you can optionally enable security.

Access the Security Settings page by navigating to the Settings tab and clicking **Security Settings**.

When you enable security, you will be asked to create an administrator user. With security enabled, only administrator users can view or change settings on the Iomega StorCenter device, including creating or deleting users and folders. When security is enabled, data contained within public folders can still be accessed by anyone within your local network. To secure any sensitive data, create a secure folder and move your sensitive data into that folder for safe keeping.

1. Access the Security Settings page by navigating to the Settings tab and clicking **Security Settings**.
2. Select the **Enable security** checkbox. When Enable security is selected, the create an administrator user fields display.

NOTE: When security is enabled, browser communications with the device are encrypted. Therefore, each computer that attempts to access the StorCenter device may encounter a security warning, which can be safely ignored. In addition, you may be asked to accept a signed certificate for the StorCenter device, which you should accept. If you change the device name at a later date, these warnings may appear again.



3. Enter the following information to create an administrator user:
 - **Username**—Enter the username for an administrator user to be created. This will be the first administrator user created and the only user that can initially log into this Iomega StorCenter device. A username can be a maximum of 32 characters and spaces are not allowed.
 - **Password**—Create a password for this administrator user. For stronger security, it is recommended that the password be between 8 and 12 characters; spaces are not allowed.
 - **Confirm Password**—Re-enter the password. If the text in this field does not match the text in the Password field, an error will be returned.
 - **Remember Username and Password**—Check if you wish to have this username and password remembered on this computer in the future. When checked, you will not have to enter the login information when accessing the device from this computer.

NOTE: Iomega StorCenter administrators do not have access to all folders by default. Access rights to folders must be granted explicitly to administrators, as with other users.

Click **Apply** to save your settings.

Creating Users

Creating users will allow you to control who is able to log into your FTP Shares.

1. Log in as an administrator. Navigate to the **Users** tab and click **Add** near the bottom of the page or, from the **Home** tab, click **Add Users**. The Add User page opens.
2. You can click **Cancel** at any time to exit the current operation and return to the Users page or the Home page.
3. Enter the following information:

Username—enter the username of the user to be created. This will be the username provided when logging into the Iomega StorCenter device. There is maximum of 32 characters and spaces are not allowed.

Password—create a password for the user. The password should be between 8 and 12 characters. Spaces are not allowed.

Confirm Password—Re-enter the new password. If the text in this field does not match the text in the Password field, an error will be returned.

Descriptive Name—add a descriptive name to identify the user. For example, if you created a user with a Username of jsmith, you may want to add the Descriptive Name Joe Smith.

Administrator—check this box if you would like to allow this user to manage the Iomega StorCenter device.

NOTE: An administrator does not inherently have access to all shared folders. Access to shared folders must be granted explicitly to administrators, as with other users.



Create a secured Shared Folder for this user—check this box if you would like to create a secured shared folder for this user. The created shared folder will have the new user’s name and will give access only to that user. If you do not wish to create a secured shared folder for this user on the device, uncheck this checkbox.

4. Click **Next** to grant Shared folder access rights for this user.
5. Set the access rights for the user to access the available shared folders. An administrator can modify access rights to any Shared folder by selecting **Read/Write, Read, or None** for that shared folder. Unsecured shared folders are not displayed in the list since access to them cannot be restricted.

Once you have finished setting the access rights for the user, click **Apply** to add the user. If the user was created successfully, a confirmation page will display. Click **OK** to return to the Users page or the Home page.

Enabling FTP

The FTP page can be accessed by navigating to the Settings tab and clicking **Network Services** → **FTP**.

This page allows you to enable FTP (File Transfer Protocol) access to your Iomega StorCenter device. When you check **Enable FTP Access**, you can send files to your Iomega StorCenter device using FTP.

Click **Apply** to save your changes.

Once FTP is enabled, all available shares will be accessible via FTP.

What is Port Forwarding?

Most home routers or gateways use a NAT firewall to protect your home network from the Internet.

NAT or Network Address Translation works by hiding your computer’s IP address from internet devices and replacing it with the gateway IP address. It will then forward internet traffic to the proper computer.

To further protect your home network, the NAT firewall disallows unrequested traffic from the internet. Some applications, such as Torrents and Remote Access, require unrequested inbound connections. To use these features with your StorCenter device, you will need to configure your router to allow inbound connections for these applications. This is known as Port Forwarding.

Configuring Port Forwarding

The Iomega StorCenter will attempt to automatically configure your router to port forward for remote access, once that feature is enabled. If the StorCenter is unsuccessful or if you need to use other features such as torrent download or FTP, you will need to manually configure your router.

NOTE: Before port forwarding, you will want to change your StorCenter to a static IP address.



The port forwarding steps will vary depending on your router. You will need to consult the user's manual that came with your router for more information. In most cases you should look for a section on port forwarding OR application access.

Although, Iomega cannot provide you with exact steps for your router, we can provide some information on settings fields commonly found on Port Forwarding screens. (Not all fields are found on all devices. Fields may appear in a different order on your router.)

Linksys Users: In addition to Port forwarding you will need to deselect Block Anonymous Internet Requests on the Firewall settings page.

Port Forwarding Settings

Description	Protocol	External Port*	Internal Port	IP Address
FTP	TCP	21	21	StorCenter IP†

* Generally the External and Internal port settings will match; however, since a port can only be forwarded to one device you may need to change the external port to avoid a forwarding conflict. For example, if your router has external (web) configuration enabled it may already be using port 443. You may need to set the external port to 8080, etc.

† You can find your StorCenter device's IP address on the **Settings** → **Network Services** → **Network Settings** screen.

Router Specific Settings

This section will give you step by step instructions for setting up port forwarding on common router models. Your router may differ from these instructions based on its model and firmware version. If these steps do not match your router, see your router's documentation or visit portforward.com. Iomega is not responsible for the information on portforward.com.

NOTE: These instruction explain how to port forward your home network. You may not be able to connect from remote networks if port 21 (FTP) is blocked. Check with the remote network's administrator for information on security policies. Iomega is **NOT** responsible for network intrusions caused by opening ports in your internet gateway's firewall (port forwarding).

Actiontec Routers

6. Log into your router by entering its IP address in the browser's URL field. The default IP address for this router is **192.168.0.1**.
7. If necessary, enter your router's username and password, then click OK.
8. Click Setup/Configuration in the Main Menu.
9. Click Advanced Setup in the left-hand navigation pane.
10. Click Begin Advanced Setup.
11. Click Port Forwarding in the left-hand navigation pane.
12. Enter **21** in both field under **IP Port Range**.
13. Select **TCP** from the **Protocol** drop-down menu.
14. Enter the IP Address of your StorCenter in the **IP Address field**.



15. Click **Add**.
16. Click **Save and Restart**.

These instructions are based on an Actiontec GT701-WG with QW04-3.60.2.0.6.3-GT701-WG firmware.

Apple Airport Extreme, Airport Express, and Time Capsule Routers

1. Launch the **Airport Utility** located in the Utilities folder on the Mac (/Applications/Utilities/) or in the Airport programs group under the Windows Start Menu (Start→All Programs→Airport).
2. Double click your router in the left-hand navigation pane. If your base station does not automatically appear, try rescanning the network. You can also manually enter the IP address of your base station. The default IP address is **10.0.1.1**.
3. Enter your username and click **OK**. By default, the password is **public**. You will **NOT** be prompted for a username.
4. Click the **Internet** tab.
5. Click **NAT**.
6. Check the box for **Enable NAT Port Mapping Protocol**.
7. Click **Configure Port Mappings....**
8. Click the **+** (add) button.
9. From the **Service** drop-down menu, select **Choose a service**.
10. In the **Public TCP Port(s)** field, enter **21**.
11. In the **Private IP Address** field, enter your StorCenter server's IP address.
12. In the **Private TCP Port(s)** field, enter **21**.
13. Click **Continue**.
14. Enter **StorCenter FTP** in the Description field.
15. Click **Done**.
16. Click **Update**.

These instructions are based on an Apple Airport Extreme with v7.41 firmware.

Buffalo Routers

1. Log into your router by entering its IP address in the browser's URL field. The default IP address for this router is **192.168.0.10**.
2. If necessary, enter your router's username and password, then click **OK**. The Default username is **root**. The default password is blank.
3. Click **Internet Games (Port Mapping)** in the left-hand navigation pane.
4. Enter **21** in the **TCP** field.



5. Click the **Manual Configuration** radio button.
6. Enter your StorCenter's IP address.
7. Click **Apply**.

These instructions are based on a Buffalo WHR-HP-G54.

D-Link Routers

1. Log into your router by entering its IP address in the browser's URL field. The default IP address for this router is **192.168.0.1**.
2. If necessary, enter your router's username and password, then click **OK**. The Default username is **admin**. The default password is blank.
3. Click the **Advanced** tab.
4. Click **Port Forwarding** in the left-hand navigation pane.
5. Enter your StorCenter server's IP address in the **IP Address** field.
6. Enter **21** in both the **Start** and **End** fields
7. Select **TCP** from the **Traffic Type** drop-down menu.
8. Check the untitled box on the left-side of the line to enable the forwarding rule.
9. Click **Save Settings**.

These instructions are based on a D-Link EBR-2310.

Routers with DD-WRT Firmware

1. Log into your router by entering its IP address in the browser's URL field. The default IP address for this router is **192.168.2.1**.
2. If necessary, enter your router's username and password, then click **OK**. The Default username is **root**. The default password is **admin**.
3. Click the **Applications & Gaming** tab.
4. Click the **Port Range Forwarding** sub-tab.
5. Enter **StorCenter FTP** in the **Application** field.
6. Enter **21** in the **Start** and **End** fields.
7. Select **TCP** from the **Protocol** drop-down menu.
8. Enter your StorCenter server's IP address in the **IP Address** field.
9. Check the **Enable** box to enable the forwarding rule.
10. Click **Add**.
11. Click **Save Settings**.

These instructions are based on DD-WRT firmware v23 SP2 on a Linksys WRT-54G.



Linksys Routers (Original Firmware)

1. Log into your router by entering its IP address in the browser's URL field. The default IP address for this router is **192.168.1.1**.
2. If necessary, enter your router's username and password, then click OK. The Default username is blank. The default password is **admin**.
3. Click the **Security** tab.
4. Deselect **Block Anonymous Internet Requests**.
5. Click the **Save Settings** button.
6. Click the **Applications & Gaming** tab.
7. Click the **Port Range Forwarding** sub-tab.
8. Enter **StorCenter FTP** in the **Application** field.
9. Enter **21** in the **Start** and **End** fields.
10. Select **TCP** from the **Protocol** drop-down menu.
11. Enter your StorCenter server's IP address in the **IP Address** field.
12. Check the **Enable** box to enable the forwarding rule.
13. Click **Save Settings**.

These instructions are based on DD-WRT firmware v23 SP2 on a Linksys WRT-54G.

Netgear Routers

1. Log into your router by entering its IP address in the browser's URL field. The default IP address for this router is **192.168.0.1**.
2. If necessary, enter your router's username and password, then click OK. The Default username is **admin**. The default password is **password**.
3. Click **Port Forwarding** in the left-hand navigation pane.
4. Click the **Add Custom Service** button.
5. Enter **StorCenter FTP** in the **Service Name** field.
6. Enter **21** in the **Starting Port** and **Ending Port** fields.
7. Enter your StorCenter server's IP address in the **Server IP Address** field.
8. Check the **Enable** box to enable the forwarding rule.
9. Click **Add**.

These instructions are based on a Netgear RP614.

Routers with Tomato Firmware

1. Log into your router by entering its IP address in the browser's URL field.
2. If necessary, enter your router's username and password, then click **OK**.
3. Click the **Port Forwarding** in the left-hand navigation pane.



4. Select **TCP** from the **Proto** drop-down menu.
5. Enter **21** in the **Ext Ports** and **Int Ports** fields.
6. Enter your StorCenter server's IP address in the **Int Address** field.
7. Enter **StorCenter FTP** in the **Description** field.
8. Check the **Enable** box to enable the forwarding rule.
9. Click **Add**.
10. Click **Save**.

These instructions are based on a Tomato v1.23 on a Linksys WRT-54G.



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