

## Setting up Rsync over SSH

Follow these simple steps in the Setup Wizard to configure rsync to run over SSH:

## What is Rsync?

Rsync is a software tool that is used to synchronize files and directories from one device to another. Using the delta-transfer algorithm, the amount of data sent over the network is dramatically reduced, by only sending the differences between the source files and the existing files in the destination. Rsync is widely used for backups and mirroring.

## What is SSH?

Secure Shell or SSH is a network protocol that allows data to be exchanged using a secure channel between two networked devices. The encryption used by SSH provides confidentiality and integrity of data over insecure networks such as the Internet.

This example assumes that both the source and the destination ReadyNAS® units are configured behind independent firewalls. The destination firewall is required to allow an incoming SSH communication.

### Step 1: Configure the NETGEAR firewall inbound service

Select **"SSH:TCP"** as the service and set the action to **"ALLOW always"**. Then, enter the DNS address of the local destination server.

The screenshot shows the 'Inbound Service' configuration window. The 'Service' dropdown is set to 'SSH:TCP'. The 'Action' dropdown is set to 'ALLOW always'. The 'Select Schedule' dropdown is set to 'Schedule 1'. The 'Send to LAN Server' field contains the IP address '192.168.1.84'. The 'Translate to Port Number' checkbox is unchecked. The 'WAN Destination IP Address' dropdown is set to 'ADSL'. The 'LAN Users' dropdown is set to 'Any'. The 'WAN Users' dropdown is set to 'Any'. The 'Log' dropdown is set to 'Never'. The 'Bandwidth Profile' dropdown is set to 'NONE'. On the right side, there are fields for 'Start' and 'Finish' times, all of which are set to '0'.

### Step 2: Synchronize files to a remote ReadyNAS

In the following example, there are two ReadyNAS units configured in different public Internet locations.

First, configure the "source" ReadyNAS:

- Select **"Backup"**, then the **"Add a New Backup Job"** tab:
- Select a backup source. In this example, we will use the local share **"Rsync\_backup"**.

#### STEP 1 - Select backup source

Specify what you want to backup. The path you want to backup can be in a share on this device (a USB disk attached to this device will show up as a share) or located remotely. The backup source and destination cannot both be remote shares.

The screenshot shows the 'Select backup source' configuration window. The 'Share' dropdown is set to 'rsync\_backup'. The 'Host' field is empty. The 'Path' field is empty, with a 'Browse' button next to it. The 'Login' field is empty. The 'Password' field is empty. At the bottom, there is a 'Test connection' button.

Next, select the backup destination, which will be **“Remote: Rsync Server”**.

#### STEP 2 - Select backup destination

Specify where you want your backup data saved. As with the backup source, the destination path can be a share on this device or a path on a remote PC or device.

Remote: Rsync Server  Host:

Path:

Login:  Password:

Tunnel Rsync over SSH. This requires adding the ReadyNAS public key to the remote server authorized SSH key list.  
[Download public SSH key file](#)

Enable Compression

Remove deleted files on target.

Enable FAT32 compatibility mode.

- The **“Host”** address is the public IP or dynamic DNS address of the remote firewall.
- The data will be copied to the share **“backup”**.
- Enable **“Tunnel Rsync over SSH”**. Then, select **“Download public SSH key file”** and save the ReadyNAS SSH key to the PC. This will be required to be copied to the destination ReadyNAS later.

#### Step 3: Configure the destination ReadyNAS

On the destination ReadyNAS, select **“Services”**, then the **“Standard File Protocols”** tab. Ensure the **“Rsync”** service is enabled.

**Rsync**, a popular incremental backup protocol used in Unix and Linux environments.

To configure the Rsync share, select **“Shares”**, then the **“Share Listing”** tab. Select the **“Rsync”** icon.

Click on the access icon to customize the access control. Place the mouse cursor over the icon to display the current access level in the status bar. For instruction on how to access the shares, click Help.

Share Name	Description	CIFS	AFP	HTTP/S	Rsync	Delete
<input type="text" value="backup"/>	<input type="text" value="Backup Share"/>					<input type="checkbox"/>
<input type="text" value="media"/>	<input type="text" value="Media Server Share"/>					<input type="checkbox"/>

Select **Read/write** from the **Default Access** pulldown menu. Then, in the **Hosts allowed access** field, enter the public IP address of the source ReadyNAS.

Share Name: backup      Default Access: Read/write

**Share Access Restrictions**

Share access for the file protocol can be restricted using the access list(s) below.

Hosts allowed access: 200.200.200.50

Separate entries with comma

Scroll down and select the **“Manage SSH Keys”** option.

### Rsync Over SSH

Rsync can run over Secure Shell (SSH) to provide encrypted transmission of data over public networks without the need for VPN routers. To do this you will need to forward port 22 on your router to this ReadyNas Ip address and import the clients public SSH key. To manage SSH keys on this ReadyNas, click below.

Manage SSH Keys

Select the **“Browse”** button and select the previously saved **“public\_ssh\_key.txt”** from the source ReadyNAS.

SSH Key Management

Remote Rsync over SSH requires adding public SSH key file from the remote system

**SSH Keys**

root@nas-EA-1F-25      Remove

Browse...      Add Key

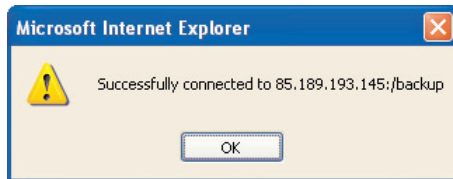
Cancel

Select **“Add Key”** to upload the new key. If successful, a dialogue box will appear stating that the import was a success. Click **“Apply”** to save the Rsync options.



#### Step 4: Configure the source ReadyNAS

On the source ReadyNAS, be sure to add the remote ReadyNAS server details and enable **"Tunnel Rsync over SSH"**.

After all backup job information is complete, select **"Test connection"** to ensure everything is working. If successful, the following will appear:



The backup job can be run by a set schedule, or manually started by clicking **"Go"**.

Enable	Job	Source Destination	When	Status	Logs	
<input checked="" type="checkbox"/>	001	[rsync_backup] 85.189.193.145:/backup	Weekdays Every 24 hr between 00-23	Completed Tue Jun 23 00:12	 	<input type="button" value="Go"/> <input type="button" value="Delete"/>

The status of the completed backup job can be viewed by selecting the **"View logs"** icon.