

Configure and Setup rsync environment for a QNAP to a WD My Cloud

Software tools and WD My Cloud settings:

- SSH command line access enabled
- "Remote Server" feature enabled
- port forwarding enabled on My Cloud and router if external WAN side access needed
- SSH software tool
 Putty for Windows, <u>http://www.putty.org/</u> iTerm2 for Mac, <u>http://www.iterm2.com/</u>

Preparation work on Western Digital My Cloud

All settings are available in the Web UI -> Settings -> Network. Enable SSH service and enter a password (used later for SSH command line access).

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|--|-------------|-------------|--------|----|
| SSH | | | | |
| New Password * Confirm New Password | | | | |
| | * | Password re | quired | |
| Cancel | | | Save | |

Picture 1: dialogue for SSH password



Enable "Remote Server" and enter a password.

| Setup a backup pass server. | word to enable remote ba | ckups for this syst | em to a remote |
|---|---|--|------------------------------------|
| Please make sure yo Backup services in S Cloud system over th | ou have added port forward cettings > Network > Port F ne internet. | ding rules for both s Forwarding in order | SSH and Remote r to see your My |
| To learn more about | port forwarding, visit <u>here</u> . | | |
| Password | ••••• | 8 | |
| Cancel | | | Apply |
| | ci i i i i i i i i i i i i i i i i i i | - | , the last |
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| | SON CHIEF | | |
| Remote Serv | er | | |
| | | | |
| Port Forward | ing | | |
| i orti orward | 119 | | |

If the WD My Cloud NAS shall be available from WAN side, "Port Forwarding" is needed. Click "Add" and select default services, enable "Remote Backups" and change the external port on the right side to any port number you like. Remember to configure Dynamic DNS and Port Forwarding rule for Internal port 873 on your router.

Picture 2: Password for Remote Server



| ort Forwarding Se | ettings | |
|-------------------------|----------------------------|----------------------|
| Select the default serv | vice scan Customize a port | forwarding service |
| | | |
| Cancel | | Next |
| Windows Servic | es | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Remote Server | | |
| | | |
| | | |
| Port Forwarding | | ID Mu Claud Distance |
| | | |
| | | |



| Port For | warding Settings | | | | |
|-----------|------------------------|-----|-----|--------|--|
| Select th | e default service scan | | | | |
| | FTP | TCP | 20 | 20 | |
| | FTP | TCP | 21 | 21 | |
| | Remote Backups | TCP | 873 | 873 | |
| | SSH | TCP | 22 | 22 | |
| | | | | | |
| Back | Cancel | | | Finish | |

| Picture | 4: | Dialogue | 2 | for | Port | Forwarding | Rules |
|----------|----|----------|---|-----|------|-----------------|-------|
| · ······ | | Dialogue | _ | | | i oi ii ai aiig | |

| Port Forwarding | |
|-----------------|---------|
| Remote Backups | Details |
| Add Dearn More | |

Picture 5: Port Forwarding rule for Rsync enabled

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Start the SSH command line tool and login with username root and SSH-related password.

First, create a file named rsyncd.secrets in folder /etc. Type

nano /etc/rsyncd.secrets

, then press SHIFT+O (capital o, not Zero 0) to write the file and press SHIFT+X to exit the Nano Editor. Next step is to set the correct file permission 600 (only root has access to this file). Type

chmod 600 /etc/rsyncd.secrets

to set this special file permissions correct, otherwise Rsync will not start. Now reboot the My Cloud device from within the Web UI. The reboot will cut off the SSH session. Reestablish the SSH connection in Putty or iTerm2 and again login with SSH credentials. The former empty file rsyncd.secrets has now one line in it, the login credential for the root user but with hashed password. Rsync is using plain text password, therefore we need to know the hashed password. Type again

nano /etc/rsyncd.secrets

to open the file but this time, don't do anything. Take a look into it and write down the password after the " : " In my example, the screen output is shown below. The example password for user root is VOQxOTcw. We will use this later. Write down the password and take care about capital O and O.



Picture 6: example of /etc/rsyncd.secrets

Close the file is done by pressing SHIFT+X.



Rsync to My Cloud from a QNAP

| | | | | Q | é 9 () ² [| ቧ admin ▾ : 🖄 |
|----------------------------------|----------------------|---------------|-----------------------|-----------------|-------------------------|---------------|
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| | | | | | | |
| 2 | | 1 | | | | |
| Control Panel | Eboto Station | Music Station | File Station | Backup Station | myONAEclaud | |
| | | | | | | |
| | | | | | | |
| S | | | 2 | | | |
| Qsync Central Station 2.0 | Antivirus | App Center | SuperMarioBros - Beta | Signage Station | Video Station | |
| | | | | | | ~ |
| | o | DAV | | | | |
| JsTetris - Beta | Surveillance Station | WebBAV | | | | / |
| | | | | | | 1 |

Picture 7: QNAP Backup Station

Backup Station is the Rsync tool to use.

| 8 | | | | | <u>ര</u> |
|---|---|--|------------------------------------|----------------------------------|--------------------------------------|
| Backup Station | | | | | - + × |
| Backup Server Rsync Server RTRR Server Time Machine Remote Replication | Rsync file-level backt Rsync Replication allows you to this function. Create a Replication Job | IP replicate the files of a local f | older to a folder of a remote serv | er. You must enable Rsync server | on the remote server in order to use |
| NAS to NAS Rsync (File-Level Backup) RTRR (Real-time Two-way Folder LUN Backup Cloud Backup | | | Schedule | Status | Action |
| Amazon S3 External Backup External Drive USB One Touch Copy | | | | | |
| | | | | | |

Picture 8: Remote Replication with Rsync

| E | ₩ 192.168.0.67 - PuTTY | | | Q | é (| € (<mark>)</mark> ² | ه ک | ıdmir |
|---|---|--|--|---|-----------------|----------------------|------------|-------|
| | GNU nano 2.2.6 File: /etc/rsyn | cd.secrets | | | | | | |
| | Bot:YVQXVTew C Get: Relp C WriteOut R Read File M X Exit D Justify Replication NAS to NAS Renote Replication NAS to NAS RTRR (Real-Hime Two-way Folder, LIN Backup Amazon S3 È External Backup External Drive USB One Touch Copy | Inc] Cut Text PC Cut Pos Prev Page PC UnCut Text To Spell Incut Text PC Cut Pos Locals Name or IP address of the remote server. Source User Name: Password: Port number. Remote Host Testing: Total F Or | Image: Particular state Image: Particu | × | er on the remot | e server in order to | - + x ? | / |
| | ATT - | | | | | | | |

Picture 9: Credentials for Rsync

Remember to use the plain text password as shown in /etc/rsyncd.secrets, as described above. Don't use the password for the "Remote Server", entered in the My Cloud web interface.

| | Create | a Replication Job | | × | |
|--|--------------------|--|----------------------|---------|-----------------------------------|
| Backup Server | | | | | |
| RTRR Server | Remote Re Name: | Settings | | × er or | the remote server in order to use |
| Remote Replication | Local s Source | Name or IP address of the remote server: User Name: | 192.168.0.67 root | | Action |
| Rsync (File-Level Backup) RTRR (Real-time Two-way Folder | | Password: Port number: | 873 | | |
| Cloud Backup | Sour | Remote Host Testing: | Test | | |
| Amazon S3 | Total Fi | | | | |
| LISE One Touch Conv | | | Apply Car | ncel | |

Picture 10: test successful with the plain text password



| Backup Station | Remote Replication | × - + × |
|---|---|---|
| Backup Server Rsync Server Rsync Server Time Machine Remote Replication NAS to NAS Rsync (File-Level Backup) RTBR (Reatime Two-way Folder | Remote Replication Job test Name: Remote site: 192.168.0.67 Local site: Source folder: ● Add | er on the remote server in order to use Action 06/09 11:32) |
| LUN Backup Cloud Backup Amazon S3 External Backup External Drive USB One Touch Copy | Source folder Destination folder Action /Public/Music → /Rsynctest Image: Constraint of the synchronization of the syn | |

Picture 11: example folder structure for Rsync

| Backup Station | | -) (| C O | - + × ? |
|--|---|---------------------------------|---|------------|
| Backup Server Rsync Server RTRR Server Time Machine | Rsync file-level backup Rsync Replication allows you to replicate the files of a local folder to a folde this function. Create a Replication Job Delete Options | er of a remote server. You must | enable Rsync server on the remote server in orc | ler to use |
| NAS to NAS Rsync (File-Level Backup) RTRR (Real-time Two-way Folder LUN Backup Cloud Backup Amazon S3 External Backup External Backup USB One Touch Copy | Job Name Source Destination test Public/Music/ 192.168.0.67/Rsynctest/ | Schedule 11:44 - No schedule | Status Replicating: 21 % Speed:16.25MB/s Elapsed Time: 00 day(s) 00 hour(s) 00 min Remain time: 00 day(s) 00 hour(s) 02 minu | Acti |

Picture 12: Rsync job in action

Status shows some job details like speed. The shown speed is NOT the exact amount, the time proposals are useful.

RSYNC from a QNAP to a My Cloud successfully working!